

Summary of Soil Health Roundtable Activity

Presented to Nebraska’s Healthy Soils Task Force
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1 Origins of the Soil Health Roundtable

We know that Nebraskans have been using soil health practices for decades, and in June 2018 a small group of stakeholders met to discuss how these soil health efforts can be amplified in Nebraska. The stakeholders included representatives from the University of Nebraska-Lincoln, Nebraska Soybean Board, NRCS Nebraska, Soil Health Partnership, The Nature Conservancy, and the Nebraska Corn Board. We know we missed many important voices from that conversation. Nevertheless, we identified a number of key takeaways:

- There is a large body of work being done around soil health in Nebraska but much of it is only loosely coordinated, if at all
- There are no standardized and common measures of soil health (i.e., lack of coordination around measurement and data collection)
- We don't understand how, if at all, to monetize benefits of cover crops and other soil health practices
- We lack detailed information about baseline cover crop acres and practice adoption rates in Nebraska
- There is interest in forming a central hub to facilitate communication and potential coordination on projects and events (e.g., field days, grower meetings, education, etc.)

We knew there weren't small challenges, but left the June 2018 meeting optimistic that by working together we can achieve great things for soil health in Nebraska. We all agreed that there was a need to meet with more stakeholders to explore the need for a Soil Health Roundtable.

2 First Meeting of the Soil Health Roundtable

2.1 Goals, Structure, and Attendees

In January of 2019, Boone McAfee (Nebraska Corn Board), Andrea Basche (University of Nebraska-Lincoln), Aaron Hird (NRCS Nebraska), Tyler Williams (Nebraska Extension), and Hannah Birge (The Nature Conservancy) began preparing for a spring 2019 Soil Health Roundtable meeting. As we began developing meeting goals and intended attendees, LB 243 was introduced to the Nebraska Unicameral to establish a Governor's Healthy Soils Taskforce. We met with supporters of the bill and decided to continue planning for our own meeting, but made adjustments so that the Soil Health Round Table attendees could potentially establish a civil society complement to the potential Task Force.

Our overarching meeting goal was to convene relevant stakeholders to discuss the merits of a Soil Health Coalition, i.e., a formal civil society group dedicated our ultimate objective of enhancing the biological, physical, and chemical properties of soil through a collaborative effort to increase adoption of best practices, and ultimately sustain the productivity of Nebraska's natural resources.

Additional supporting goals were to:

- Describe past and current soil health efforts across the state
- Create a venue to identify opportunities for expanding soil health in Nebraska
- Explore how a Soil Health Coalition can benefit Nebraska's soil health efforts
- Identify shared understanding of what soil health means in Nebraska
- Develop rapport among soil health stakeholders
- Establish a timeline for next steps

We held our meeting in April 2019 and used a combination of whole and small group discussions, presentations, and a period to write down reflections to share with the organizers. Attendees included:

- Neil Dominy (USDA - NRCS)
- Jacy Spencer (NE Dept. of Ag)
- Tom Hoegemeyer (retired)
- Alan Moeller (Nebraska Elder Climate Legacy)
- Mike McDonald (Indigo Ridge Farm)
- Deb Gangwish (PG Farms & The Diamond G)
- Bob Bettger (Farmer)
- Martha Mamo (UNL)
- Rick Rasby (UNL/NE Extension)
- Keith Glewen (UNL/NE Extension)
- Troy Kash-Brown (Farmer)
- Alan Kelley (Iowa Tribe of KS and NE)
- Tim Rhodd (Iowa Tribe of KS and NE)
- Kirstin Bailey (Center for Rural Affairs)
- Eric Zach (NE Game and Parks Commission)
- Graham Christensen (GC Resolve/RegeNErate Nebraska)
- Nelson Winkel (The Nature Conservancy)
- Wayne Rasmussen (Nebraska Grazing Land Coalition)
- Tyler Williams (UNL/NE Extension)
- Andrea Basche (UNL)
- Boone McAfee (Nebraska Corn Board)
- Aaron Hird (USDA - NRCS)
- Hannah Birge (The Nature Conservancy)

2.2 Meeting Outcomes

The group listed many opportunities and ongoing efforts around soil health in Nebraska. Below is a non-exhaustive list of what they told us they or others are doing for soil health in Nebraska:

