

2021 Winter Newsletter

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2021 Renville County Outstanding Conservationist

By: Ethan Dahl Renville County SWCD

Richard and Mary Jepson live east a few miles of Granite Falls in Renville County, Minnesota, and have been farming since 1974. The Jepson's 800-acre crop operation includes a corn/ soybeans/wheat rotation. Richard and Mary both come from multiple-generation farming families from Renville County and knew each other as kids as their parents were friends. They became romantically involved while attending the University of Minnesota, Morris. Since then, Richard and Mary have been blessed with 3 children and 9 grandchildren.



Richard started farming with conventional tillage, dabbled with Ridge-till in the 1980s but has since then has been using strip- tillage and some no-till for the past five years. Richard raised alfalfa in the '90s quite extensively and was a founding member of Minnesota Valley Alfalfa Producers. In addition to selling hay to MnVAP, he mentioned how much he enjoyed the relationships developed with buyers of his premium-grade alfalfa. Richard shared that their 2020 corn crop was the best he has ever had. He attributed that to the strip-till practice he used. While our discussion continued about his tillage practices, Richard also quickly brought up the importance of cover crops. He retold the story about how he and about 50 other farmers attended a cover crop meeting in 2016 over at the Renville Convention Center. He talked about how Holly Hatlewick, the District Administrator for Renville County Soil and Water Conservation District, used a rainfall simulator to demonstrate the surface runoff from different covered and non-covered soils. Richard stated that "There were audible gasps" when Holly turned over the conventionally tilled pan and no water had infiltrated the 3-inch depth of the pan. Noting it was eye-opening seeing how much soil was being washed away from 1.5' of rainfall. Richard and Mary are big believers that something should be done about soil health in Minnesota. "Minnesota is behind on the times", Richard explains. "Driving from the south you can see all the other states are already using practices such as no-till to keep their soil in place while Minnesota's just blows away in the wind. It's quite obvious when you cross the border from Iowa. The ground turns black."

Richard is a leader in conservation and is willing to talk to those who are willing to listen. "I get a lot of questions from the neighbors wondering what I'm doing, or younger farmers who are just starting out and what to learn more." Richard explains one of the best things you can do is to educate yourself by using resources like YouTube. It can be a great way to see what's been working or what hasn't been working. And another piece he suggests to those interested is to start small with only about 20 acres or so. Every field is going to be different and just because something is working on your neighbor's field it doesn't necessarily, mean it will work on yours. "And like everything else, you will run into problems, and you will need to learn and adapt," says Richard. He continued to say that "the biggest obstacle for adopting new practices is right here between your two ears".



The Jepsens' believe that it's important to make a profit while also doing right by the land. "One of our motivations is trying to help combat climate change and help reverse it."

Rain Gardens

A rain garden serves as water filter, collecting polluted stormwater before it reaches our lakes and streams. Rain gardens are made up of native shrubs, grasses, and flowering perennials that are planted in a small depression, which is generally formed on a natural slope. It is designed to temporarily hold and absorb in rainwater runoff that flows from rooftops, driveways, patios, lawns or, other impervious structures. Rain gardens are unique, cost-effective, low maintenance, and a colorful way to showcase a conservation practice of filtering runoff and reducing erosion on your property. If you are interested in rain gardens please reach out to the Renville SWCD.



What is the Hawk Creek Watershed Project and what do they do?

By: Heidi Raunhorst Hawk Creek Watershed Project

The Hawk Creek Watershed Project (HCWP) is a local government unit created by a joint powers agreement between Chippewa, Kandiyohi, and Renville Counties to improve water quality on a watershed scale. HCWP focuses on Best Management Projects (BMPs), water quality monitoring, and education and outreach.



BMPs – BMPs are on the ground projects, such as cover crops, alternative intakes, and water storage basins, that improve water quality, reduce erosion, and decrease the amount of pollutants entering our streams and lakes. HCWP has cost-share funds available for the design and installation of BMPs, up to 75% of total project costs, dependent on funding availability.

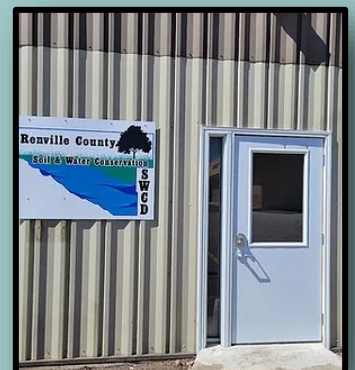
Water Quality Monitoring – HCWP works with several entities, including the Minnesota Pollution Control Agency, Minnesota Department of Agriculture, Minnesota Agricultural Water Resource Center (Discovery Farms), and University of Minnesota, to collect water samples from several lakes and streams for many pollutants, including phosphorus, nitrogen, and pesticides.

