LaMoure County SCD
PO Box 278
LaMoure, ND 58458-0278
Return Service Requested

Non-Profit Organization
U.S. Postage Paid
Permit #4
LaMoure, ND 58458
Pre-Sort

CANCELLED

Ladies Ag night has been cancelled for 2021 due to the uncertainty of COVID.

There is still time to order trees!

Orders are preferred by March 15th but still can be placed after. Order forms can be picked up at the office, found on our website at www.LaMoureSCD.org, or call 883-5344 Ext. 3 to have one mailed out to you.

Find us on the web at LaMoureSCD.org

Help Wanted

Taking applications for Tree Crew. Seasonal from May 1 to June 30 depending on the weather.

Two positions available: Helping machine plant trees in the field or helping sort and bag tree orders in the shed then scheduling pick up with customers.

Starting wage is $12/hr if under age 18 and $16/hr if over age 18.

If interested, please call the office at 883-5344, ext. 3 for an application or visit our website at www.LaMoureSCD.org

Deadline to apply is March 20. Inquires welcome after this date, however the positions may be filled.

THE LANDSAVER

LAMOURE COUNTY SOIL CONSERVATION DISTRICT

Winter 2021 **Volume 31, Number 1**

Congratulations to the Haugen Families—2020 Achievement Winners

The LaMoure County Soil Conservation proudly selected Clay & Pam Haugen and Josh & Mary Haugen along with their children Lexi and Alex, as the 2020 LaMoure County Achievement Winners!

Clay and Josh are a father and son duo who farm together in the north-eastern part of LaMoure County. Clay and Pam started from scratch, farming on their own in the early 1980s. They started with dairy cows from 1981 to 1997, then switching to beef cattle until 2013 and now focusing on grain farming with a corn, bean, and wheat rotation.

Josh and Mary farm together with them and have incorporated no till and cover crops into their minimum till operation to improve soil health. They have been involved in CSP, EQIP, and CRP programs with practices such as installing filter strips to increase wildlife habitat, planting unproductive cropland back to native perennial grass, plant tissue testing of corn to reduce the over application of fertilizers, using enhanced efficiency fertilizer products, and installing drift reducing nozzles when applying pesticides. The Haugens value the land and all that it has to offer, striving to keep it sustainable for future generations.

The ND Soil Conservation Achievement Awards Program is a statewide program where each of the Soil Conservation Districts in ND recognizes farmers and ranchers who have made an outstanding effort to conserve their valuable resources. The statewide convention and banquet was cancelled last November, but the Haugen's will be recognized at the banquet this coming November instead.

Congratulations Clay and Josh Haugen and families!

Clay and Pam Haugen farm

Josh and Mary Haugen farm

2020 Yearly Review

LaMoure SCD

Participated in NDASCD Conservation Achievement Awards Program
Sponsored "TREES" program for LaMoure County schools through zoom
Supported the "Keep ND Clean" poster contest
Planted 125,230 linear feet (23.7 miles) of trees
Installed 120,560 linear feet (22.8 miles) of weed barrier
Installed 500 tree tubes
Sold an additional 485 tree tubes
Provided no-till drills for 1,241 acres of grass and cover crop plantings
Assisted producers and land owners with grass and cover crop plantings
Rented additional equipment such as manure spreaders and post pounder
Published newsletters
Maintained website
Maintained Arboretum that is open to the public

LaMoure NRCS

442.50 ac.- Upland & Wetland Wildlife Habitat Management (645)
5,801 ft.- Pipeline (516)
1 installed - Livestock Water Tank (614)
734.80 ac.- Cover Crop (340)
5,100 ft - Windbreak/Shelterbelt Establishment (380)
7,831 ft. - Cross Fence (382)
234.4 ac - Prescribed Grazing/Improve Grazing Management (528)
78 ac. - Pasture/Hayland Planting (512)
49 ac.- Nutrient Management- Reduce risk of nutrient losses (590)
2.7 ac.- Field Border (386)

10 new EQIP Contracts funded in 2020 on 355 acres in LaMoure County.

FY21 CRP Grassland sign up announced.

Signup for CRP Grasslands runs from March 15, 2021 to April 23, 2021

CRP Grasslands helps landowners and operators protect grassland, including rangeland, pastureland, and certain other lands while maintaining the areas as grazing lands. Protecting grasslands contributes positively to the economy of many regions, provides biodiversity of plant and animal populations, and improves environmental quality. A separate CRP Grasslands signup is offered each year following general signup.

