Full Season Cover Crops Displayed at Paradise Farms Tour

Levi Neuharth, Vice Chairman of the South Dakota Soil Health Coalition, and wife Crystal Neuharth hosted an educational field day at their farm near Fort Pierre on October 4th 2017. Technical personnel and local producers gathered to view full season cover crops which had been implemented with partial funding provided through the Natural Resource Conservation Service’s Conservation Stewardship Program (CSP). Participants learned how Neuharth had integrated livestock in conjunction with full season cover crops in order to increase soil health. Other demonstrations of soil health principles at the event included a rainfall simulator and a session describing how to measure infiltration at field level.

Neuharth and his family, farm approximately 2,500 acres of land with an additional 3,000 acres of grassland which is custom grazed. Some of the many soil health practices incorporated into his operation include: utilizing No-Till; diversifying crop rotations to include a wide variety of small grains such as winter wheat, spring wheat, oats, peas, milo, sunflowers, as well as hay barley; incorporating livestock through custom grazing and utilizing rotational grazing; as well as planting cover crops. Neuharth’s were recognized by the Society of Range Management (SRM) for the management excellence. “The Neuharth’s get it! When you step foot on their operation, you can see first hand what great management looks like,” stated April Boltjes, USDA/NRCS Soil Conservationist in Pierre.

When asked which of these soil health practices he believes has made the most difference on his farm Neuharth insists that it is impossible to identify just one. He believes that in order to be successful the practices must be utilized together. As someone who grew up with a No-Till background, mimicking nature to the best of his abilities is extremely important to this soil health advocate. In the future Neuharth hopes to continue to learn new soil health techniques, work to limit necessary inputs, as well as incorporate more livestock throughout his operation.

S.D. Soil Health Coalition Annual Meeting

The S.D. Soil Health Coalition proudly announces that our Annual Meeting will be held on January 17th at the Lake Area Tech campus in Watertown. The following guest speakers will be promoting the five principles of soil health.

Allen Williams, David Brandt and Joe Breker
Communications Coordinator Hired

The South Dakota Soil Health Coalition (SDSHC) has a new employee and member of our conservation team! Please welcome Sarah Fitzgerald, the new Communications Coordinator, who will be based out of the Sioux Falls USDA Service Center. Originally from Illinois, she attended Augustana College, in Rock Island, where she majored in Biology, Environmental Studies, and Geography. Her work background includes the Quad City Botanical Center, Mercer County Soil and Water Conservation District, as well as Rock Island County Soil and Water Conservation District. Sarah is an avid hiker, camper and natural resources enthusiast and is looking forward to exploring SD as she helps to further the mission of the Soil Health Coalition.

This position was made possible through a USDA NRCS SD 2017 Conservation Collaboration Grant (CCG) to the SDSHC, with key partner the South Dakota Grassland Coalition (SDGLC), and the SD Association of Conservation Districts (SDACD) who is the employer of record. Through summer of 2020, Sarah will be working closely with State Public Affairs Officer Colette Kessler and SDSHC Coordinator Cindy Zenk to increase awareness and adoption of soil health practices in South Dakota. Among other tasks, Sarah will be handling the Coalition’s communications through traditional and social media and managing the communications/public relations deliverables in the NRCS and SDSHC Cooperative Agreement, such as the Soil Health Producer Profiles and South Dakota Soil Stories on YouTube.

FFA Regional Land Judgers Receive Scholarships

The South Dakota FFA Foundation and South Dakota Soil Health Coalition are proud to announce the recipients of four $100 scholarships for students placing first in one of the four SD Regional Land Evaluation Competitions this fall. 2017 scholarship recipients are: Gayge Schopp, Lemmon; Sydney Maro, Highmore, Jacob Prouty, Willow Lake; Emily Bies, McCook Central.

The scholarships are designed to encourage and reward students’ accomplishments in the field of land & soil management. Scholarships are made possible by a contribution to the SD FFA Foundation from the South Dakota Soil Health Coalition. "The South Dakota Soil Health Coalition is excited to be partnering with South Dakota FFA to help inform young people about the dramatic effect management has on water infiltration, microbial activity and production. We believe the future of agriculture depends on the next generation. The SDSHC hopes to help demonstrate the NRCS Rainfall Simulator to as many citizens as possible in the coming months. The direct correlation between improved water infiltration and improved water quality are easily seen during this powerful 20 minute demonstration." said Doug Sieck, President of the South Dakota Soil Health Coalition.

