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PPF members braved cold temperatures to examine the effects of different crop management systems and their impact on soil properties.

Cold doesn’t keep farmers from learning at field days hosted by PPF

By Nathen Nysse, agronomist, Tilth Agronomy Group and PPF board secretary

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Continued on page 2
**TWO FIELDS, MANY LESSONS**

On Nov. 12, despite an air temperature that barely reached double digits, PPF hosted a tour of two farms, reviewing two different crop management systems and their impact on soil properties.

The day started at Mark Schmidt’s farm with the group checking out a soil pit to evaluate the soil structure and compaction as a result of rutting and fall tillage. The farm has reduced its use of tillage over the past few years and is moving toward a single vertical tillage operation. The field was planted to corn silage in 2019 and harvested in late fall, and 2019 harvest operations left traffic ruts, which were leveled with a chisel plow pulled at a depth of 8 inches.

Evaluating the depth and extent of compaction created in excessively wet soils is imperative, as soils can experience the greatest compaction when the soil is near field capacity but not yet saturated. However, when soils are saturated, the excess water filling the soil pores can limit compaction by helping to carry the weight of equipment.

In this field, Jamie Patton, outreach specialist with UW-Madison, found limited subsurface compaction, even though the field had been rutted where the soil pit was located. Pointing at a compacted layer in the top 3 inches of the profile and the aggregated soils underneath, Patton emphasized the importance of evaluating the soil before implementing management to “fix” fall compaction.

“Many farms, assuming rutting means subsoil compaction, go straight to deep tillage as the first step,” Patton said. “Deep ripping this field, when the compaction is located primarily at the soil surface, would only make the situation worse. Deep tillage, particularly if the soil was not dry enough, would only create compaction where currently there is none.”

At El-Na Farms, a soil pit was dug in a field managed in a long-term no-till system using cover crops. This field was harvested using dump carts and incurred few traffic ruts. After examining the soil in the pit, Patton found little surface or deep compaction, but rather a minorly compacted layer at 2 inches.

“I think this near surface compaction is likely a remnant of past tillage, tillage which ceased more than four years ago,” she said. “Overall, the field has well-defined soil structure throughout the profile and active – albeit half frozen – earthworms burrowing in the subsoil.” Roots were present to more than 20 inches in the profile. The field had been broadcast seeded to cereal rye just a few days prior to the field day.

**KEY FOCUS: TILLAGE**

After looking at both soil pits, one of the key take-home messages of the day centered on tillage.

Before assuming a field is compacted at depth, even if rutting did occur, farms should use a shovel and/or soil penetrometer to determine where compaction occurs in the field and at what depths. If most of the compaction is isolated to the surface (top 4 to 6 inches or so), deep tillage is not going to help.

For surface compaction, farms should reduce tillage where possible and use cropping practices to promote soil aggregation and soil organic matter accumulation, such as planting cover crops and altering crop rotations to keep a large number of roots in the field for as many days as possible. Natural processes such as freezing and thawing can help to build soil aggregates in the top couple inches of soil. However, the combination of cropping and natural processes will take several years to rebuild the surface soil aggregates that were lost this season.

If significant subsoil compaction does exist, farms can consider deep tillage, followed immediately by the planting of a deep-rooted crop or cover crop. Using grass cover crops such as sorghum-sudangrass, winter rye, oats or barley, which have fibrous root systems, with tap-rooted covers, such as legumes or brassicas, can help to fill the fractures created by deep-tilling and promote aggregate reformation and water and air movement through the profile. The same cover crop species are also good choices to help rebuild surface aggregation.

It is important to know that one season of cover crops is not enough to rebuild soil properties, particularly when compaction appears at depth. Reducing soil compaction in the lower soil profile can take many years, depending on soil texture and soil health practices used.

While we never want to see a year like this one again, we should begin preparing our soils for the extreme weather conditions we seem to be incurring on a more regular basis. As our two soil pits showed, soils with increased organic matter and managed under a soil health management system can be more resilient both in terms of productivity and trafficability. Plus, less mud, fewer ruts and less stress…soil health, what’s not to love?

Farms that have questions regarding soil compaction or starting their soil health journey can contact PPF board members Nathon Nyssse at (920) 858-5756, Adam Barta at (920)255-2703 or Nick Guilette at (920) 304-6293.
Greetings once again!

It seems like we just started Peninsula Pride Farms, but the reality is we are wrapping up our fourth year. If we take a moment to reflect, we have come a very long way as an organization, and as individual active members. Our accomplishments are real. Cost sharing has allowed our members to try and adopt new conservation practices. Working together, farmers have significantly sped up improvements in our collective results. We have established relationships with outside entities such as NRCS and The Nature Conservancy that were looking for progressive farmers as partners. By speaking to those outside of agriculture with a collective voice, we have improved the perception of farms on the Door County Peninsula.

