



South Dakota  
**Soil Health  
Coalition**

# Soil Visions

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## Small Grains Can Increase Profitability

By Stan Wise

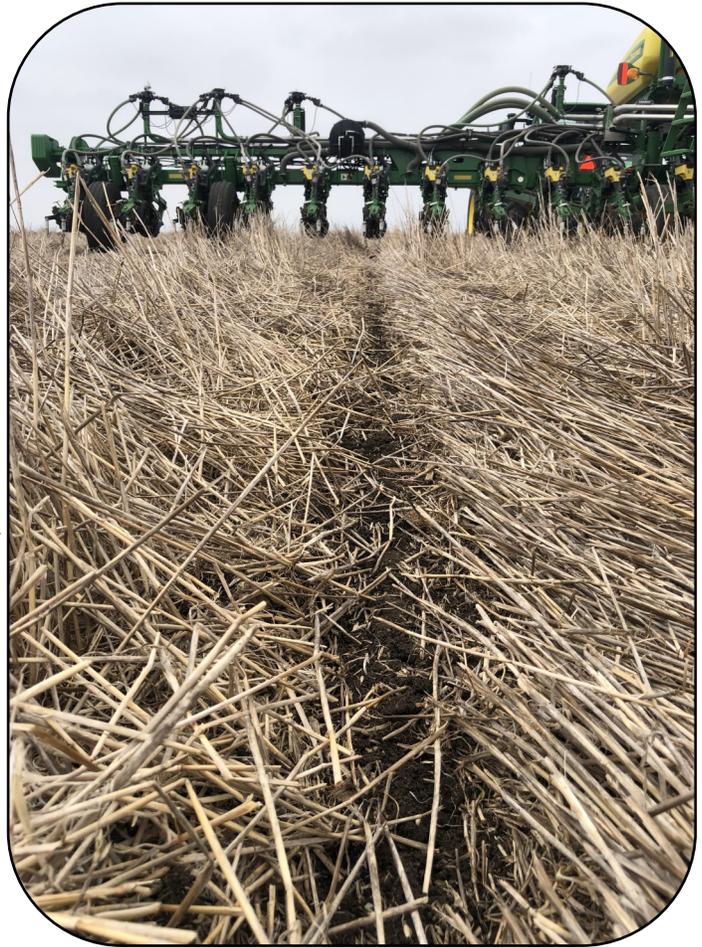
When Cronin Farms partner Tregg Cronin takes the long view of his operation, he knows that including a small grain in his rotation can lead to higher profitability.

“Consistently we see a yield bump following that year of wheat and, in our case, following those two years of wheat,” Cronin said. “When you look at it as a system over a three- or five-year time frame, for us especially, the net returns on that whole system almost always outweigh just a simple corn-soybean rotation.”

Cronin Farms near Gettysburg, SD, employs a diverse rotation including corn, soybeans, spring wheat, winter wheat, oats, sunflowers, alfalfa, a forage blend and cover crops.

Cronin said that last year was a good example of a yield advantage following a small grain. He said that in 2022, corn yields in his area often varied by crop rotation.

“In my immediate neighborhood, we saw differences on corn of 20 to 50 bushels an acre, depending on the rotation that the farmer implemented,” he said. “So, if it was corn on soybean stubble, in a simple corn-soybean rotation, some of those yield differences between a field like



Cronin Farms plants directly into stubble left by their small grain crops. This crop residue protects the soil, aids moisture retention, and builds soil organic matter. Courtesy photo.

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**Manage Saline Soils to Reap More Profits!**  
See Page 4 to learn how to manage your marginal acres to reap even greater profits and improve the health of your soil!

that and a field of corn planted on two years of wheat stubble, it was as much as 50 bushels an acre. And so, when you start looking at a 50-bushel yield advantage at \$5, \$6 – in some cases, depending on when you sold it – \$7 corn, all of a sudden, yeah, that wheat didn't really drag on your farm, and in fact, it probably made your year.”

Increased corn yields aren't the only reason the Cronins plant small grains.

“The big benefit for us, I mean, right off the bat is always moisture retention,” Cronin said. “That stubble, as you know – most people know by now – it does such a great job of keeping the soil a lot cooler, which reduces evaporation, and especially in the central and western part of the state where moisture is almost always our limiting factor.”