The South Dakota Soil Health Coalition is proud to support Agricultural Education and the FFA’s mission to make a difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.
South Dakota State University Extension and USDA-NRCS Collaborate on Cover Crop Nutrient Cycling Project

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Through funding from USDA-NRCS, SDSU Extension is leading an on-farm study and survey that aims at investigating soil nutrient cycling of cover crops. A three year study initiated in the fall of 2017 will utilize various crop lands across South Dakota to conduct research and demonstration on the topic of cover crop nutrient cycling.

It is well documented that cover crops add diversity, prevent soil erosion, enhance soil biological activity, suppress pest pressure, increase soil organic matter, and provide supplemental livestock forage. A national survey conducted by USDA-SARE in 2016 found a large portion of respondents, especially commodity crop growers, adopted cover crops for overall soil health improvement. The primary reasons indicated by SD growers to grow cover crops are soil health and supplemental livestock forage. Additionally, through discussions with crop growers across SD, we have identified nutrient cycling as another important aspect of cover crops where growers express interest. A few studies conducted in other parts of the US on cover crop nutrient cycling have reported encouraging results, however, due to differences in climate and production systems, the results from these scientific studies may not always relate to SD growing conditions. This project will focus on various cover crop blends composed of both cool and warm season broadleaf and grass species. The study is already underway and has three distinct objectives which the investigators aim to complete by the end of 2020.

Objective 1: Determine the influence of cover crop compositions on nutrient cycling and availability for subsequent cash crops in South Dakota.
Objective 2 – Determine cover crop nutrient compositions and rate of loss effect on following cash crop nutrient uptake and yield as well as soil moisture status in western South Dakota
Objective 3 – Cover crop carbon/nitrogen ratio effect on corn and sorghum nitrogen requirements.

As the trials and demonstrations are completed each season, the results will be posted/published on SDSU Extension igrow.org website and shared through NRCS newsletters, fact sheets, and in-person meetings (i.e. field tours and winter meetings).

Save Time & Money. Improve Soil Health & Water Quality

Eliminating tillage not only improves soil health, but can reduce energy and save money by reducing fuel costs. Enhanced nitrogen cycling on no-till fields reduces recommended nitrogen lbs./acre applied to the field.

Additional No-Till Economic Information
Newly Available Resources and Projects

South Dakota Soil Health Mentor Network Brochure
Now Available!

The USDA Natural Resources Conservation Service (USDA-NRCS), South Dakota Association of Conservation Districts, individual conservation districts and the South Dakota Soil Health Coalition have established a Soil Health Mentor Network for South Dakota.

The list of mentors, called South Dakota Voices for Soil Health, includes nearly 100 names of individuals willing to be a mentor for soil health management practices. “The Network provides a method for people to connect and communicate with other agriculture producers about their curiosities or challenges with implementing soil health management practices,” says Colette Kessler, Public Affairs, USDA-NRCS. “It’s great when you have a relationship where you can call someone and they can help you think through ideas that might fit your management practices.”

The publication will be available by contacting any of the partners, local offices in the USDA Service Center, or send an email to USDA-NRCS and we will send a hard copy by U.S. Mail. So, if you are contemplating your next step to improve your soil health, contact a mentor to help you get started. (Source: USDA NRCS)

Evaluate Soil Economics
Data points are being collected on more than 4,000 acres
The Soil Health Partnership has enrolled 111 farms across 12 states in projects to determine the economic, yield and environmental benefits of farm practices such as cover crops, nutrient management and reduced tillage. The research trials take place on just over 4,000 acres across the program. The data those farms gather can demonstrate a positive economic impact from these practices, and that in turn can convince many more farmers to adopt the practices on a larger scale.

Soil Health Economics in SD
The goal of SDSU Extensions 3 year project is to analyze the economics, production risks and soil health impacts associated with several agricultural practices. SDSU Extension will provide valuable information that will facilitate decision making processes for agricultural producers in South Dakota.

