

CONSERVATION NEWS

MORTON COUNTY SOIL CONSERVATION DISTRICT

Volume 21, no 4

Working Grasslands Partnership Program

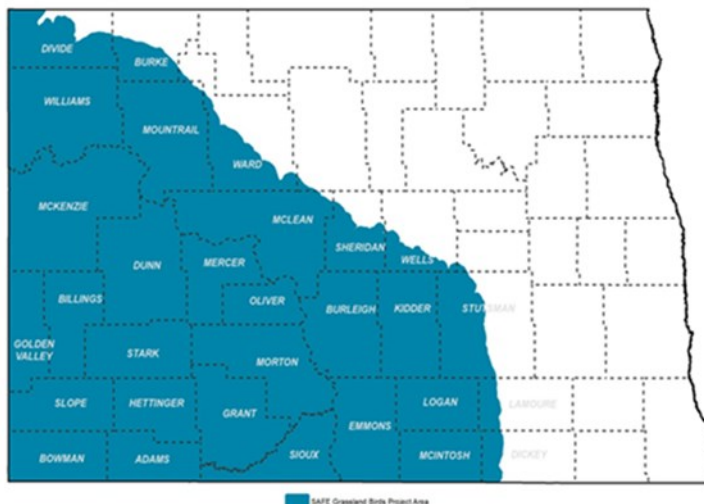
By: Justin Edwards-ND Association of Soil Conservation Districts Farm Bill Specialist

There is an exciting new program available for landowners with expiring or recently expired CRP. The North Dakota Natural Resources Trust was awarded a grant through the North Dakota Outdoor Heritage Fund for the Working Grasslands Partnership Program.

The objective of this program is to keep expiring or recently expired CRP in grassland cover and utilize it in a grazing system to keep high quality habitat for both game and non-game species such as western meadowlarks, curlews and grouse. Producers can receive cost share assistance and possibly a small rental payment to add the expiring CRP into their grazing system.

Cost share would cover grassland improvements such as fences, pipelines and tanks. There could also be extra incentive from the North Dakota Game and Fish Department if the landowner chooses to enroll their land into the Private Lands Open To Sportsman (PLOTS) program.

If you have any questions feel free to call Justin Edwards at the Mandan NRCS Service Center 701-667-1163 Ext 3 or the North Dakota Natural Resources Trust at 701-223-8501.



Blue area represents core Working Grasslands Partnership Area



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Data Supports No-Till Regarding Phosphorus Runoff

Over the summer months you may have noticed various news stories covering blue-green algae blooms, sometimes referred to as HABs (harmful algal blooms). Not all algal blooms are harmful but some have the potential to be. This year, harmful blooms were noticed in waterbodies like Heart Butte Dam and Froehlich Dam. Smaller blooms were noticed in Sweet Briar, but the concentration was not high enough to be harmful. Blooms typically occur when temperatures increase and there is a high level of nutrients available, like phosphorus. The article below is from Ohio and sheds some light on how no-till can help with stopping phosphorus loading.

Luckily, in Morton County most producers utilize the farming practices talked about in this article. For that, we would like to thank all of you!

By: Laura Barrera—Credit to No-Till Farmer

Blake Vince doesn't believe farmers are facing a nutrient runoff problem, but something else. "We have a soil water infiltration problem," he told a group of people attending the Lower Thames Valley Conservation Authority (LTVCA) Farm to Coast tour.

As reported by the *Chatham Daily News*, the 30-year no-till veteran and cover crop user from Merlin, Ontario, explained that tillage creates loose soil with less organic matter. So instead of making its way through the soil profile, water just runs off the surface, taking soil and algae bloom-causing phosphorus (P) with it. Recent data supports his statements. At a news conference last week, Ohio State University research scientist Elizabeth Dayton shared that nearly $\frac{3}{4}$ of P in surface runoff is attached to, and travels with, eroded soil sediment.