Cronin believes that a diverse rotation is just as important as no-till practices when it comes to building soil organic matter. After years of soil health management practices, Cronin Farms has built healthy soils that help them perform well in the good years and weather the bad years.

“When all the stars line up and you've got that healthy soil that's really working for you – you've got that extra organic matter or you've got that available organic matter – it kicks into gear, and that's where you see the top end yields that exceed your goal by 10, 20, 30, 40 bushels an acre in some cases,” he said. “Even in a tough year, in a drought year like 2021, we still had fields where I know we add more yield than what we should have based on the rainfall we had because, again, our soils have added water carrying capacity. We've got the residue in place to hold what we do get.”

Cronin said that the state is already entering 2023 short of soil moisture and that water will be important in planting decisions.

“I think dry conditions are going to be on the forefront of every farmer's mind going into this growing season,” he said. “So, if dryness is your overarching factor, it's going to take a lot less water to raise a wheat crop than it is corn or soybean.”

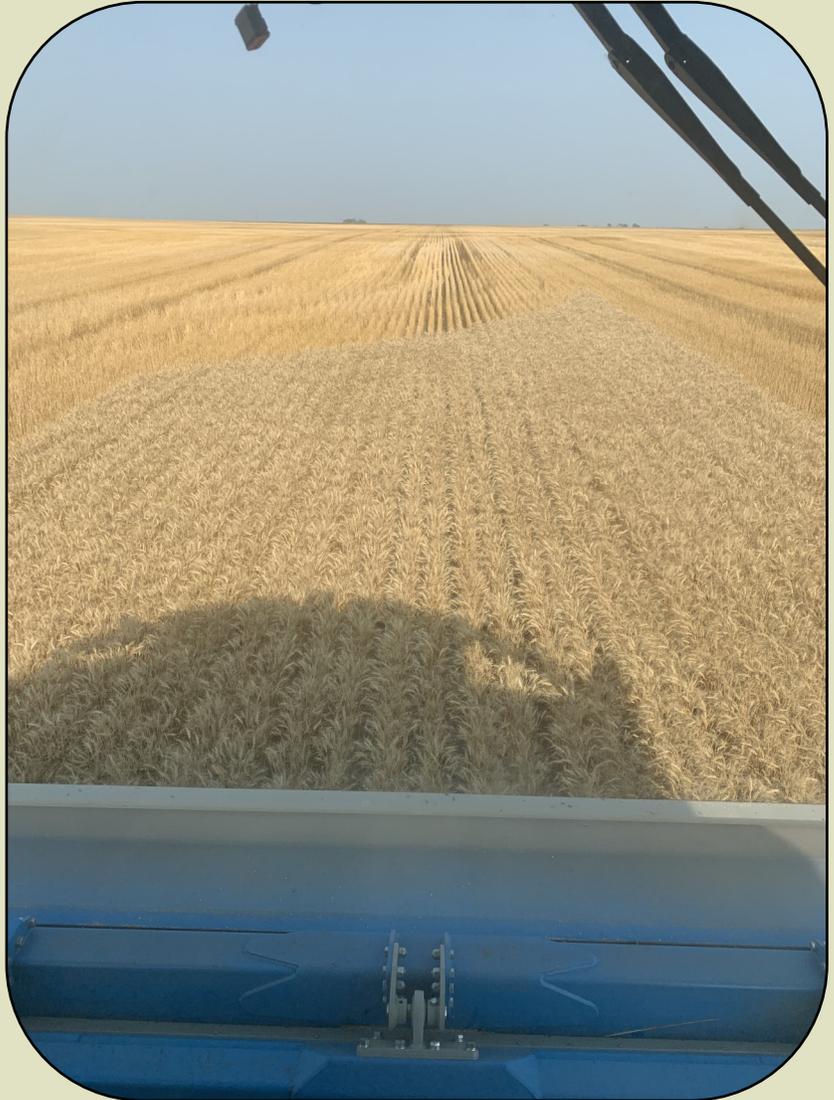
Another big reason to plant a small grain, Cronin said, is the opportunity to break up the season's workload.

“Corn and soybean farmers in the spring, you try to get everything done in a two-week window, and then the same holds true in a lot of cases in the fall. You're trying to get all this harvest done in a very small window,” he said. “Whereas, if you've got spring wheat harvested in the bin by the middle of August, well, that's one less thing that you have to deal with come September, October.”