While all this is true and significant, it is easy to sometimes feel like we are not making progress or perhaps are even sliding in the wrong direction on our farms. In the conditions we have experienced in the last two years, where we have struggled with implementing many of our conservation practices due to weather, it is easy to get discouraged. The fact is that we are more and more frequently up against a whole new foe…weather! The changes in weather patterns have been real and relentless. It used to be dump wagons were the exception for silage harvest, combining was done on a predictable schedule and manure applications were manageable. This year the PPF board of directors decided to take weather issues and challenges on as our main topic at our annual meeting on Feb. 13. This year's meeting will once again be held at the county fairgrounds in Luxemburg. Our keynote presentation will be delivered by Timm Uhlmann from the National Oceanic and Atmospheric Administration (NOAA) Weather Forecast office in Green Bay. His talk will focus on several areas of great interest to our members.

- Recent weather/precipitation trends in northeastern Wisconsin
- Short- and long-term weather outlook for 2020
- New tools and resources available for farmers in our area

There will be an opportunity for questions at the end of the presentation and during lunch that will follow. See page 4 for more details on the annual meeting.

I would like to finish up with a request for input from our members. You should have received an email asking for feedback about what’s working and areas for improvement in PPF as an organization. We are very proud of our organization, yet, like our farms, we strive for continuous improvement. The survey results will be discussed at the members-only annual meeting following lunch on Feb. 13. Please feel free to share your thoughts either on the survey link previously sent or with a board member. Your ideas are important in continuing our progress.

I hope to see you all on the 13th! Until then, take care.

- Don

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Here’s to a new year for PPF!

By Don Niles

Conservation grant will help PPF in watershed work

From PPF

Peninsula Pride Farms has received a state grant to continue the farmer-led watershed conservation group’s mission of protecting and improving soil and water quality in northeastern Wisconsin.

The grant, for $10,000, is part of the Department of Agriculture Trade and Consumer Protection’s Producer-Led Watershed Protection program, which gives financial support to farmers willing to lead conservation efforts in their own watersheds. The emphasis is on innovation and practices not already covered by other state and federal programs, and the intent is that participating farmers will reach out to other farmers to help them adopt conservation practices by offering incentives and through education and outreach activities.

In all, 27 groups received funding.

“Thanks to DATCP’s support, PPF has been able to promote conservation practices that protect our water and build soil health,” said Don Niles, president of PPF and dairy farmer in Casco, Wis. “We are looking forward to making continued progress in awareness and adoption of conservation practices by farmers in our community and appreciate the collaboration of DATCP and other groups who support our efforts.”

Learn more about the grants online at datcp.wi.gov. Click on “Programs/Services” and scroll to Grants and Other Funding Opportunities.
Peninsula Pride Farms announces conference and annual meeting Feb. 13

From PPF

Peninsula Pride Farms will host its conference and annual meeting Feb. 13 at the Kewaunee County Fairgrounds in Luxemburg. More than 100 farmers, agribusiness professionals and community members are expected to attend this free event hosted by the farmer-led conservation group. The public and news media are welcome.

Details
9:30 a.m. to 1:15 p.m., Thursday, Feb. 13
Kewaunee County Fairgrounds, 625 3rd Street, Luxemburg, WI 54217

Register online at peninsulapridefarms.org by Feb. 6.

Agenda
9:30 a.m. Registration, collect membership dues, distribute cost-share checks
9:45 a.m. Welcome
10 a.m. Opening keynote, Timm Uhlmann, meteorologist, NOAA Weather Forecast Office, Green Bay
11 a.m. Keynote, Tim Kowols, DoorCountyDailyNews.com
11:30 a.m. Door-Kewaunee Demonstration Farm Network panel presentation
12:30 p.m. Lunch
1:15 p.m. Conference concludes
1:30 p.m. Annual meeting (members-only)
2:30 p.m. Adjourn

Presentations
- Timm Uhlmann, meteorologist with the National Oceanic and Atmospheric Administration (NOAA) at the weather forecast office in Green Bay, will give a presentation on northeastern Wisconsin precipitation history, outlook and tools. He will review the past few years of precipitation and trends and share the current state of the region, including soil moisture and precipitation outlook for the upcoming spring. He'll also share online tools for finding soil moisture data, frost depth, precipitation forecasts and other weather information of interest to the agricultural community. Uhlmann has been with the NOAA office in Green Bay since 2016. He has been studying and working in the field of weather for most of the past decade.
- Tim Kowols, a sales representative and news reporter with DoorCountyDailyNews.com in Sturgeon Bay, will cover how transparency and honesty can help forge strong relationships with the media and broader community. Kowols has been with the news outlet since 2014, reporting on local issues, including many agricultural topics, and working with businesses on their marketing plans.
- A panel presentation will highlight experiences from the four Door-Kewaunee Demonstration Farm Network participants. Barry Bubolz of NRCS will moderate the discussion, during which each farm will highlight an innovative practice tried in 2019 and there will be time for discussion between the audience, farmers and agronomists.

