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Dan Forgey, right, receives the 2023 Friend of Soil Health Award from SDSHC Board Member Doug Sieck, center, while SDSHC Board member Dennis Hoyle, left, looks on at the 2023 Soil Health Conference, Jan. 24-25 in Sioux Falls. South Dakota Soil Health Coalition photo.

## Finding the Puzzle Pieces

*Soil Health Conference offers education, networking opportunities*

*By Stan Wise*

For fifth-generation Hughes County producer Terry Ness knows the value of South Dakota's annual Soil Health Conference.

"I compare this whole soil health journey to a 10,000-piece puzzle, and we've got maybe a thousand pieces in place," he said. "Every time you go to an event like this, you figure out where a few more puzzle pieces will fit."

Ness, a member of South Dakota Soil Health Coalition Board of Directors, joined approximately 400 other attendees January 24-25 at the Best Western Plus Ramkota Hotel in Sioux Falls for the 2023 Soil Health Conference. Keynote speakers Dr. Kris Nichols, Rick Clark, Mitchell Hora, and Roy Thompson joined 13 other presenters to offer insights on a variety of sustainable land management topics.

"There were a lot of cutting-edge topics that had really comprehensive information," Ness said. "My head was about ready to explode by the time it got done. I hope that meant I absorbed it all."

Fellow SDSHC Board Member and McLaughlin, SD, producer Candice Mizera said that while she enjoyed Dr. Nichols's presentation on soil biology, Roy Thompson delivered her main takeaway message

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## Check Out This Watershed Comparison!

See Page 2 for a side-by-side comparison of two watersheds after a heavy rainfall event to see how soil health practices can improve water infiltration and water quality!

# Tale of Two Watersheds

By Anthony Bly  
SDSU Extension Soils Field Specialist

On July 5, 2022, a derecho crossed western South Dakota, went across central South Dakota, proceeded eastward across eastern South Dakota and ended up going across Iowa, Illinois and into Indiana before it stopped. As this storm crossed eastern South Dakota, it dropped huge amounts of rain (more than 4 inches). Soon after the storm, while driving around looking at all of the flooding and water coming off cropped fields, it became evident that some waterways were not carrying a significant amount of water. The main difference for this run-off was soil management and resulting soil health. Watersheds in fields with at least no-till management had little water run-off, while fields with even minimal tillage had significantly more run-off. Two examples are included in this discussion. The map in Figure 1 shows two watersheds that are next to each other, Blue (A) and Red (B). The Blue (A) watershed is mostly long-term no-till with a diverse crop rotation, cover crops and waterways. The Red (B) watershed has been conventionally farmed with only one tillage pass this year and a Fall anhydrous ammonia applicator pass the previous Fall (2021). The pictures show the runoff from each watershed approximately 30 minutes after the main rainfall occurrence. During approximately 1.5 hours, 3.92 inches of rain measured in a gauge located ½ mile from these watersheds. The difference in the amounts of run-off water is astounding! Compare Figure 2 and Figure 3 that correspond with the Blue (A) and Red (B) watersheds.

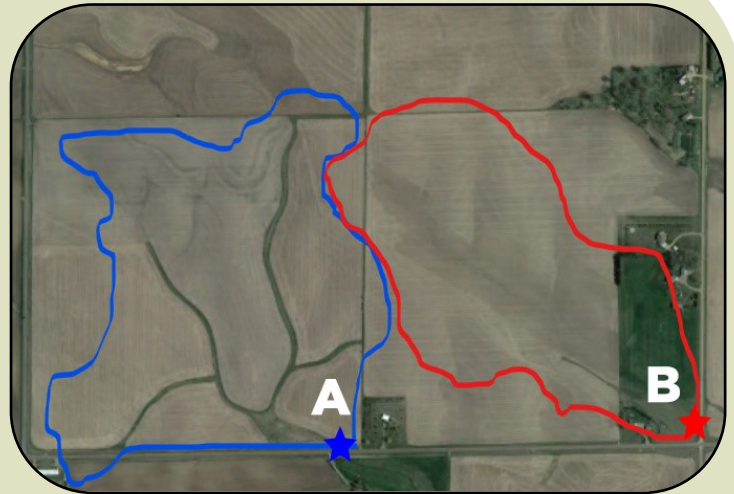


Figure 1. Map showing the Blue (A) and Red (B) delineated watersheds. Courtesy image.



Figure 2. Blue Watershed (A) - Long-term no-till, crop rotation, cover crops and waterways. Courtesy photo.