A progress report from the Ohio Corn & Wheat Growers Assn., Ohio Soybean Council and Ohio Soybean Assn. emphasized that this makes "erosion control a key to P runoff control." But I found it interesting that while the report cites conservation practices as key to reducing erosion, it doesn't specifically mention no-till or cover crops as methods to implement — even though erosion control is one of the main benefits and often a primary motivator — for those who adopt those practices.

I also found it interesting that the report encouraged tile drainage as a means for preventing the loss of nutrients, crediting it for reducing erosion. While that may be true, USDA research ag engineer Kevin King has shared that research conducted by the USDA-ARS found that when comparing surface runoff and tile runoff, tile was the major contributor in annual dissolved reactive P loading. You can read more about this research — and what no-tillers can do to prevent runoff via tile drainage — in the upcoming November edition of *Conservation Tillage Guide*.

Ohio State and the USDA-ARS both agree that soil testing and injecting or banding fertilizer are best practices all growers can adopt to help keep nutrients on their farm and out of local waterways. Ohio State data indicates that banding or injecting fertilizer has the potential to reduce the concentration risk of P in runoff up to 90% under certain conditions.

As we continue to learn more about the runoff problem and what growers can do to be part of the solution, I think no-tillers like Blake Vince are on the right track. We'll continue to see less runoff and cleaner water the more growers focus on practices that improve the soil.

For more information visit: <https://www.no-tillfarmer.com/blogs/1-covering-no-till/post/6113-data-supports-no-till-regarding-phosphorus-runoff-insider>



Photos Courtesy: <https://www.ndhealth.gov/WQ/SW/HABs/defaultHABs.htm>



cyanobacteria (blue-green algae) in surface water

GrassSnap the Cool Phone App.

In this technologically advanced time, phones are making range monitoring even easier. A phone app that we find helpful here in the office is called GrassSnap! This app was created by the University of Nebraska Extension along with Nebraska Grazing Lands Coalition and NIANR.

There are several great features to this app that can assist with monitoring grazing. One of the best features is that it allows you to take photos from the same spot every year. When you add a new transect (photo point) the app will automatically create a folder for that location. In the folder it will put all of your photos. Each photo will have the name of the file, your GPS coordinates and the date located at the top. It will also save an extra page with any other information that you would like to add.

The app assists you with taking your photo points by telling you what you should be taking a photo of at that time. It encourages you to take a photo of the horizon and then it has you take a photo looking at the ground. This will allow you to see how the vegetation has changed over time. GrassSnap will prompt you with questions to help determine apparent trend or pasture condition scores.

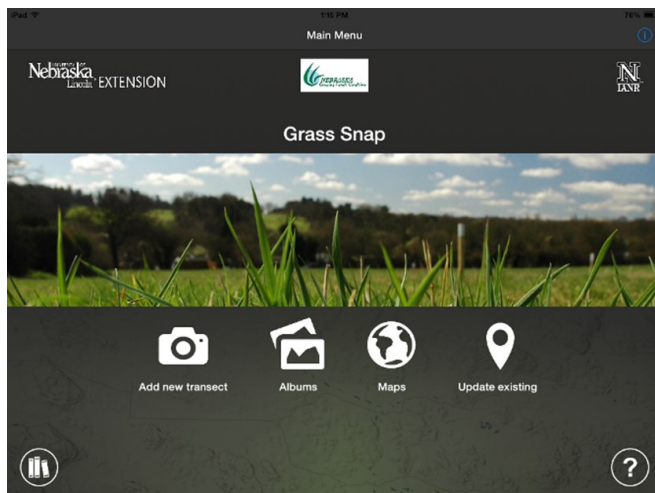
Each folder can be downloaded to a computer to be saved or printed. This phone app is available for both Apple and Droid devices.

This is a great app to use over several years. When you come back to a site the following year you have the ability to overlay the previous years photo. This way you can line up the horizon so you know that you are getting the exact same photo location every time. This is a great way to see how your rangeland and pasture land is changing over multiple years. This may help assist you with management decisions to get the most out of your grazing land while maintaining the health of your grazing land.

