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We're Here To Help

Written by District Technician Ethan Dahl

Renville County Soil and Water Conservation District promotes the sustainable use of water and soil resources through innovative and mutually beneficial conservation activities with local stakeholders. Landowners can request financial and technical assistance from the Renville County SWCD to implement conservation practices.

Our office is here to help provide technical assistance on conservation practices that will improve water quality. In addition to technical information, we can often provide cost-share funds to Renville County landowners. Some common projects are those that help control nutrient runoff; create wildlife habitat; divert runoff; improve water quality; restore native prairie and wetlands; reduce wind erosion; control gully, rill, or sheet erosion; and protect surface water and groundwater quality.

We also have a partnership with Hawk Creek Watershed Project that offers cost-share for cover crops, reduced tillage, and no tillage. This partnership has allowed us to go beyond our typical county borders and offer cost-share to those within the Hawk Creek Watershed boundary. This cost-share is not eligible for those who receive an incentive or a cost-share payment through other programs such as EQIP, CSP, et cetera.

Another avenue for technical information and cost-share funds can be by becoming certified through the Minnesota Ag Water Quality Certification Program. Renville County SWCD is here to help guide and assist in signing up with the MAWQCP and becoming certified. It is a voluntary opportunity for farmers and agricultural landowners to implement conservation practices that protect water resources. Those who



implement and maintain approved farm management practices will be certified and obtain regulatory certainty for ten years. And once you become certified, you become eligible for specially designated technical and financial assistance to implement practices that promote water quality.

Make sure to follow us on social media to keep up to date when different opportunities become available. And feel free to give us a call at 320-523-1559 with any questions.

Business of Soil Health: Profitability & Weather Resiliency

Come Join Us

The Renville County Soil and Water Conservation District along with the Hawk Creek Watershed Project will hold a Soil Health Meeting at the Renville Community Center on Wednesday, March 1st.

This meeting will emphasize on the economics of farming focused on soil health vs conventional farming and different soil health practices that local farmers can adopt that both benefit their soil health and reduce their costs by needing fewer inputs, machinery, fuel, and time. Local farmers will discuss how economics have changed in their operations along with what has and hasn't worked for them. Make sure to follow us on social media for more information about the upcoming meeting and all that it will encompass.

Also presenting, CEO of Blue Dasher Farm, Dr. Jonathan Lundgren. Dr. Lundgren will discuss strategies to developing a long term solution to regenerative Agriculture.

Winter Meeting March 1st, 2023

9:30am - 2:00pm

Three speaker presentations: Redwood County Farmer Matt Tiffany, Renville County Farmer Phil Smith, and CEO of Blue Dasher Farm Dr. Jonathan Lundgren.

Watch our website www.renvilleswcd.org for details and to RSVP.



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www.renvilleswcd.com

DOES HEALTHY SOIL MEAN HEALTHY FOOD?

Written by District Administrator Holly Hatlewick

In 2022, we conducted a local investigation to determine if food grown in regeneratively farmed soil is higher in nutritional value, compared to soil that is conventionally farmed. We collected soil from a long-term regenerative farm

in early summer. This farm utilizes the following practices; no-tills soybeans (20+ years), reduce-till corn (10-years), and in the last 5-years added a small grain into the rotation. Along with that, cover crops are inter-seeded in June, and for the last 3-years, fall cover is planted on 100% of their acres. We also collected soil from the neighbor's section of land that is in corn and soybean rotation, with spring and fall tillage on both crops. We looked at what was in the soil using a Haney Soil Test. While both sites' soil had similar Organic Matter, the big surprise was how much higher available nitrogen was in the regenerative soil vs. the conventional soil. (See Tables 1& 2)

Table 1- Haney Soil Test- Regenerative Soil

Available N (lbs/Ac)	P (ppm)	K (ppm)	Percent Organic Matter	pH
87.2	67.7	50	4.1	7

Table 2- Haney Soil Test -Neighbors Conventional Soil

Available N (lbs/Ac)	P (ppm)	K (ppm)	Percent Organic Matter	pH
55.8	379.9	164	4	6.7

We decided to plant produce that would grow well in our zone and is produced in our region of the State on a large agricultural scale. We planted an 80-day maturity tomato and a 72-day maturity sugar snap pea in the same pots (Image 1). What we observed was a visual difference in plant health, based on color and plant vigor.



