

Letter from the President

By Arlene Brandt-Jenson

I want to thank you all, SD SWCS members, for the work you are doing to have a positive impact on our natural resources. Some of you are working with producers who are adopting soil health practices. Some of you are shaping the minds of college students to be critical thinkers. Some of you are conducting research to help us understand complex environmental interactions and address real-world problems. Some of you administer state-wide programs that offer tools for conservation implementation. And some of you are no longer employed but are staying informed of current issues, being a conservation advocate, and supporting important work through your membership. Our individual and collective contributions are vital to the future of agriculture and the environment. Now more than ever, we need solutions to issues that threaten the natural world. As I write this, we have just experienced record-breaking high temps in the first week of November. Meteorologists are almost giddy with excitement when they share the forecast. But shouldn't that attitude be tempered with an underlying concern? Major challenges we face include droughts, floods, wildfires, hurricanes, sea level rise, insect die-off, and the list goes on. Weather events are more extreme; rainfall is sometimes measured in feet instead of inches; springs and falls are wetter, and summers are drier.

As SWCS members, we all receive the weekly Conservation NewsBriefs email. I have noticed several articles addressing impacts of climate change. Here are three noteworthy articles:

<https://www.marketplace.org/2020/10/20/many-farmers-need-swap-crops-stay-profitable-climate-change-continues/>

<https://www.peoriapublicradio.org/post/regenerative-ag-could-make-illinois-farms-more-climate-friendly-and-more-profitable-too#stream/0>

<https://www.scientificamerican.com/article/climate-change-sets-a-drought-trap-for-u-s-corn/>

It may be easy to become discouraged. But we need to put on "stubborn optimism." (Listen to the TED Radio Hour podcast, episode 160 Climate Mindset featuring diplomat Christiana Figueres.) Here are small things you can do: Continue to stay informed. Read scientific articles. Discuss the issues in your circles of influence.

Make a small change on the little piece of earth that you may have control over. Reduce the lawn size. Grow pollinator friendly plants like joe-pye weed or blanket flower. Reduce your reliance on pesticides. Ask your colleagues to join you as a fellow member of the Soil and Water Conservation Society. Keep asking until you gain at least one new member. Our chapter membership is increasing, but only because of persistent members who make personal connections with others.

Life would not exist without soil and water. Thank you again for your work in protecting these vital natural resources. We can and will make a difference. "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has." – Margaret Mead.



Internship Program Provides Variety of On-The-Job Experiences

By Jamison Winter and Arlene Brandt-Jenson

As part of a \$1000 Internship Agreement with SD SWCS, Dalton Howe worked with the NRCS Redfield Field Office staff in the later

part of July and the first part of August. He assisted the field office with a variety of tasks and had the opportunity to job shadow and learn in the field as well.

Dalton was involved in the gathering of soil cores used in identifying soil types. These determinations were used to determine breaks and soil survey

mapping units. Dalton learned how to complete salinity electroconductivity (EC) readings from soil samples and ran dozens of samples to check for salinity concerns, which were to be addressed with CRP

(Conservation Reserve Program) and crop rotation via EQIP (Environmental Quality Incentives Program) and CSP (Conservation Security Program) contracts. Dalton also ran EC and pH readings for 128 soil horizons.

Dalton assisted field office staff in on-site

reviews for CRP enrollment. He helped to evaluate grass stands, identify vegetation and ensure boundaries and borders were accurate



Dalton Howe and Jay Hermann evaluating rangeland

and complete. He also helped to gather waypoints for CRP enrollment and used GPS to assist in flagging CRP for boundary marking and grass plantings. Dalton assisted in measuring pipelines, tanks and fences for certification through the EQIP program. Dalton was able to go on site with several NRCS staff to conduct pasture

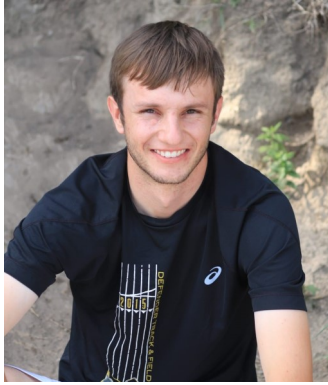
monitoring and evaluations, cover crop stand evaluations, and perform soil health assessments on cropland and rangeland, learning from Area Range Specialist Jay Hermann, Area Soil Health Specialist Shane Jordan, and Area Agronomist Eric Barsness. He was able to practice vegetation clipping and calculations for productivity, range health assessments, and soil health assessments, all of which are integral parts of the conservation work of NRCS.

Besides this 40-hour internship with SWCS, Dalton worked for Brevant Seeds (formerly Mycogen seeds) during the 2020 summer. He recently accepted an internship with Brevant (under Corteva Agriscience) for summer 2021 in Wisconsin. Dalton is the son of Lance and Shirley Howe; Lance is an NRCS Soil Scientist and Shirley is the Spink Co. Hwy Dept. Office Manager. Dalton said, "It was cool for me to learn what my dad did and what the other people in his office did, getting to work on CRP and EQIP and other programs." Dalton is a junior and will be graduating from SDSU in May 2022.