If you would like to know more about this application you can visit the Nebraska Extension website at <http://extension.unl.edu> and typing in GrassSnap in the search box or contact Melissa McCann at 701-667-1163 Ext. 3.



This is what the application emblem looks like.



This is what the main page looks like.

Image Name: r29a-2013-Aug-13 point
GPS co-ordinates: 41.922250,-100.684983
Date: Aug 13, 2013, 2:24:04 PM CDT
Direction: 0 N



This is what your photos will look like.

Winter Care for Trees

Winter is fast approaching, and there are a number of things a person can do this fall to help maximize the survival of trees through our harsh winters and maximize health and vigor when spring arrives.

- Rake up or destroy fallen leaves and debris that have accumulated around your trees. Many fungal leaf diseases can survive the winter in these leaves and will quickly establish in your trees come spring.
- Wrap the lower main stem of young trees to help protect their thin bark from winter damage such as sun scald, winter burn, and rodent damage.
- Prune any dead or damaged branches. This will help reduce overwintering sites for pests and diseases. Any living wood should be pruned after the tree has gone dormant, but while they still have leaves is a great time to mark any living branches to be pruned later.
- Watering is a great idea. Giving trees water in the fall, even after they have dropped their leaves, is a great way to help improve survival through the winter. A good rule of thumb is to weekly give 2 gallons of water per inch of stem diameter.
- In addition to caring for the trees, make sure to clear off any dirt and debris that may have accumulated on your weed barrier fabric. It doesn't take much organic matter for weeds to start growing on top, and once they do their roots can penetrate the fabric and ruin it quickly.

Preparing for Spring Planting

If you are thinking about planting trees in the spring, now is the best time to get started. If you want to have the district plant for you, contact us and set up an appointment to get started. Once you have met with us and we have figured out where the rows will go, there are a few things you should be doing to get ready for the spring.

- Get your utilities marked. The district has a policy that we will not plant on any easements, and we have to give 10 feet on either side of any utility lines. We also have to stay at least 100 feet off any roads, and some other situations warrant additional setbacks. In addition, we may refuse to plant if your area is in native range and certain criteria are not met. The point is, until we know where all of these things are, we can't truly know where we can put your trees and you should not start your site prep until you have talked with us.
- Prepare the ground. In meeting with us we will decide if it would be best to do a no till planting or to work the soil. If the soil is going to be worked, start doing that this fall. You will want the soil to be the consistency of a vegetable garden- not lumpy, but not a powder either. This can take a lot of time to do, so you want to start this fall. If it is a no till site, it needs to be sprayed multiple times and mowed.
- Mark your rows. If the rows aren't marked, we don't know exactly where to put the trees! Even though we have met on site and discussed the plan for a while, without the rows being marked we have to make a guess on site where to put them, and that might end up with them not being exactly where you had imagined. In addition, we have to take the time to mark the rows so we know where each one will be, and there will be an extra charge if we have to do that on site.

The importance of the preparation for tree rows should not be underestimated. Even the best plans with the best trees can be hindered if the site is poorly prepared. If you have any questions with any of these steps, please contact Adam, our District Technician, at 701-667-1163 ext. 3.



Good Site Prep

Good Site Prep

BAD SITE PREP!

Tree of the Quarter—Amur Maple

Amur Maple is a deciduous tree that has become quite popular in our area. It is a tall shrub or short tree habit that is appealing to many people both as a windbreak and landscape tree. The mature crown height in ideal conditions is 15-20 feet, with a similar width. In our area we can expect a height of around 10 feet in 20 years, which may ultimately end up being the total mature height.

Amur Maple is popular for a number of other reasons as well. In addition to the appealing growth habit, it gets fragrant yellowish-white flowers in the spring, and the leaves turn a beautiful red color in the fall that is very appealing to a lot of people. It can also be a good tree for wildlife, as it is used for browse by deer and rabbits, the seeds are eaten by squirrels, and can provide some cover for songbirds.