Figure 3. Red Watershed (B) - Conventional tillage in the past with minimal tillage this year. Courtesy photo.



## Membership Minute: Taylor Sumption

Fifth-generation producer Taylor Sumption and his wife, Cassandra, run a grain and livestock operation near Fredrick, SD, along with an oatmeal company packaging the oats grown on their farm. They have five children.

In the last few years, the Sumptions have introduced cover crops and reintroduced oats into their rotation. "Controlling wind and water erosion and maintaining good fertility has always been a priority for our farm," Taylor said, "but recently I've shifted focus more towards a wider range of soil health and biodiversity."

Taylor made the change because he had become frustrated with a reliance on a two-crop system and was looking for a way to mitigate the associated risk. "I attended some SDSHC meetings, and it really changed my outlook and desire to improve our system. I always leave those meetings reinvigorated and excited for the future of agriculture," he said. "Since then, I've spent a lot of time reading and listening to podcasts of some of the early adopters in recent years. I think new advancements in biology and a better understanding of our soils will make large strides in the coming years in regards to soil health and crop production."

"I think the introduction of a third crop in our rotation really opened my eyes to the benefits of diversity," Taylor said. "That coupled with a focus of keeping soil covered and growing a crop throughout the season really opened my eyes to the importance soil health."

Consumers are another driving force behind Taylor's continued focus on soil health. "Today's consumers want products grown in a sustainable manner and have a positive impact on the environment," he said. "In my opinion this trend will continue to strengthen, and I want to be a producer that provides that for consumers."

Taylor said that for change to happen, it must be deliberate and planned. "It is very important to set out goals and direction for any venture. It is important to consistently evaluate those goals and adjust accordingly," he said. "We often hope for change when things aren't desirable, but we need to invoke that change before anything will happen. Surrounding yourself with the right people is paramount."

With such excellent forethought and stewardship, Taylor is building sustainability into his operation, and that allows him to focus on enjoying what matters most to him. "I have always enjoyed growing crops and especially harvesting them," he said. "However, as I've aged, my favorite time is a Sunday evening spent with my wife and children as we watch the sunset."



Taylor Sumption introduced oats into his operation as a way to mitigate the risk of a two-crop system and improve his soil health. These oats are being harvested with Taylor's 1958 John Deere 45 combine. Courtesy photo.

## Student Essay Contest Winner

The following essay by Riley Ash, a senior at Webster Area High School, won the \$200 top prize in the high school category of SDSHC's 2023 Student Essay Contest.

### How does diversity benefit agriculture?

What does diversity look like in agriculture, and how can this benefit agriculture? Diversity in agriculture can be as simple as growing multiple crops in your rotation. Diversity could be as simple as planting five crops instead of two. A more advanced use of diversity is including livestock and soil health related practices. Some practices include no-till, cover crops, and using natural fertilizers.

The human eye is not able to see them, but there are microorganisms working in the soil to better it. These microorganisms are part of our diversity. Reactions these microorganisms do help break down dead materials and nutrient assimilation. Nutrient assimilation is the process of absorption of vitamins, minerals, and other chemicals from food as part of the nutrition of an organism. If you take a standard soybean/corn farm, nutrient cycling is very slow. Multiple crops with a range of classifications help increase the nutrient cycling process.

With only two crops, the ground can become infected with diseases. Introducing more crops can reduce diseases and parasites like corn root worm. Each crop brings a different attribute. Legumes, with the aide of bacteria, do a process called nitrogen fixing. This process is where molecular nitrogen in the air is converted into the ground. This nitrogen benefits corn and wheat which use nitrogen as one of the most essential nutrients to the plant.

All biology involved with the ground work together as one group. Doing soil practices with our biology in mind, we can help increase the soil's productivity to increase performance. It is important to keep diversity involved to increase the operation's profits, yields, and overall stability of the operation.

### Upcoming Soil Health Events

#### [Feb. 10](#)

SDSHC Board Meeting  
Online

#### [Feb. 21](#)

Spink County  
Winter Soil Health  
Workshop  
Redfield, SD

#### [Feb. 21-23](#)

Soil Health and  
Regenerative  
Agriculture Crop Hour  
Online

#### [Feb. 27](#)

Soil Health  
Awareness Day  
Pierre, SD

#### [March 4](#)

Ag Day at  
Washington Pavilion  
Sioux Falls, SD

#### [March 9](#)

SDSHC Board Meeting  
Online

#### [April 13](#)

SDSHC Board Meeting  
Online

#### [June 8-9](#)

Women on the  
Range: Nicole Masters  
Sturgis, SD

#### [June 14-15](#)

Rangeland and  
Soils Days  
Watertown, SD

#### [June 20-22](#)

SD Grazing School  
Wall, SD

#### [July 25-27](#)

SD Grazing School  
Wall, SD

#### [Aug. 28-30](#)

South Dakota  
Soil Health School  
Garretson, SD

Access Our Events  
Calendar [HERE](#).

from the conference with the story of how he addressed both personal health challenges and operational challenges on his land with sustainable agriculture.