If you know of a SD college student who would qualify for this valuable Internship experience, see eligibility info here: <https://sdswcs.wixsite.com/website/internship>



Dalton Howe boring for soil cores



Member Spotlight: Ben Brockmueller

Ben Brockmueller is the new Soil Conservationist in Redfield, SD. He is originally from Freeman, SD. His hobbies include running and gardening. Ben was selected to participate in a one-year cultural exchange program in Kenya with the Mennonite Central Committee, an NGO that partners with local grassroots organizations across the world that are involved in relief, development, and peacebuilding work. This program acts as an exchange in which people from across the world move to another country from their home to work in a field related to their profession. Here he describes his experience:

“I was partnered with a local agricultural



Ben examining cover crops with Joel Mutua, a local farm leader

organization in Kenya that was seeking to establish conservation practices to improve sustainability and food security in the semi-arid lands of Kenya. More than anything it was a fabulous cultural experience as I stayed with a host family in rural Kenya. From an agricultural perspective this experience was a

bit of an ah-ha moment for me in understanding the value of conservation in not only preserving our natural resources, but also improving food production, especially in these lower fertility soils. I often think conservation and production get pitted against each other; however, this was not the case in Kenya. While cropping systems, cultural practices, and social dynamics are vastly different to what I'm accustomed to in the US, it was inspiring to see the enthusiasm local community leaders developed in order to sell the idea of conservation to farmers as financial incentives were not an option. Overall, I learned a lot about the slow time scale in which change occurs, the different levels of risk that farmers were willing to accept as they made changes, and the role of working with innovative farmers to encourage wider spread adoption. All these things seem to translate well across cultures.”

SDSU Research

By Dr. Sandeep Kumar

Intensive management practices degrade soils and water quality, and crop productivity. These practices include conventional tillage, overgrazing, heavy use of inorganic fertilizers, pesticides, manure, land use conversions, and many others. Nutrients from mineral fertilizer are important for enhancing crop yield. However, when available nutrients exceed plant requirements, these can wash away with water or be emitted as gases into the atmosphere and negatively impact the environment. Thus, innovative and holistic management practices are needed to minimize the off-site movement of applied nutrients. Dr. Sandeep Kumar's soil physics and hydrology lab is focusing on addressing some of these issues. Dr. Kumar and his team showed that long-term benefits of conservation practices, such as no-till, cover crops, integrated crop-livestock systems, diverse rotations, and perennial grasses on marginal lands, can enhance soil organic carbon, mitigate soil surface greenhouse gas (GHG) emissions, reduce runoff, and improve water quality. However, not every conservation practice can be used universally because of heterogeneity in the soil and



Navdeep Singh (left) and Dr. Kumar (right) and student collecting soil samples

climate from region to region. Thus, an integrated approach that includes monitoring, modeling and producers' involvement is very important to better understand the influences of different conservation practices on soil properties, GHG emissions and water quality.

Claim Your Membership Reimbursement

If you saw a \$50 bill lying on the ground, would you make the effort to bend over and pick it up? Of course you would. Some of you are eligible for a 50% membership rebate and haven't claimed it. In 2019, our chapter agreed to offer a 50% membership rebate in the first year to members who sign up for automatic payroll deduction and 25% in the second year. Members must attend at least one meeting (teleconference or face-to-face) during the year. This program is a recruitment tool to encourage membership and is still in effect for new and future members. Current members can help spread the word about this benefit as you discuss SWCS membership with colleagues. If you are wondering if you qualify, email sdswcs@gmail.com to inquire and request the SD SWCS Membership Rebate Request Form.

Help Wanted

The Chapter Chatter wants to hear from you! This is an open, perpetual call for future articles, ideas, or events to feature. Local conservation efforts, research, outreach events, conferences, member news, and photographs are a few examples of the kind of information that could be featured. Any ideas or inquiries can be directed to Editor Tyler Tran at tyler.tran@usda.gov or sdswcs@gmail.com. We look forward to hearing from you.



Save the Date

The South Dakota Soil and Water Conservation Society's Annual Meeting is happening on December 10th via Zoom. This year is a little different than normal. We will have a variety of guest speakers covering society issues and conservation topics. This conference will be a benefit not only to our existing members but also be used as a recruitment tool. Please feel free to invite colleagues and friends.

This year's conference will be open to anyone who registers through our website:

<https://sdswcs.wixsite.com/website/events>

Review the agenda below:

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|   | | Connecting Farm to Future SD SWCS Conference and Annual Meeting Thurs. Dec. 10, 2020 Zoom FREE, OPEN TO ALL |
| 1:00 | Welcome and Introductions | Arlene Brandt-Jenson, SD SWCS President |
| 1:15 | Ask Your Doctor if SWCS is Right for You! | Clare Lindahl, CEO, Soil and Water Conservation Society |
| 2:00 | Mixing 16 million pounds of diverse seed species. How does it happen? | Keith Berns, President of Green Cover Seed, and SWCS NW Regional Director |
| 2:30 | Conservation Trivia Break | Rachel Frei & Tyler Tran, Co-Hosts |
| 2:45 | Highlights from SWCS Internship Experience with Redfield NRCS Office | Dalton Howe, SDSU Junior Agronomy Major |
| 2:50 | Cropping Pattern Changes Diminish Agroecosystem Services in North and South Dakota | Dr. Peter O'Brien, Research Agronomist, USDA-Agricultural Research Service |
| 3:10 | Regenerative Agriculture in Practice at Blue Dasher Farm | Dr. Jonathan Lundgren, Director and CEO of Blue Dasher Farm |
| 3:50 | Conservation Trivia Break | Rachel Frei & Tyler Tran, Co-Hosts |
| 4:00 | Urban Conservation Demonstration and Awareness Project | Alina Krone-Hedman, Urban Conservationist, Minnehaha CD |
| 4:10 | (TBD) | |
| 4:20 | Wetland and Fringe Soil Profiles in Prairie Potholes | Carrie Werkmeister, Asst. State Soil Scientist, SD NRCS |
| 4:30 | Annual Business Mtg for SD SWCS | SD SWCS Members |

Door Prizes including \$25 and \$50 Visa Gift Cards drawn randomly throughout the afternoon. Some prizes only available to SD SWCS Members. Not a member? Join now! sdswcs.org/get-involved/join

sdswcs.org/website/events sdswcs@gmail.com