This all being said, there are some reasons to exercise caution with Amur Maple. For one, it is somewhat picky with soils. It does not handle alkaline or poorly drained soils well, and does not tolerate salinity. These are all issues that landowners in Morton County know well. It is only approved for soil class 1, 3, and 5 in our area, which are soils we don't encounter very often. Additionally, some other states, such as Minnesota and Illinois, consider Amur Maple to be invasive. This is because in those areas it has shown the tendency to displace native species in the understory in wooded areas. It also has the ability to produce a lot of seeds, and easily re-sprouts if the stump is cut.



Making Cover Crops Cash Flow

With commodity prices where they are at, margins are small. Adding another seed expense is a very tough decision to make if you're not focused on the Soil Health aspect. Part of my job has been to work with a particular group of farmers in the county that were very interested in **Soil Health** and wanted to use the tool of **cover crops** to help increase Soil Health on their operation. During this project we have collected some economic data, which I would like to share.

The data in the table below comes from one operation in 2015, using the 2015 crop prices. It is by no means a scientific study but you may find it useful and our goal is to give you "something to chew on."

The Scenario: This operation winters and feeds their cows near the farmyard on some surrounding cropland and gives them access to rangeland. The crop aftermath is corn and sunflowers with a 70 acre field that is annually seeded to cover crops after haying an oat/pea/barley mix. Below is a table of their 2015 feeding regimen.

Calendar of Events and Economic Data

<u>Start</u>	<u>End</u>	<u>Days (#)</u>	<u>Cows (#)</u>	<u>Bales (#)</u>	<u>Silage (lbs.)</u>	<u>Chopped Hay (lbs.)</u>	<u>\$/hd/day</u>
1-Nov	5-Dec	35	235	0	0	0	\$0.00
9-Dec	26-Dec	18	215	2.5	0	0	\$0.44
26-Dec	13-Feb	50	215	3	3500	600	\$1.94
13-Feb	15-May	90	215	6	3500	600	\$2.47

Values used: \$64/ton for hay, \$28.50/ton for silage (based on 2015 corn prices), and \$83.33/ton for chopped hay to include grinding costs.

Interpreting the Data: Looking at the 18 day span in orange, **\$5,805** was saved by not having to increase rations to the next step (green). The cost of seed (\$37.09/ac) and seeding (\$15/ac) for the 70 acres was **\$3,646.30**. It's easy to see that the money saved in feed, outweighs the actual cost of seeding these covers. We do take liberties by assuming that rations weren't increased because of the cover crops. With the covers testing at 22% crude protein in Mid-November the owner felt that this was a reasonable assumption as he did not need to supplement and body condition kept increasing. There are other variables not added in, such as the first 35 days of grazing, no manure hauling, and increased fertility on the field. Not all of these have a direct impact on your checkbook, but they are worth noting. But now let's transition to the cover crop mix that was seeded, since each can vary.

With Soil Health, high quality feed and seeding date in mind, we used:

- 1) Legumes for Nitrogen building.
- 2) Warm season grasses to help build organic matter below ground and get biomass above ground.
- 3) Brassica species to help with compaction, nitrogen scavenging and protein level.

Some good things to know: Brassica species (kale, turnips, radish, collards etc....) are very cold tolerant. Many species do not freeze until temperatures dip below 20 degrees. This helps keep a living root in the soil longer and are superb at keeping protein levels high in a later grazed mixture. Fall grazing warm-season grasses like millet and sorghum-sudan can come with risk like high nitrate levels. These risks are minimized when used in a mix rather than solid seeding. Testing is recommended if it looks to be stunted/stressed. Waiting to graze sorghums for 7-10 days after a freeze is also recommended to eliminate the risk of Prussic Acid poisoning.