Farm Selection Criteria: This project aims to study four major agricultural practices: no-till, cover crop, diversified crop rotation and integrated livestock cropping system. We will work with neighboring farm pairs with different agricultural practices across South Dakota. Possible farm pair examples include: *your farm uses no-till, while your neighboring farm uses no-till and cover crops; *your farm uses corn-soybean rotation, while your neighboring farm uses diversified crop rotation; *your farm uses no-till, cover crops, while your neighbors uses no-till, cover crops and integrated livestock cropping system.

What do we expect from you?
During the study, you are expected to work with SDSU researchers from economics and soil science disciplines. We will gather soil samples and obtain information on your operation such as crop yields, types of input (quantity and costs), number of years you have adopted certain agricultural practice(s), and change in yield and costs due to the new practice adoption, etc.

How will you benefit from participation?
Some of the benefits from being a part of this project include: 3 yrs of enterprise budget analysis, break-even cost and price analysis, soil health indicators, budget analysis on adopted practices. Your time is valuable to us and a stipend will be provided.

Confidentiality All individual information collected as part of this project will be kept in confidentiality, results will only be published in aggregated form, unless further permission is obtained.
Managing Soil Maximizing Profit Meeting
December 1st, 2017

BROOKINGS, S.D. -

SDSU Extension will host the Managing Soil Maximizing Profit meeting Dec. 1, 2017 in Sioux Falls. "This meeting is designed for farmers and agriculture professionals interested in learning more about maintaining healthy soil while remaining profitable," said Sara Berg, SDSU Extension Agronomy Field Specialist.

The meeting will be held at the SDSU Extension Regional Center in Sioux Falls (2001 E. 8th St. Sioux Falls, SD 57103).

Meeting registration begins at 8:15 a.m. (central). Speakers begin at 8:45. All are welcome to the meeting, which features information on a variety of agronomic topics presented by farmers, and SDSU, NDSU and UNL Extension staff and faculty as well as a representative from Natural Resources Conservation Service.

November 24, 2017 is the registration deadline. To register, visit the iGrow Events page or call 605.782.3290. To cover costs, this meeting is $20. Certified Crop Advisor credits are available. Participants can also register the day of the event.

Integrating biologicals, fertility and cropping to maximize yields will be highlighted by Dan Coffin, keynote speaker.

Other speakers include: Chip Florey, Cody Zilverberg, Febina Mathews, Nick Jorgensen

Complete agenda and registration is online!
Did You Know: Each Tillage Pass Can Cause The Loss of Moisture

Research has shown that reducing tillage intensity increases water infiltration. No-till has been the most effective method. Tillage reduces water infiltration by disrupting soil structure, breaking large soil aggregates, ultimately clogging soil pores. Without sufficient crop residue, rain drops can break soil aggregates and slow infiltration while increasing the risk for soil crusting and runoff. Crop residue can reduce evaporation by moderating soil temperature, particularly in the top two inches of soil. Tillage reduces the quality and quantity of corn stalks. Eight to sixteen inches of standing residue can reduce wind erosion and capture snow. Corn residue reduces runoff and increases snow melt infiltration in the spring. Standing residue can account for an additional 1 to 2 inches of soil moisture if it has not been destroyed by tillage.

For more information about the “Truth About Tillage” please access the following article:
http://www.cornandsoybeandigest.com/tillage/truth-about-tillage

Mighty Mini Microbe’s Tale Aims To Unlock Soil Secrets

The creators of a new soil health-themed coloring book believe “Mighty Mini Microbe’s Tale” will encourage the next generation of farmers, conservationists and scientists to further unlock the secrets in the soil. “While the characters are fictional, there’s solid science behind the narrative,” said Ron Nichols, the book’s author and NRCS soil health campaign coordinator. “Many people don’t realize that the elegant symbiosis of life underground enables all life above ground.”

Nichols said the story not only highlights the role of soil microbes in our lives, but also the role of “farmer heroes,” who farm in ways that protect and improve soil microbial habitat. “Farmers who implement soil health management systems on their farms are the other heroes in the story,” he said. “By using no-till, cover crops and diverse species and rotations, these producers are increasing the health and diversity of soil microbiological communities. In turn, these microbes provide nutrients, protect plants from pests and disease and improve soil aggregation and function – all of which make farming operations more productive, profitable and more resilient to weather extremes.”

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(Article Source: FarmFutures.com)