For more information on CRP, visit fsa.usda.gov or contact the LaMoure County FSA Office.

Site 3 – Continued...

SOIL YOUR UNDIES!

* **pH** is at 7.7, this soil is mildly alkaline (pH scale 0-14, 7 is Neutral).
  Most plant nutrients are optimally available to plants within the 6.5 to 7.5 pH range, plus this range of pH is generally very compatible to plant root growth (Jensen, Dr. Thomas L., "Soil pH and the available of Plant Nutrients- Plant Nutrition Today", Fall 2010, No. 2").

  At alkaline pH values, greater than pH of 7.5, like this one, phosphate ions tend to react quickly with Calcium (Ca) and Magnesium (mg) to form less soluble compounds. Most other nutrients (micronutrients especially) tend to be less available when soil pH is above 7.5. The exceptions is Molybdenum (Mo), which appears to be less available under acidic pH and more available at moderately alkaline pH values (Jensen, Dr. Thomas L., "Soil pH and the available of Plant Nutrients- Plant Nutrition Today", Fall 2010, No. 2").
* **Phosphorus (P) and Potassium (K)** are reported in parts per million (ppm).
  At this site P was 125 ppm, P is very high in this exact location of where the soil was tested (P is not necessarily this high in the whole field). NDSU says the optimum level ranges from 15 to 50 ppm but the amount required varies among soil types.
  At this site K was 2,000 ppm, K is extremely high in this exact location of where the soil was tested (K is not necessarily this high in the whole field). NDSU says the optimum level ranges from 200 to 300 ppm but the amount required varies among soil types.
  This high of P & K tells us that amendments are being applied each year but that the plants are not using it all. So, fertilizer was applied but there was minimal plant growth in that area to use it.

If you have areas in your field that are usually wet/drown out, then check with your agronomist if you need to put fertilizer in those spots. It may be a way you can save some money because those areas can add up.

On 9/22/20 when digging up the undies, it was noticed that the soils at this site were wet. WHY? Odds are there was extra moisture in that spot. Soybeans use less water, than say corn, and especially in September when the growing season is slowing down.

Did this experiment go as we thought it would?

NO, we thought it would go like this:
1st place (undies all eaten by micro-organisms): Site 2- Pasture. Why- higher diversity of plants (9 or more), which start growing earlier and continue later than some crops.
2nd place (half eaten undies, half not): Site 1- Cover Crops & No-Till. Why- Mix of cover crops means more diversity, so more soil biology.
3rd place (barely eaten undies): Site 3- No-Till. Why- less diverse crop and cover crop rotation and saline/wet areas in the field.

This experiment is more visual than scientific and poses so many more questions in our minds as to why and how these undies were soiled the way they were. It has really made us think more about what is happening underground and how it relates to soil health.
We look forward to trying this experiment again this spring. Let us know if you would like undies planted in your soil this spring!

The original article was published in last fall's newsletter and can be found on the LaMoure Soil Conservation website at LaMoureSCD.org under the "Projects" tab.

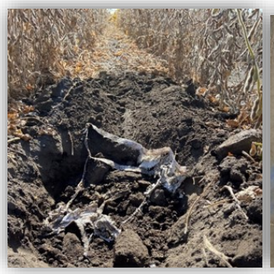
Site 2 – Continued...

SOIL YOUR UNDIES!

* **pH** is at 6.8, so close to neutral (pH scale 0-14, 7 is Neutral).
  Most plant nutrients are optimally available to plants within the 6.5 to 7.5 pH range, plus this range of pH is generally very compatible to plant root growth (Jensen, Dr. Thomas L., "Soil pH and the available of Plant Nutrients- Plant Nutrition Today", Fall 2010, No. 2").
  Should see more plant diversity in the next few years.
* **Phosphorus (P) and Potassium (K)** are reported in parts per million (ppm).
  At this site P was 36 ppm, a really good level to be at. NDSU says the optimum level ranges from 15 to 50 ppm but the amount required varies among soil types.
  At this site K was 440 ppm. NDSU says the optimum level ranges from 200 to 300 ppm but the amount required varies among soil types.
* On 9/22/20 when digging up the undies, it was noticed that **the soils at this site were dry**. Our thoughts were because this is perennial vegetation it used up the moisture quicker and because this site is dry at this time it affected the soil microbe population as well, which leads to 3rd place undies.
* **Still newly established**, only two years as pasture, the soil may still be making changes to itself and microbes are getting accustomed…just needs more time to flourish.