Hopefully this gave you something to think about for next year. Having cover crops on an entire operation can be near impossible. However, the fields nearby may be the perfect spot to try and cut your winter feeding costs while also giving you benefits you may not see, in the soil.

Conservation Stewardship Program, CSP– Reinvented for 2017

The Conservation Stewardship Program is receiving a revamp for 2017. New enhancement activities and a new program format will be unveiled in November 2016. Enhancements are management activities that go above and beyond the minimum conservation practice standard requirements helping the producer achieve a higher level of conservation. CSP helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resources concerns. Participants earn CSP payments for conservation performance - the higher the performance, the higher the payment. CSP provides payments through five-year contracts.

Our Conservation Stewardship Program (CSP) helps you build on your existing conservation efforts while strengthening your operation. Whether you are looking to improve grazing conditions, increase crop yields, or develop wildlife habitat, we can custom design a CSP plan to help you meet those goals. We can help you schedule timely planting of cover crops, develop a grazing plan that will improve your forage base, implement no-till to reduce erosion or manage forested areas in a way that benefits wildlife habitat. If you are already taking steps to improve the condition of the land, chances are CSP can help you find new ways to meet your goals.

CSP is for working lands. It is the largest conservation program in the United States with 70 million acres of productive agricultural and forest land enrolled in CSP. Thousands of people that have made the choice to voluntarily enroll in the program because it helps them enhance natural resources and improve their business operation.

Contact the Mandan NRCS for more information, or check out the NRCS website: <http://www.nrcs.usda.gov>. Click on the **Programs** tab – **Financial Assistance**. Then scroll to the **Conservation Stewardship Program** paragraph and click on the hotlink to view details of the program.

Conservation Client Gateway—Your Online Access to NRCS

Conservation Client Gateway is a new NRCS secure web application that provides individual landowners and land users the option to request conservation technical and financial assistance from NRCS. **Conservation Client Gateway** provides users the flexibility to determine when they want to engage with NRCS online and when they prefer in-person conservation planning assistance.

Conservation Client Gateway enables farmers, ranchers and private landowners to securely:

- Request NRCS technical and financial assistance;
- Review and sign conservation plans and practice schedules;
- Complete and sign an application for a conservation program;
- Review, sign and submit contracts and appendices for conservation programs;
- Document completed practices and request certification of completed practices;
- Request and track payments for conservation programs; and
- Store and retrieve technical and financial files, including documents and photographs.



Conservation Client Gateway is entirely voluntary, giving producers a choice between conducting business online or traveling to a USDA service center.

Just a few steps will get you started on Conservation Client Gateway. For step-by-step instructions on getting started, visit: www.nrcs.usda.gov/clientgateway

MORTON COUNTY SOIL CONSERVATION DISTRICT

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RETURN SERVICE REQUESTED

All Programs and Services of the Soil Conservation District are offered on a nondiscriminatory basis without regard to race, color, national origin, religion, sex, marital status, age, or handicap.

Wildflower of the Quarter

Heath Aster

Late Blooming- Late summer into fall

-Many small white flowers with yellow centers

-Excellent pollinator plant for a wide variety of insects



UPCOMING EVENTS

November

10th– SCD Board Meeting @ USDA Service Center, Mandan

11th– Veteran's Day Holiday—Office Closed

24th—Thanksgiving Day Holiday—Office Closed

December

8th– SCD Board Meeting @ USDA Service Center, Mandan

26th—Christmas Day (Observed) Holiday—Office Closed

January

2nd—New Year's Day (Observed) Holiday—Office Closed

12th– SCD Board Meeting @ USDA Service Center, Mandan

16th—Martin Luther King Jr's Birthday (Observed)—Office Closed

Save the Dates!

Morton County SCD 2017 Winter Workshop—February 16th, 2017

Morton County SCD 2017 Women's Ag Day—March 16th, 2017

More information coming soon!

Please visit www.mcscd.com to stay up to date on all upcoming tours and events! Also Like us on Facebook!