Cronin said that wheat prices are relatively high right now, but before growers decide to plant spring wheat for the first time, they need to have some marketing plans in place.

“What I see, a lot of times, the producer tries something for the first time, and they really haven't thought about: ‘Where do I get rid of this? How do I get rid of it? When do I get rid of it? What are the quality considerations that I need to meet in order to market this effectively?’ And so then they end up with a product that they can't just haul 5 miles down the road to their local elevator and sell,” Cronin said. “So, I think you really need to look at that marketing task and how you're going to get rid of it – working with somebody who understands those markets, who can give you some better transparency on where those markets are so that you don't get picked off because you don't know any better.”

For more information about adding small grains and other crops to a rotation, contact the South Dakota Soil Health Coalition at (605) 280-4190 or [sdsoilhealth@gmail.com](mailto:sdsoilhealth@gmail.com).



**Cronin Farms uses stripper combine heads to harvest wheat in order to leave behind useful stubble which will protect the soil, aid moisture retention, and build soil organic matter.** Courtesy image.

## Membership Minute: Jeff Roehr

Jeff Roehr runs a diversified crop and livestock operation with his wife, Kim, and son, Robert, on the edge of the Coteau Hills northeast of Langford, SD. They run stock cows and raise beans, corn, spring wheat, alfalfa, rye, and a variety of other cover crops. Jeff is the third generation farming land his grandfather purchased in the 1940s. His father started working off the farm in 1978, and that's when Jeff began making some management decisions at the age of 13. A few years later he purchased a nearby farm that he and his family currently live on.

Jeff has been using no-till practices since the mid-1990s and using cover crops for about 12 years. "I watched a neighbor transition to no-till when I first started farming, and it looked like it worked well, so I decided to go that direction, too," Jeff said. "It seems like we can grow better crops with less inputs. I would like to get to the point of using no commercial fertilizers or chemicals."

Jeff has also been using rotational grazing for about 20 years. "Rotational grazing will provide more feed while leaving more cover on our sloping pastures," Jeff said. "I recently installed water lines, tanks, and more cross fencing to make even smaller paddocks."

Jeff said he farms with older equipment and that his best day on the farm is "the day we get more fixed than we break."

Soil health practices have made Jeff's operation more resilient to weather extremes, but he says the most important lesson he has learned is that Mother Nature gets the final word. "No matter how healthy your soil and moisture retained or pastures rested, it still needs to rain," he said. "No matter how much winter grazing you have planned, enough ice and snow can make you have to feed cattle."



Jeff and Kim Roehr stand with their son, Robert, on a hill overlooking the farm where Jeff grew up and the farm they currently live on, which Jeff purchased as a young man. Courtesy photo.

## New Forage Association to Promote Sustainable Production

South Dakota and surrounding Northern Plains states are now home to a new group, the Northern Plains Forage Association. The new association is open to forage growers, buyers, industry partners, and any interested stakeholders in the forage industry. The group intends to create a forage networking and education community in order to promote sustainable, quality, profitable forage production in the region.

"South Dakota is one of the top producing forage states in the nation, and this group will work towards further promoting and developing the forage industry in South Dakota and surrounding states," said Sara Bauder, SDSU Extension Forage Field Specialist and association coordinator.

The board of directors is made up of growers and industry partners who intend on teaming together to provide forage stakeholders with educational opportunities such as field days and programs as well as in-person and online networking events to help keep forage growers and utilizers up-to-date on the latest research and best management practices.

"Cover crops are a hot topic in our industry and making sure elements of forages and soil health work together in a positive way is very important. We want to raise great quality forage profitably while respecting the land that allows us to do so," Bauder said.

Association meetings will take place 2-3 p.m. on March 29 and March 30 at the Denny Sanford Premier Center in Sioux Falls during the Central Plains Dairy Expo.

For more information about the Northern Plains Forage Association, visit their Facebook Page @NPForage or contact SDSU Extension Forage Field Specialist Sara Bauder at 605-995-7378 or [sara.bauder@sdstate.edu](mailto:sara.bauder@sdstate.edu).