Coalition names Wisconsin technician winner of CCA Conservationist of the Year Award

From National Association of Conservation Districts

On Nov. 22, Nick Allen Guilette of Casco, Wis., was named as the inaugural recipient of the Certified Crop Adviser (CCA) Conservationist of the Year Award for his conservation work with AgSource Laboratories. Since 2010, Guilette has been an advanced nutrient management and GPS technician for AgSource Laboratories, where his responsibilities include writing plans for 20 growers on more than 25,000 acres while also sampling soils in the spring and fall.

The CCA Conservationist of the Year Award annually recognizes a certified crop adviser who exhibits dedication to exceptional conservation delivery and customer service and has shown to be a leader in their industry.

“Mr. Guilette has contributed substantially to the exchange of conservation ideas within the agriculture industry,” said Natural Resources Conservation Service (NRCS) Chief Matt Lohr. “He is truly a leader in conservation.”

The 2019 award was presented by Chief Lohr to Guilette in Washington, D.C., at the U.S. Department of Agriculture (USDA).

“Mr. Guilette’s conservation efforts go back to his upbringing on the family farm, which instilled practices for being a good steward of the land,” said AgSource Laboratories Vice President of Laboratory Services Steve Peterson. “He is first and foremost an educator, teaching and sharing the experiences learned with growers, environmentalists and agency groups.” Read more about Nick and his involvement with Peninsula Pride Farms on page 6.
Install tile correctly the first time

By Eric Cooley, Discovery Farms co-director

Many farmers have purchased or are considering purchasing equipment to modify existing drainage tile systems or install new ones. Owning your own equipment allows you to install or repair systems as time and money allows. Although the ability to “do it yourself” is great, there are many things that should be considered before starting.

The old adage, “Do it right the first time or don’t do it at all,” couldn’t hold truer with tile drainage systems. A properly designed and installed tile system will provide many crop production benefits and should outlast anyone reading this article. If not installed correctly, it can be a source of constant problems and may negatively impact other tiled fields. State and federal rule compliance, adequate site assessment for tile needs and outlets, proper engineering design and correct installation are critical to get the biggest bang for the buck from your tile system.

**Rule compliance:** There are multiple state and federal codes in conjunction with established drainage district rules that mandate tile system installation and modification. Accidental or unintentional violations of these rules can result in substantial fines and even loss of Farm Bill benefits (including crop insurance premium subsidies, FSA loans and NRCS programs). It is important to consult with a tile drainage professional or local agency personnel to ensure compliance.

**Site assessment:** Many considerations need to be identified and determined even prior to designing or modifying an existing tile system. They include, but are not limited to:
- soil types
- restricting soil layers
- bedrock depth
- outlet point(s)
- closed depressions
- wetland boundaries (can differ between regulatory organizations)
- locations of any existing tile systems.

Inadequate site assessment can result in poor engineering design and installation challenges. In addition, it is important to plan for any future tile system expansion or connecting of upland tile systems so tile mains/submains can be properly sized to accommodate future flow volumes. It is far more economical to increase the initial size of the main by a few inches now instead of installing a secondary main a few years down the road.

**Engineering design:** Proper engineering design is vital for proper tile system operation and function and should be done by qualified personnel. Determining the acres to be drained and the drainage coefficient (inches/24 hours) are first steps in tile system design, but many other factors also need to be considered including:
- installation grade
- single vs dual wall
- mineral vs organic soils
- tile spacing
- surfaces inlets (open vs blind)
- pipe size
- length of run
- adequate venting
- subject to fine sand or silt
- sock vs no-sock
- other factors influencing tile system operation and performance.

There are many new and emerging technologies to enhance tile system functionality such as water level control structures, saturated buffers, constructed wetlands, bioreactors, two-stage drainage ditches and others which are more economical to add initially than after the tile system is already installed. Most of these practices have cost-sharing available so talk to your local NRCS representative or tile installation professional for more information.

**Proper installation:** Although the economics of owning your own tile installation equipment has become more viable than in the past, professional tile installers have equipment that often reduces soil disturbance and compaction, provides more consistent slope of pipe, better support and contact of soil with tile pipe to enhance initial system function, deeper burial depth capacity to cross any high spots in the field, and can create georeferenced maps during the installation process.

If you are installing your own tile, at a minimum you should be using a GPS to mark the location and annotate the size of each tile as you install it to create an as-installed map. GPS technology is very inexpensive and will provide you ease of accurately finding the tile in the future for any needed repairs or spill response. Finally, ensure you properly mark and protect all tile outlets, vents and open tile inlets to prevent accidental damage.