Then, when the produce reached peak maturity for consumption, we tested it for nutritional value. We discovered it is all interconnected. The peas and tomatoes grown in regenerative soil had, what we consider, a significantly higher protein content, when compared to produce grown in conventional farmed soil. Iron, Manganese, as well as calories, were also higher showing more nutrient dense produce from regeneratively farmed soil. Keep in mind, these are the same soil type and from the same neighborhood. In our small sample set, it was clear a healthy soil biome meant higher nutrient-dense food. (See Tables 3 & 4)

Table 3-Sugar Snap Pea Nutrition Facts

	Conventionally Farmed Soil	Regeneratively Farmed Soil	Percentage Increase in Nutrients on Regenerative Soil
fat	0.27	0.26	3.77%
fiber	5.12	3.96	25.55%
calories	59.39	61.38	3.30%
carbs	11.68	10.73	8.48%
iron	9.855	14.44	37.74%
manganese	2.69	4	39.16%
zinc	6	7.745	31.28%
potassium	0.23	0.24	4.26%
phosphorus	0.06	0.08	28.57%
protein	2.56	4.03	44.61%

Table 4-Tomato Nutrition Facts

	Conventionally Farmed Soil	Regeneratively Farmed Soil	Percentage Increase in Nutrients on Regenerative Soil
fat	0.19	0.27	34.78%
fiber	2.09	1.82	-13.81%
calories	37.35	46.03	20.82%
carbs	8.17	9.28	12.72%
iron	5.251	3.62	-36.77%
manganese	0.783	1.17	39.63%
zinc	1.428	2.74	62.96%
potassium	0.33	0.38	14.08%
phosphorus	0.04	0.04	0.00%
protein	0.74	1.62	74.58%

Each farm and field are unique; our goal at the Renville County Soil and Water Conservation District is to apprise farmers of the long-term benefit of adopting regenerative farming practices such as reducing tillage, diversifying crop rotations, and building crop resilience through soil health on their farms, to be sustainable. "We need to change the mindset from soil simply being dirt, but the base of all life on the planet," Dr. Daphne Miller.



WIND EROSION LEADING TO DECREASED PROFITABILITY

Written by District Resource Conservationist Kyle Richter

Agricultural producers grow an agricultural commodity that the world relies on. To continue to raise that commodity, producers need to remain profitable. Many factors go into remaining profitable including management styles and commodity prices. One factor that affects profitability that not many producers consider is mother nature. Mother nature affects profitability in different ways as the year progresses. This article will focus on how mother nature affects crop production outside of the growing season.

When harvest ends, many producers apply nutrients to fields for the next growing season. This comes in the form of broadcasting or incorporating tillage methods. Unfortunately, when nutrients are incorporated, the soil structure breaks and makes the soil susceptible to wind erosion. With winter comes high winds, and when the soil is light and fluffy and no structure is present, it allows the rich, fertile soil to blow off the field and into road ditches or neighboring fields. With rising fertilizer prices, this loss of soil instantly takes a hit on producers' profitability. Not only is the soil losing that fertilizer the producer spent money on, but the producer also cannot get back the amount of fuel and equipment wear it took to apply those nutrients. Additionally, next year's crop will not have the nutrients it needs to grow to its potential yield.

Luckily, there are proven management practices to combat wind erosion and ensure fertilizer stays where it needs to be, and helps ensure producers are not losing money and are maximizing profitability. One practice is cover crops. On early harvest crops, cover crops are an effective way to combat wind erosion. Having winter cover helps catch the soil before it can blow. Another practice is no-till or strip-till. No-till provides zero disturbance to the soil and allows no dirt to blow from the field. Strip-till allows a majority of the field to remain undisturbed, while minimum tillage is used to break up the rows. This allows for wind erosion to be mitigated while applying fertilizer to only the crop rows increases efficiency and drives down fertilizer prices. Not only do these practices help producers' soil become more weather resilient, but it also helps drive down the cost per acre to grow a crop.

Meet Jeff Kjorness, the New NRCS Area Team-Lead

How long have you been with the Farm Service Agency?

I have been with the Natural Resources Conservation Service for 23 years.

What's your favorite part about working there?

The people I have interacted with during my career. Working with customers to help solve their resource concerns and the relationships that have been built with my co-workers of the NRCS, FSA, SWCD, and other agencies have been great.

What are you looking forward to in your new role?

Building a strong customer service team in Brown, Redwood, and Renville Counties and strengthen the relationships with partners in these counties.



Wind blowing away the topsoil and creating "Snirt"

Meet Jiselle Pfarr, the New Renville County FSA County Executive Director

How long have you been with the Farm Service Agency?

I have been with the Farm Service Agency for 22 years.

What's your favorite part about working there?

My favorite part working for the FSA is the relationships made with our landowners and producers. I am also very lucky to work with all of the staff in the Renville County USDA Service Center. They do a wonderful job managing the programs administered by each agency.

What are you looking forward to in your new role?

I am looking forward to the fact that I will be able to continue to assist the landowners and producers in Renville County and I am hopeful to gain new relationships with people in Ag throughout our county.