### Upcoming Soil Health Events

#### March 22

Utilizing Rye in a Corn-Soybean Rotation  
Ipswich, SD

#### March 23

Landowner Prescribed Fire Introductory Class  
Yankton, SD

#### March 29 & 30

Northern Plains Forage Association Meeting  
Sioux Falls, SD

#### April 6

SDSHC Board Meeting  
Online

#### April 12

Beginning Farmer-Rancher Event  
Mission, SD

#### April 16-18

SD FFA Convention  
Brookings, SD

#### April 25

Ag Fair  
Aberdeen, SD

#### May 11

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](#).

## Saline Soil Management: More Money With Fewer Crop Acres

By Stan Wise

Salinity areas. Trouble spots. White deserts. Regardless of what they're called, saline soils are a problem for South Dakota. White, salty areas where nothing grows are a common sight in fields across the state.

"The amount of salinity that's in South Dakota, it's just amazing how much there is," longtime Cronin Farms Agronomy Manager Dan Forgey said during a discussion panel at the 2023 Soil Health Conference.

Saline soils have excessive levels of soluble salts in the soil water high enough to negatively affect plant growth, resulting in reduced crop yields, increased input costs, and increased soil erosion. How to manage these areas is an important question because tilling them, applying fertilizer, and planting them not only results in a financial loss on those acres, but can also cause them to grow in size.

One way to deal with saline areas is to take them out of row crop production and plant deep-rooted, salt-tolerant crops to pull water and salts deeper into the soil profile.

"The first thing we'll do is we'll go on with the forage barley or barley and hay it," Forgey said of his approach to saline areas at Cronin Farms near Gettysburg, SD. "Take the forage barley off, come with the rye, and then I'll put it into grass."

"That's how we handle it. We do not farm through it," Forgey said. "Even if it's a three- or four- or five-acre patch, we try to straighten it out."

The approach is designed to make every acre profitable.

Cristin Weber, a precision agriculture and conservation specialist with Pheasants Forever, helps administer the Every Acre Counts program, which provides producers with a free precision profitability analysis.

"With the Every Acre Counts program, we've looked at about 52,000 acres," Weber said. "And any time that I ran a profitability report on a field that has saline acres and I can visually see the white—like when I look at aerial maps—I've never found one of those acres to be profitable." She said that when producers plant row crops in those areas, "they're literally just putting money down



A white, crusty surface is typical of soils with high salinity. USDA-NRCS South Dakota photo.

on those acres, and they're not getting a return on their investment."

The analysis provided by Every Acre Counts allows producers to see which areas of their fields are the most profitable and which areas need improvement. "We're using yield data, variable rate maps, and then pairing that information with their input costs. And then once we merge that data, it gives the producer a report, a red-to-green map or visual—it looks like a yield map, but it's actually their profit—and it's showing what acres of the field are doing the best, but then also highlights what areas are at a net loss," Weber said. "And so we're able to edit those boundaries a little bit, take those marginal lands out, and give a what-if analysis. What could happen to your yields over time just by not farming that? How

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The photo on the left shows a field in 2021 with many areas of marginal crop production which were dragging down profits from the field. The photo on the right shows the same field in 2022. The producer worked with the Every Acre Counts program to take 99.5 acres out of crop production. Those acres were seeded with an alfalfa/intermediate wheat grass mix in the fall of 2021. The orange outline shows a much smaller area devoted to crop production. The total profits from corn on the field were increased by more than \$4,500 simply by removing the marginal acres from row crop production. Courtesy photo.

much expense could be reduced every year and how much profit could be increased just by not farming that, but then also enrolling those acres into a conservation program?”

Northville, SD, producer Alex Boekelheide said during the 2023 Soil Health Conference that he started working with Every Acre Counts to pinpoint the troubled acres on his farm and find out exactly how much those acres are harming the bottom line.

“The strategy we’re starting to deploy is perennials. So, through that program – it’s a five-year program – we dormant-seeded some different grass species and alfalfa mixed in to have some diversity there. Our intent is to have the acres that are really in tough shape go into this program for five years and then re-evaluate after year five if we want to bring them back into production or not,” Boekelheide said. “It’s been remarkable. You finally feel good about those acres. You’re making a change before it’s a crisis.”

He said that he is “starting to see some cover and some growth and starting to see to some more activity on those soils instead of being just barren and white.”