Education and Outreach – HCWP utilizes a variety of education and outreach activities, from annual meetings, field days, youth events, one-on-one consultations, and newsletters to promote conservation practices and water quality efforts. HCWP also coordinates a citizen monitor network of volunteers that collect precipitation, stream, and lake data.

The HCWP office is located at the Renville County Courthouse in Olivia. Go online to hawkcreekwatershed.org for more information about what HCWP can do for you.

New Renville SWCD Office Location

The Renville Soil and Water has relocated into a new space! We are still in the same USDA building as before with NRCS and FSA. You can now come through our very own entrance on the east side of the building.



Soil Health Pays

By: Holly Hatlewick Renville County SWCD

One of the critical points we try to use when encouraging farmers to look at Soil Health Practices like no-till, strip-till, cover crops, and reduced tillage is the direct financial gain and reduced farm expenses. If we know one thing, farmers rarely put a high enough dollar value on their time. While soil health practices will save labor time, the significant savings are in equipment operations and maintenance. On Sept 30th, a survey completed by the Soil Health Institute, a nonprofit organization aiming to enhance soil vitality and safeguard productivity, released a comprehensive report on Economics of Soil Health. They collected the data from ten Southern Minnesota Farms. Of the ten farmers interviewed, they grew corn, soybeans, and a small amount of spring wheat, on an average of 1930 acres, using no-till, strip-till, and cover crops. See Table 1 for detailed farm characteristics.

Table 1. Growing conditions and crops for the 10 Minnesota farmers interviewed.

Characteristic	Value
Range in Average Annual Precipitation (inches) ¹	24 - 36
Range in Mean Annual Temperature (°F) ¹	43 - 46
Range in Average Annual Growing Degree Days for Corn ²	2400 - 2700
Average Acres in Corn	959
Average Acres in Soybean	703
Average Acres in Spring Wheat	20
Average Acres in other Crops ³	238
Average Total Crop Acres	1930

¹ PRISM Climate Group 30 Year Normals (1981-2010) (<https://prism.oregonstate.edu/normals/>).

² Purdue Extension Publication NCH-40.

³ Other crops included dry edible beans and sugar beets.

Based on the information gathered, it cost an average of \$16.38/ac less to grow corn and \$23.11/ac less to grow soybeans when using soil health practices. Because of input savings, using a standardized price unit soil health management systems increased net income for these ten farmers on average of \$32.13/ac for corn and \$37.63/ac for soybeans.

We can take this a step furtherer and look at Renville County data. We have three producers in our county who shared their 2020 data on acres they are using no-till and strip-till with cover crops.

The results are soil health pays. We have several farmers in the county who are also willing to share their message and mentor others as they transition to soil health cropping systems. The Renville Soil and Water is here to help farmers navigate this change and connect them to resources.

Source: <https://soilhealthinstitute.org/economics/>

Coffee and Conservation

Start your day off right by tuning into Renville County's hottest morning talk show with Coffee and Conservation. Watch our top two reporters live from the field or back at the office discuss what's going on locally in the county and what kind of different programs are available or coming up. You can either tune in live as it airs by on the Renville SWCD Facebook page or watch it later at your convenience on our YouTube channel.



No-Till Drill Rental

The Renville SWCD has a Great Plains 1006NT Drill that can be rented for seedings. Many benefits using a no-till drill include reducing fuel, labor, and equipment costs, improving your soil structure, reducing erosion by leaving more residue on the surface when no crops are growing, and minimizing the compaction of the soil which leads to



better water infiltration. The SWCD current drill rental agreement goes at a flat rate of

\$150.00 for anything up to 13 acres and each additional acre after that initial 13 acres is \$12.00 an acre. If you have any questions or are interested in renting the drill, please give the office a call at 320-523-1559.

NRCS Programs

By: Jeff Kjorness NRCS

The Natural Resources Conservation Service (NRCS) offers two programs to assist farmers and landowners with resource concerns that they may have on their farm.

First, Environmental Quality Incentive Program (EQIP) is a cost share program to assist with "fixing" resource concerns on the farm. Common resource concerns are wind and water erosion, ag waste storage, water quality, inadequate forage, and wildlife habitat. Common practices in Renville County used to address the resource concerns include, reduced tillage, strip-till or no-till, cover crops, pollinator planting, nutrient and pest management, pasture establishment, animal mortality facilities, and manure storage (lagoons and stacking slabs). Depending on the practice, EQIP contracts can run from 1 - 5+ years to address the resource concerns on the farm.