"Healthier soil, healthier operation, healthier animals, healthier people," Mizera said. "Just the resilience of it – being able to combat drought and floods. That's so much of what we do. It enables us to deal with the uncontrollable."

This year the conference was held in conjunction with the Midwest Cover Crops Council Annual Meeting, which held a poster competition for graduate students. The informational posters were available for viewing throughout the conference.

New this year to the conference was the Soil Health Sitdown Session in which attendees broke into smaller groups to discuss one of ten soil health topics.

"That was fun to participate in. I just sat in on one of them, and it never wanted to end. We just kept going and going and going and going," Ness said. "A lot of good conversations there."

Mizera said those conversations are important.

"Talking with other producers who are there, who have done it or are thinking of doing it and just bouncing ideas off each other," she said. "And hopefully meeting a friend or two or getting to know someone either in your neighborhood or a long way away. Just striking up a conversation and finding out what everybody's up to. The big value is education, whether it's from people one-on-one out in the hallways or listening to the speakers."

"I've been saying it for two or three years now that the Soil Health Conference and the Soil Health School – the way I see it, each one is worth about a semester of college to me," Ness said. "I get that much good out of it, so I don't plan on ever missing one again."

### Awards

During the South Dakota Soil Health Coalition's Annual Meeting, the Coalition presented Dan Forgey with the 2023 Friend of Soil Health Award. Forgey was an active member of the SDSHC Board from 2015-2021. He was also the longtime agronomy manager for Cronin Farms where he helped to run a cow/calf livestock operation as well as low-disturbance, no-till management of crop ground since 1993. He also used diversified cropping rotations and cover crops. Forgey was also a member of the Dakota Lakes Research Farm Board of Directors for many years. He travels across the state and the nation to share his knowledge and experience with others who are working to improve the land. Forgey's vision for the future of soil health is "to see more interest in soil health so



SDSHC Board Members Candice Mizera, left, and Terry Ness, right, participate in a small group discussion on cover crops at the 2023 Soil Health Conference. South Dakota Soil Health Coalition photo.

that one day it is as common in farmers' conversations as no-till."

"I was tremendously touched that the peers, the people all in soil health gave me that award," Forgey said. "It means a lot to me, especially coming from the people that live and preach soil health. I really appreciate that."

The Coalition presented Cronin Farms with the 2023 Legacy Award for their dedication to conservation and willingness to share their knowledge with others. The farm transitioned to no-till in 1993, and the fragile perennial pastures were transformed from season-long grazing to a rotational grazing system. Forage and cover crops have been integrated into the diverse crop rotations and are either swath or bale grazed during the fall and winter. The Cronins partner with other organizations to conduct research on their land and have hosted people from around the world who want to learn how they maintain excellent soil health. In 2016 Cronin Farms won the South Dakota Leopold Conservation Award.

Forgey said that the Legacy Award spotlighted the soil that has been built on the land managed by Cronin Farms. "The soil is what brought that award on," he said. "It's all about the soil and the soil health and our road down the soil health journey."

### Essay contest

As part of the conference, the Coalition held a student essay contest. Caleb McGregor of Webster, SD, is a freshman at South Dakota State University, and he won the \$400 top prize in the post-secondary category. Riley Ash, a senior at Webster Area High School, won the \$200 top prize in the high school category. Londyn Groneberg, an 8th grade student at Black Hills Christian Academy in Spearfish, won the \$200 top prize in the middle school category.

### By-laws amendment

During the Coalition's annual meeting, members voted to amend the organizations by-laws. The amendment adds a sixth item within "ARTICLE VI - BOARD OF DIRECTORS Section 1. The role of the Board of Directors" of the by-laws regarding a conflict-of-interest

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Members of the Cronin Family accept the 2023 Legacy Award at the 2023 Soil Health Conference. South Dakota Soil Health Coalition photo.