Site 3 - Barnes- Svea Loam Soil Type.
No till system for 5 or more years- Corn and Soybean rotation.
Soybeans in 2019 and 2020, as well as some Preventive Plant (PP) areas in this field also.

SITE 3- NO-TILL START: 7/24/2020



SITE 3- NO-TILL END: 9/22/2020

Mostly Eaten Undies (1st place)
Conclusion/Ideas: We gave these undies a rating of 1st place as there was very little left of these undies.

Our thoughts from visual observation and a soil analysis:

* **Organic Matter (OM)** is at 4.9%, which is really good! This spot may have high organic matter due to the soil types. Svea has high amounts of OM, it is deep dark black to a depth of 16 inches. Barnes is similar to Svea but has thinner topsoil and still has a lot of OM.
* What is the **Carbon to Nitrogen Ratio (C:N)?** We suspect it is very high in Nitrogen. We added Carbon to the system by adding 100% cotton undies and the microbes attacked it (microbe frenzy), hence why the undies are gone and why this site comes in at #1.

NDSU | EXTENSION

Photo Credit: Eric Hylden

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Brad Brummond
News Column

FORTY CHANCES

I am currently reading a book by Howard G. Buffet called Forty Chances. The author is actually the son of Warren Buffet and believe it or not he is a farmer. This book was recommended to me by Dr. David Franzen, our NDSU Extension Soil and Fertility Specialist. It is predicated on the notion that the average farmer gets forty crops or forty chances to make changes. Make no mistake, this is a book about change and if you are not comfortable with change this is not the book for you. This a book about world hunger, soil health and trying to create the next brown revolution. We have already had the green revolution with the new crop technology this book talks about improving our soil's health and making the soil and resources we have do more. It has inspiring stories of the third world farmer's plight in fighting warlords, genocide and all the ills that accompany mismanaged economies and total lack of respect for food production. This book has produced a rollercoaster of emotions from joy to extreme disbelief and sadness but most of all it gives me hope, it is a dire warning of what happens when the food and farmers go away.

Now let's talk about how the concept of forty chances applies to Walsh County farmers. If we follow this concept each producer is given approximately forty chances to change their operation or not. The easy changes are adopting the new high yielding varieties and the latest technology and equipment. The hard changes are trying to make changes in your operation that are not the accepted norm and carry social and maybe economic risks while you figure out your new paradigms. The soil health movement that I have been attracted to over the past ten years falls into this category. We have figured out a lot of things in this movement that is led by farmers. I have found that the really profound changes I have seen have always occurred when farmers and consumers work together in a common cause. We must stop the fighting and those that would take away the tools we need to farm. If we work together I believe we can overcome this, but we also must change and change is hard. I was once told the only ones who like change are babies with soiled diapers.

I try to be the change I would like to see in the world and I am part of a core group of people looking at soil health and how making changes that stabilize and improve the productivity of our soils does not have to come with an economic cost or a very low one. The "Save the Five" program seeks to return to productivity of the five acres that exist in most quarters in Walsh County. Think of the increased food production we could gain if we got just these acres back into production and instead of them being a loss generator and turn them into profit producing acres. We are rapidly running out of herbicide options on the tough to control weeds. We have initiated a program that looks at using strip till to suppress some of the early growth of these weeds and protect our fragile beet seedlings. We are looking at conservation beets and trying to gain knowledge on how to keep more cover on our ground, stop the wind erosion, increase soil health while improving the productivity our land and doing it in a way that makes economic sense. We have been doing cover crops for a long time in Western Walsh County and have used them as a way to put on cheap gain when traditionally our cattle are going backwards. I have found it does have to rain to make this happen and it can't be 30 inches! These are what I have been doing with my 40 chances. I am now at year 39 so how many chances do I have remaining to make a positive impact in Walsh County Agriculture? The answer is not many.

What will you do with your forty chances? What innovations would you like to try on your farm to increase the productivity of your land and in return increase your profit margins and fight weeds? It does not have to be big or earth shaking, just start! If you would like to learn more about some of the things I have done with my forty chances and how you might adapt some of it to your operation I would love to talk to you 701-284-6624. The "Save the Five" program might be an easy way to start down the road to your forty chances.