Tile drainage systems can enhance agricultural crop production, especially in poorly drained landscapes, but only when tile systems are properly designed, installed and maintained. Although tile installation equipment is becoming more economical for the do-it-yourself farmer, there are many considerations to properly site, design and install tile drainage systems.

If you are new to the tile installation process, contact a local tile installation professional or tile supplier to aid in the process. A good rule of thumb is, when in doubt, hire or consult a tile drainage professional. Consulting fees charged by professionals to aid you in the process are much cheaper than fixing simple errors later. As a reminder, agricultural tile drainage systems are not a “set it and forget it” system, annual inspections and maintenance should be done to ensure proper operation and longevity of your tile system to protect your investment.
What was your prior role at AgSource, and what is your current job with Ebert Enterprises?
At AgSource I was responsible for completing nutrient management plans (NMP) and other relevant permit application work for clients in mainly northeastern Wisconsin. I am involved with PPF and co-chairman with Nathen Nyse for the Door-Kewaunee Demonstration Farm Network. I collected soil samples for clients both in that area and further away, even out of state.
At Ebert Enterprises, I’ve been overseeing manure applications, continuing to do the NMP work and other relevant permit applications. I will be working on crop planning to advance soil health practices and advance low-disturbance manure application techniques. I will also continue environmental stewardship practices that are already in place on the farm and advance ideas for new conservation practice.

What is your background?
I grew up on a farrow-to-finish hog operation on the Door-Kewaunee county line. I earned a bachelor of science degree and soil sciences minor from the University of Wisconsin-Stevens Point. A few years after graduating, I earned my certified crop advisor (CCA) certification from the American Society of Agronomy. Since then, I’ve been writing NMPs and consulting farmers about nutrient management, crop health and pest management, and conservation stewardship. Recently, a lot of effort has been spent learning about cover cropping systems, aspects of soil health, and evaluations of different types of low-disturbance manure technologies.

What do you find rewarding about your work?
Every year is a new and different year presenting a different set of challenges that we try our best to manage. It is very rewarding to be outside in the fields trying to address challenges that come up and developing solutions. The relationships I’ve developed with clients, past co-workers and other acquaintances are what have been and continue to be most memorable.

What do you see in terms of farmers’ commitment to conservation?
Farmers’ commitment to conservation is continuing to increase from year to year. As we learn more about soil health and the benefits that come with increased soil health, farmers are more willing to try proven practices and experiment with out-of-the box ideas. Farmers are by their very nature conservationists and caretakers of the land. They understand what it means to be good neighbors and good stewards. And, their livelihood depends on it.

What advice might you have for farmers who are considering whether to try a new conservation practice?
Jump in, the water’s fine! I’d tell anyone considering a new conservation practice to talk to their neighbors, attend a field day or tour hosted by PPF or D-K Demo Farms, or talk with an agronomist. There are many ways in which a farmer can gain knowledge about a new practice in today’s electronic age, but none is more valuable than seeing it with one’s own eyes, especially on a nearby field.
If you were a cover crop, what kind would you be?
Red clover. I may not be the most popular of cover crops, but I can be used for many purposes. When it is my time to bloom, I have a respectable blossom, but not too showy. I’m a perennial and will keep coming back; I’m in this for the long haul.

Anything else you want PPF members to know?
Even a small change can make a big difference. Small changes like no tilling winter rye after corn silage or planting a cover crop after winter wheat harvest, even if it is an annual that winter kills, can result in big dividends (This is by
no means the only type of practice that could be tried on any single farm). Please feel free to talk to anyone on the board if you have concerns or ideas that could be used to better our organization.

Our philosophy of continuous improvement does not go unnoticed. No one is saying that we have all the answers, but our willingness to share both successes and failures is allowing us to learn at a rate faster than anyone of us could do alone. Keep up the great work!

And I would like to personally thank every member for their hard work and commitment to agriculture and conservation. Recently, I had the opportunity to travel to Washington, D.C., as I was nominated and selected as the inaugural CCC Conservationist of the Year. It is an unbelievable honor to be able to represent CCAs, Wisconsin and even more importantly the Door-Kewaunee County Peninsula’s efforts to advance agriculture and conservation. Again, thank you for all your hard work and dedication.

The award is supported by a conservation and agribusiness partnership between the USDA Natural Resources Conservation Service, the Agricultural Retailers Association, the American Society of Agronomy, CropLife America, Crop Science Society of America, National Association of Conservation Districts, National Association of State Departments of Agriculture, Soil Science Society of America, Syngenta, and The Fertilizer Institute. The American Society of Agronomy administers the award. Learn more at https://www.agronomy.org/awards.
Save the date: PPF Conference & Annual Meeting Feb. 13

Go to peninsulapridefarms.com to see the full schedule and to register.

RSVP requested by Feb. 6.