Next, Conservation Stewardship Program (CSP). CSP is a 5-year program to reward landowners for being good stewards of the land and to assist in further improving their operations on the farm. CSP assesses all land uses on the farm, cropland, farmstead, pasture, and associated land/noncropland. There are numerous practices and enhancements in CSP. The most popular ones in Renville County are nutrient and pest management, reduced tillage, cover crops, and pollinator plantings.

Both EQIP and CSP are on going sign ups which means applications can be accepted anytime. Currently no application deadlines have been set for 2022.

If you have any other question please the NRCS office in Olivia at 3230-523-1550 and talk to Jeff, Brett, or Jon.

Wetland Restoration

By: Kyle Richet Renville County SWCD

Wetlands provide major benefits and functions to agricultural infrastructure and the ecosystem, especially in rural communities. A wetland is an area that is saturated or flooded, seasonally or permanently. Unfortunately, close to 65% of the world's wetlands have been drained or degraded since 1900. In southwest Minnesota, more than 50% of pre-statehood wetlands have been drained. This has placed unwarranted stress on rural infrastructure due to increased flooding and erosion concerns, as well as exacerbated the degradation of water quality. Regulatory programs like the Wetland Conservation Act have been implemented, to retain, restore, and increase the quality of wetlands in Minnesota to combat these issues.



The most important function of wetlands is the ability to provide clean water. Wetland ecosystems act as a filter, by trapping pollutants and allowing the soil to break down harmful pollutants and bacteria, providing clean water. Wetlands provide capabilities to remove harmful nutrients that jeopardize drinking water and vital ecosystems, such as nitrogen and phosphorus that are found in herbicides and pesticides. They also provide necessary flood retention. Today's climate brings forth intense, more frequent rainfall events that cause flooding in areas that use to not experience flooding. Flood retention becomes a vital part of infrastructure and agricultural systems. One acre of wetland, one foot deep provides approximately 330,000 gallons of water storage. This provides much-needed flood retention for towns and cities, as well as agricultural systems producing crops. Wetlands capture runoff and hold water, instead of runoff working its way down the watershed, where it causes flooding in places not meant to hold water.

Although wetlands take up productive cropland, frequently these areas (where wetlands provide the most benefit) are marginal and increased saturation and flooding cause the loss of crops. Strategically placed wetland restorations provide relief on drainage systems, which leads to less future cost of maintenance, or improvements of the drainage system. Less water is placed on the system, which decreases flows, providing relief to outlets that could potentially be jeopardized to fail in today's climate. Producers also see cost savings by decreasing inputs on acres that they tend to take losses on. Counties and cities also see cost savings by alleviating flood issues before flood issues become a problem and taking out necessary infrastructure, like roads and bridges, which has proven to be costly. Along with all the cost savings, the water quality benefits are exponential. Wetland restorations and constructed wetlands allow for impaired waters to be repaired and help alleviate unforeseen weather-related issues.



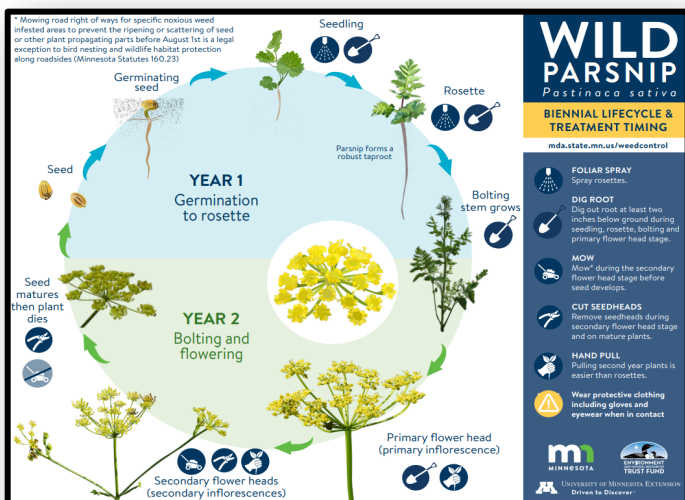
Before placing more drainage tile into the ground, contact the SWCD to discuss a possible wetland restoration, or constructed wetland to see if future cost savings would benefit you.