- Farmer to farmer trainings, development of regenerative food systems a farm and community level, regenerative Ag Alliance and Market Place Development
- Rotational grazing, adaptive grazing management, High stock density.
- Cover Crops, use of alternatives to corn, soybean cropping system, No Till, Minimum Till.
- Cover Crops and integrating chickens
- Weather Ready Farms – an assessment and certification program in development by NE Extension to assess farm resiliency and risk management practices. To be Continued...
- Offering in-field soil health training clinics
- Offering annual soil health conference @ ENREC
- Peer Learning Group Establishment
- Rural Educational Grants
- Working with Ward Labs to submit and analyze data to compare biological vs chemical testing to use the information for nutrient management.
- Cover Crop RCPP (NGPC, NRCS, PF)
- NGPC just hired a precision ag coordinator in partnership with Pheasants Forever and UNL Extension and promoting Soil Health will be a part of this position.
- Teaching efforts, supporting the NRCS Soil Health Initiative and on farm demos, supporting the Corn Board and NET funded research on Cover Crops, research at Upper Big Blue's project Grow to document potential soil health benefits at their well head production area farming practices.
- NRCS Soil Health Initiative and Demonstration Farms with UNL Agronomy
- NRCS Soil Health Advocate
- Education on these topics

When asked what they learned from the meeting, attendees told us:

- A "Soil Health Coalition" and the LB-243 Task Force do not have to be duplicative but can be complementary and a possible mechanism to carry out the task force comprehensive strategic plan.
- More of us are rallying together around soil health! Thanks!
- The diverse interest and back grounds of the people at the meeting.

- The existence of “Large” farms who are working on Soil Health!
- Diversity of the group from a subject matter perspective.
- This reinforces the talent and goodness in Nebraska!
- The role and possibilities with conservation and wildlife!
- A well-planned and managed day! Good Job facilitating!
- The perspectives of the different people from different groups
- Formation of a coalition will be important
- The fact that NRCS only supported a small % of cover crop acres in Nebraska according to the 2017 Ag Census.
- Definition of Soil Health.
- Existence of LB-243

2.3 Next Steps

After synthesizing discussion from the meeting, the coordinators identified four major gaps in soil health efforts around the state that, if filled, could have outsize benefit for soil health practice adoption in Nebraska. They are to: 1) increase and streamline **communications**, 2) deepen and expand **research** efforts, 3) instigate **collaboration** among ongoing efforts and towards new efforts, and 4) establish a high value annual **soil health conference** in Nebraska.

We also identified that, once again, many important voices were missing from the room, and reaffirmed the importance of UNL’s On Farm Research Network, and the importance of integrating livestock to increase soil health practice adoption.

3 Action Items for Soil Health in Nebraska

The Soil Health Roundtable identified four major action items for amplifying soil health in Nebraska, with communications at the top of the list. The action items are described in more detail below in relative order of importance:

3.1 Increase and streamline communications

- CropWatch from Univ. Nebraska-Lincoln has an existing soil health page that could serve as a centralized forum for agronomic information. They have a full time web host, a calendar of events that could be expanded, social media presence, and a network of content providers. However, CropWatch has specific goals and requires peer-review for its posted articles to maintain its position as a trusted source. Not all material is suitable for CropWatch, which may limit what can be posted.

- Social media is increasingly used by farmers, especially millennial farmers, to share new and innovative practices. Finding ways to amplify their voices could have an outsize impact on farmer-to-farmer learning.

3.2 Deepen and expand research efforts

- There is a need to collectively (i.e., with all stakeholders including researchers and farmers) to identify ongoing research needs around soil health
- There is a need to more effectively communicate findings from existing soil health research - including what we still don't know
- On Farm Research, housed in Univ. Nebraska-Lincoln's Agronomy and Horticulture Dept. is a leader in on-farm research. Providing more resources to this group will amplify farmer-led soil health research, communications, and education.
- Also in the Dept. of Agronomy and Horticulture, Andrea Basche teaches hundreds of undergraduates "hungry" for more knowledge and hands-on experience with soil health
- Tyler Williams is working on a project called Weather-Ready Farms to assist farmers with implementing, monitoring, and adjusting on-farm practices that improve weather resilience - including soil health practices.
- Nebraska Corn Board, with Soil Health Partnership, provides technically sound soil investigation in agronomic management on farm research, forges key partnerships, and funding
- Nebraska Extension has a superb track record of providing key symposiums to assemble and survey subject matter experts on future research needs and feedback on current work
- USDA/NRCS provides funding, outreach and education on human, physical, and informational resources

3.3 Instigate collaboration among ongoing and new efforts

- There is a need to identify and communicate key outreach opportunities
- The Roundtable can provide a source of value-added resources such as presenters, demonstration equipment, or visual displays. We can also serve as technical specialists and expert facilitators before, during, and after the event
- There is a need for geographically distributed, high value learning opportunities where farmers can learn from farmers and receive current Soil Health Research information
- There is a need for a centralized hub to identify and facilitate collaborators among existing soil health efforts, and towards the establishment of new efforts

3.4 Hosting a Nebraska Soil Health Conference in 2021

- Our Roundtable group is poised to plan and facilitate a large, high value, attractive event. This would be in complement to and in lieu of the multiple small, localized soil health field days and meetings taking place across the state.
- Any ongoing conference series would move around the state to ensure ease of attendance by all Nebraskans
- The event could provide a forum for the Nebraska Governor's Healthy Soils Task Force to unveil their mission and strategic plan