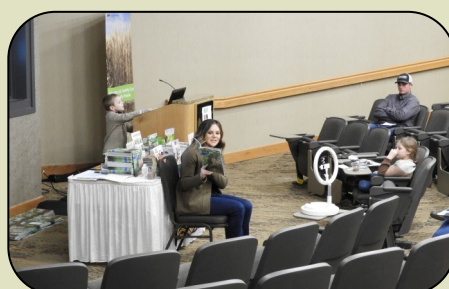
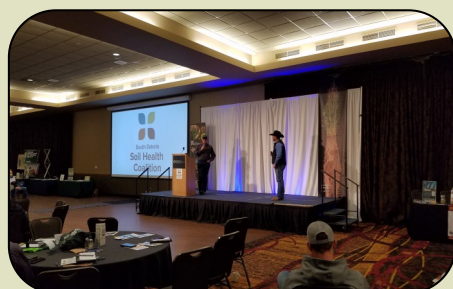
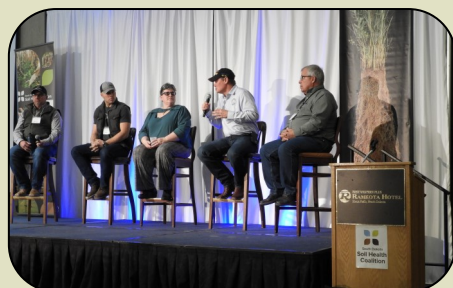
statement:

*6. Disclose any conflict of interest when considering taking an action or entering a transaction that might benefit the private interests of a director or otherwise violate state and federal laws governing conflicts of interest applicable to nonprofit, charitable organizations.*

The South Dakota Soil Health Coalition thanks all speakers, panelists, attendees, and viewers for making this year's conference a success. Recordings of the presentations will be made available online at [www.sdsoilhealthcoalition.org](http://www.sdsoilhealthcoalition.org).

The 2024 Soil Health Conference will be held Jan. 23-24 at the Best Western Ramkota Hotel in Rapid City, SD.

## 2023 Soil Health Conference Photos



The Coalition thanks the following sponsors for their generous support of the 2023 Soil Health Conference: South Dakota Wheat Commission, Green Cover Seed, North Central Sustainable Agriculture Research and Education, Mustang Seeds, Exapta Solutions Inc., South Dakota No-Till Association, South Dakota State University Extension, Albert Lea Seed, South Dakota Grassland Coalition, Every Acre Counts, Ducks Unlimited, Dakota's Best Seed, South Dakota Specialty Producers Association, Grain Millers, Agassiz Seed & Supply, Range Ward, Millborn Seeds, Grossenburg Implement Inc., South Dakota Association of Conservation Districts Employees, Presentation Sisters, Pheasants Forever, USDA Natural Resources Conservation Service, La Crosse Seed, Organic Crop Improvement Association - South Dakota Chapter 1, East Dakota Water Development District, C & B Operations, South Dakota Center for Farm/Ranch Management, Ward Laboratories Inc., Midwest Cover Crops Council, South Dakota Stockgrowers Association, and South Dakota Discovery Center.



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## Growing Connections App Puts Solutions in the Palm of Your Hand!

The new Growing Connections mobile app creates a network of producers, landowners, gardeners, and ag industry professionals designed to help users get answers to their sustainable land management questions and share insights gained from their own experience.

Released by the South Dakota Soil Health Coalition with the help of partners, this FREE app makes use of a network of verified and trusted mentors who are experienced in sustainable agriculture. Users can search for mentors by geographic location and by area of expertise. They can send private questions to mentors along with photos, videos or documents. Users can also make public posts with their thoughts and questions along with photos or other media. They can even filter public posts based on certain types of land use.

The Growing Connections app makes it possible to build relationships with others who are interested in sustainable agriculture and share knowledge so that land management mistakes and setbacks can be avoided.

Growing Connections can be downloaded from the Apple App Store or the Google Play store, or it can be used in a web browser at [www.growingconnectionsapp.com](http://www.growingconnectionsapp.com). Learn more about the app and download use instructions at [www.sdsoilhealthcoalition.org/growing-connections-app](http://www.sdsoilhealthcoalition.org/growing-connections-app).

## Download Growing Connections!



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## Don't Forget the Grazing Exchange!

As the 2023 season approaches, now is a great time to plan your forage resources for the rest of the year. You can use the FREE South Dakota Grazing Exchange to form private grazing agreements, whether you are a landowner or livestock producer! Learn more and form grazing connections at [www.sdgrazingexchange.com](http://www.sdgrazingexchange.com)!