"Soil Your Undies" Project Results and Conclusions

By: Amanda Brandt, Lance Duey, Kelsey Naze, and Susan Muske

SOIL YOUR UNDIES!

In the fall 2020 Newsletter there was an article called "Soil Your Undies" which was a trial the LaMoure NRCS and SCD employees tried in LaMoure County. In this trial, three different field locations were chosen, and pairs of underwear were buried in hopes of demonstrating different levels of soil biological activity based on visual observations of the underwear after **61 days** buried underground. The theory is that the 100% cotton underwear are high in carbon and they would be "eaten" in healthy soils teaming with the microbial life underground.

Our conclusions and observations to this trial are as follows:

Site 1 – Barnes- Gardena Loam Soil Type.

No-till system for ten years- soybeans in 2019, nine-way Cover Crop Grazing Mix in 2020.

DAY 1- SITE 1 START: 7/24/2020

DAY 61- SITE 1 End: 9/22/2020

Half-Eaten Undies (2nd place)

Conclusion/Ideas: We gave these undies a rating of 2nd place based on our visual observations of how "eaten" they were by the soil microbes and other chemical reactions.

Our thoughts from visual observation and a soil analysis:

* **Organic Matter (OM)** is at 5.5%, which is good! If the OM has risen in the last 4 years, then there may be too much Carbon in the system.

* What is the **Carbon to Nitrogen Ratio (C:N)?** We suspect maybe higher carbon in the soil, so this ground may need different diversity (maybe adjust the crop rotation).

* **pH** is at 5.9 (pH scale 0-14, 7 is Neutral). pH on this site is slightly/moderately acidic. Low or High pH soils can tie-up nutrients, many sources say to aim for your soil pH to be in the 6.3 to 7.3 range.

Site 1 – Continued...

Maybe the soil pH is affecting the microbes in the soil?

* **Phosphorus (P) and Potassium (K)** are reported in parts per million (ppm).
  At this site P was 46 ppm. NDSU says the optimum level ranges from 15 to 50 ppm but the amount required varies among soil types.
  At this site K was 675 ppm, per the soil test there seems to be an excess of Potassium. NDSU says the optimum level ranges from 200 to 300 ppm but the amount required varies among soil types.

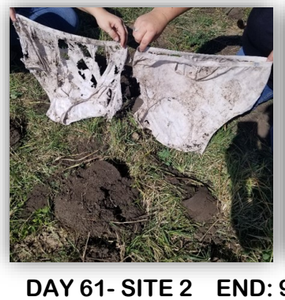
* On 9/22/20 when digging up the undies, it was noticed that the soils at this site were semi-dry (not wet but not dry). Crops and Cover Crops use some moisture but not as much as perennials (in Site 2).

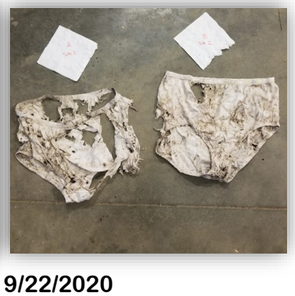
Site 2 – Barnes- Svea Loam Soil Type.

2 Years in Pasture

Site was seeded back to grass in the spring of 2018 with a mix consisting of Big Bluestem, Little Bluestem, Green Needlegrass, Blue Grama, Sideoats Grama, Western Wheatgrass, and Indian Grass. Prior to seeding it to grass it was cropped and in the early fall of 2018 it was seeded to a grazing cover crop mix of peas, oats, turnips, and radishes and then grazed.

Day 1 - SITE 2 START: 7/24/2020





DAY 61- SITE 2 END: 9/22/2020

Barely Eaten Undies (3rd place)

Conclusion/Ideas: We gave these undies a rating of 3rd place as they had not really changed.

Our thoughts from visual observation and a soil analysis:

* **Organic Matter (OM)** is at 3.5%. This seems a bit low for pasture and is the lowest of the three sites. Will have to watch it over the next few years, it should increase overtime.

* What is the **Carbon to Nitrogen Ratio (C:N)?** We suspect this spot may be high in Carbon. This field is cycling carbon from the top vegetation as well as the roots. Soil organisms and the soil are still probably adjusting to the management change.