Weber said that for landowners in the Prairie Pothole Region, the Soil Health and Habitat program offers a working lands conservation option that would allow producers to hay or graze acres taken out of production from August through April. That program also

offers seeding cost-share funds and a land payment. She also said that she can help producers take the first steps with other conservation programs.

However, there are no conservation program requirements to participate in the Every Acre Counts program, and simply managing marginal acres differently can result in increased profitability. Weber said that in 2021 a producer working with the program removed 99.5 acres from corn production in a field and seeded them with an alfalfa/intermediate wheat grass mix. The total profit from corn on the field increased by more than \$4,500 simply by removing the marginal acres from crop production – no conservation program payments were received.

“Sometimes you got to treat every acre different instead of farming it end-to-end like we’re all used to doing,” Boekelheide said.

The Every Acre Counts program is funded primarily by South Dakota State University Extension, Second Century Habitat Fund, Pheasants Forever, Natural Resources Conservation Service, South Dakota Game, Fish and Parks, South Dakota Corn and Purina.

More information about Every Acre Counts can be found at [extension.sdstate.edu/agriculture/every-acre-counts](https://extension.sdstate.edu/agriculture/every-acre-counts). For more information about soil health management practices, visit [www.sdsoilhealthcoalition.org](https://www.sdsoilhealthcoalition.org).

## Don't Miss the 2023 Soil Health School! Sign up today!

By Stan Wise

If you haven't attended one of SDSHC's Soil Health Schools, you're really missing out! This outstanding event combines both classroom presentations and field exercises with discussion and networking opportunities to benefit every producer, gardener or landowner, regardless of where they are in their soil health journey. There's something for everyone!

“I don't know any other way where you can get that much information packed into two and a half days,” longtime Cronin Farms Agronomy Manager Dan Forgey said.

This year's school will be held Aug. 28-30 near Garretson, SD, and hosted on the farms of Bruce Carlson and SDSU Extension Soils Field Specialist Anthony Bly. Industry professionals and experienced producers from across the Northern Plains are working together to provide outstanding instruction for this year's school. A valuable part of the experience is the chance to meet and form connections with these instructors!

“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,” SDSHC Soil Health Technician 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.”

Various cash crop and cover crop rotations will be demonstrated in the working fields of the host farms, and cover crop grazing exercises and information will focus on both cattle and sheep.

Class size is limited so that participants can have more contact with instructors and SDSHC Board members. However, this means that the school fills up quickly, so you should sign up today!

The cost to attend the school is \$150 and \$75 for each additional person from the same operation. A block of rooms has been reserved for a nightly rate of \$100 at the Holiday Inn Express and Suites in Brandon, SD. Register at [www.sdsoilhealthcoalition.org/event-calendar/soil-health-school](https://www.sdsoilhealthcoalition.org/event-calendar/soil-health-school). For questions about the school, contact the SDSHC at 605-280-4190 or [sdsoilhealth@gmail.com](mailto:sdsoilhealth@gmail.com).





South Dakota

## Soil Health Coalition

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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. 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).

### Cost Share Funds Available for Soil Health Practices

The Soil Health Improvement and Planning Project has funds to provide technical and financial assistance to landowners and operators within the program's active watershed project areas who are willing to help improve water quality by adopting certain soil health best management practices. Learn more and apply at [www.sdsoilhealthcoalition.org/319-program](http://www.sdsoilhealthcoalition.org/319-program).

### Conference Videos to be Available Online

Did you miss the 2023 Soil Health Conference? Did you go to the conference, but would like to see some of the breakout sessions were unable to attend? You're in luck! The conference presenters were recorded, and the finished videos are being placed on online as they become available. Some are available now, and all the sessions will eventually be uploaded to: [www.sdsoilhealthcoalition.org/educational-resources/event-recordings](http://www.sdsoilhealthcoalition.org/educational-resources/event-recordings).

### Set Up Your Own Field Trials!

If you would like to set up your own field trial for a soil health practice, such as cover crops, no-till, interseeding, rotational grazing, and more, the South Dakota Soil Health Coalition would be happy to provide help in designing and implementing the trial! Just contact the Coalition at [sdsoilhealth@gmail.com](mailto:sdsoilhealth@gmail.com) or 605-280-4190.