Reinvest in Minnesota (RIM) Maintenance

The landowner is responsible for establishing and maintaining each conservation practice identified in the conservation plan and referenced in the conservation easement. This can range anywhere from noxious weeds, volunteer trees, or poor establishment. Management options include but are not limited to: mowing, haying, prescribed burning, herbicide application, and grazing.

Noxious Weeds Update

The Minnesota Department of Agriculture (MDA) has updated their list of top priority noxious weeds. On the top of the list is Palmer Amaranth, Oriental Bittersweet and Common Tansy, non of which has been confirmed in Renville County. However Canadian Thistle and Wild Parsnip continue to be Renville County's top priorities as they are the most prevalent. With the use of an MDA grant and the help of the Renville County Drainage department, the Wild Parsnip in Beaver Falls County Park look to have been eradicated. A early spring mowing followed by a herbicide spraying and another fall spraying seems to have killed of this toxic weed. Renville County will continue to monitor the area to make sure it doesn't make a comeback in the park. To help control or eradicate noxious weeds in Renville County, please contact Ethan Dahl at 320-523-3635, the county weed inspector with any questions.



A Reminder from FSA

By: Jennifer King, Farm Service Agency

FSA is always cleaning up our producer record database, and we need your help. Please report any changes of address, zip code, phone number, email address or an incorrect name or business name on file to our office; this includes reorganization to form a Trust, LLC or other legal entity. You should also report changes in your farm operation, like the addition of a farm by lease or purchase.



FSA and NRCS program participants are required to promptly report changes in their farming operation to the County Committee in writing and to update their Farm Operating Plan on form CCC-902.

To update your records, contact your Renville County USDA Service Center at (320) 523-1550.

Environmental Review Required Before Project Implementation The National Environmental Policy Act (NEPA) requires Federal agencies to consider all potential environmental impacts for federally funded projects before the project is approved.

For all Farm Service Agency (FSA) programs, an environmental review must be completed before actions are approved, such as site preparation or ground disturbance. These programs include, but are not limited to, the Conservation Reserve Program (CRP), Farm Storage Facility Loan (FSFL) program and farm loans. If project implementation begins before FSA has completed an environmental review, the request will be denied. Although there are exceptions regarding the Stafford Act and emergencies, it's important to wait until you receive written approval of your project proposal before starting any actions. Applications cannot be approved until FSA has copies of all permits and plans. Contact your local FSA office early in your planning process to determine what level of environmental review is required for your program application so that it can be completed timely.

Cover Crops Providing Weather Resiliency

By: Kyle Richet Renville County SWCD

As time marches on, farming communities face challenges that require adaptations to occur. One of the biggest recent challenges that affect the agricultural community is unpredictable weather events. Rainfalls are becoming few and far between, and when it does rain, it comes in a flooding fashion. Windstorms are becoming more prevalent and an ever-creeping increase in temperature is causing evaporation rates to increase.

Much of the United States experienced a drought in 2021, that put unwarranted stress on farming communities. The drought of 2021 caused commodity prices to plummet, feed shortages for livestock production, and economic uncertainty with inflation causing essential inputs (fuel, fertilizer, etc) to increase. What if there was a way to make crops weather resilient while not suffering yield? Cover crops provide a way to do this! Having your soil work for you is how this can happen, and one of the ways to increase soil productivity is by implementing cover crops.

Cover crops provide numerous benefits for agricultural production. Cover crops increase organic matter in the soil, which leads to more efficient nutrient cycling and contributes to building soil structure. This increase in nutrient cycling allows for nutrients to be decomposed quicker and biomasses to accumulate. These biomasses are directly inputted into crops and help with growth, leading to greater yields come harvest. Cover crops also provide water storage, which helps dry out fields faster in wet conditions.

Soil structure is another benefit that is seen, especially when dealing with weather. Having a good soil structure allows fields to absorb water during rains, resist erosion, as well as increase water holding capacity in dry conditions. Absorbing more water allows for greater infiltration. This will help farmers during planting and harvest, by not having small rains shut down operations for a few days. Erosion is reduced by keeping the soil in place during wind events, and the soil is strong enough to not wash away and create gullies in fields. This helps keep rich, productive soil where it should be and ensure crops are receiving optimal growing media. Greater water holding capacity allows for crops to withstand drought conditions and not be affected in ways covered fields are. Roots can tap into the soil's water storage and use it in drought and heat-related events.

All these benefits will help farming operations become more profitable, as well as more resilient to water events. Contact the SWCD for more information on how to get started.



Renville County Soil and Water Conservation District



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