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THE
AG STEWARD NEWS

OUR VISION: A community where farmers and friends of agriculture work together to protect and improve our water quality and environment.

*More than 75 people attended
LASA's field day on Aug. 15.*

Water quality hinges on soil health

UW-Platteville research farm provides setting for annual field day

By **Mary Hookham for LASA**

You might say hog farmer Mike Berget has soil on the brain, so he appreciated Lafayette Ag Stewardship Alliance's third annual field day.

The event, held Aug. 15 at the University of Wisconsin-Platteville's Pioneer Farm, centered on the importance of having healthy soil in protecting the quality of surface and groundwater.

Berget's family has been recognized for innovation in soil stewardship at Berget Family Farm and Silver Creek Family Farm in the Darlington area.

"I'm passionate about soil conservation. I think it's very important that our soils are

safe for our grandchildren," Berget said.

LASA's field day featured high-tech rainfall simulators, a soil pit and groundwater monitoring equipment as part of the farmer-led group's efforts to improve and protect water quality in Lafayette County in southwestern Wisconsin.

Dennis Busch, Pioneer Farm's research manager, and his students explained the proper way to find test plots on farms and analyze data, and shared test plot results from Berget's farms among others.

With a rainfall simulator, Jim Isermann demonstrated how management affects soil health and how that leads to better infiltra-

tion and reduced runoff. Isermann is field manager for northern Illinois for Soil Health Partnership, a farmer-led soil management project. Using local soils from different management types, attendees saw a significant difference in the amount of runoff from fields where soil health practices were used versus soil that was under full tillage.

"I think the demonstration went great and was very eye-opening for those who saw it," Isermann said.

Josh Kamps, agriculture educator with UW-Extension Lafayette County, who co-hosted an education station at the field day
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with Isermann, talked about soil functions, quality indicators and properties before taking attendees down into a soil pit to see how water infiltrates the soil.

“Being a longtime farmer in the county myself, I know that for people to give up their time away from their farms and come to an event, it needs to be relevant,” Kamps said. “That’s really my goal – to provide information and help with decision-making.”

Groundwater monitoring was the topic at Kevin Masarik’s education station. Masarik is the groundwater outreach specialist at

the University of Wisconsin-Stevens Point. He provided a map of private well nitrate-nitrogen concentrations across the state and shared information on the nitrogen cycle, water drainage and nitrate leaching at multiple test sites, and geologic considerations for bacteria. Masarik explained that monitoring the top 1 foot of soil profile is challenging.

“Agricultural systems represent a significant contribution of nitrate losses to groundwater – much of it outside the growing season,” he said. “We have to maintain nitrogen and water in the upper part of the

soil profile.”

Jim Winn, president of LASA, encouraged members to get involved in the organization and its cost-share programs.

“Groups like this one are a vital part of farming,” he said.

Steve Carpenter, vice president of the group, previewed a new texting program that will be used to notify members and guests of events happening on short notice as an effort to help increase participation.

“It’s all about clean water in the end,” Carpenter said.



LASA members and other field day attendees had the chance to learn about soil health and water quality at four different stations during LASA’s field day Aug. 15.

Persistent crop residue: A problem or a symptom?

By Josh Kamps, UW-Extension Lafayette County

Farmers are well aware of the risk for poor crop emergence and uneven plant stands resulting from high levels of crop residue at planting time. However, crop residue on the soil surface has many benefits which add to soil quality. Primarily, it creates a barrier between the soil surface and weather extremes. Crop residue is also an important source of nutrients and carbon for various soil nutrient cycles.

Multiple tillage passes have historically been the answer to create a more ‘ideal’ seed bed. Can an ‘ideal’ seed bed be created without intensive tillage? Functioning soil biology will harvest crop residue and increase Soil Organic Matter (SOM), and this increase in SOM will directly increase soil productivity and farm profitability.

Tillage places crop residue and soil par-

ticles in close contact and also stimulates nitrogen release from SOM. This process results in soil microbes having access to nitrogen allowing for the decomposition of crop residue. This is a breakeven process at best when working towards retaining carbon and increasing SOM in the soil.

Breakeven works for the short term, but when considering long term soil quality, a process with positive results is preferred. Intensive tillage can also negatively impact soil aggregation, which impacts the quantity and diversity of soil microbial populations. Soil microbes require a stable home, abundant food source and a steady environment to remain alive and active in the soil.

Blake Vince, no-till and cover crop farmer, sums up crop residue management like this: “Roots not Iron”. Choose living roots over

tillage to enhance soil biology, which leads to long-term soil quality. Living roots form a symbiotic relationship with soil microbes. Along with living roots, organic carbon through manure additions enhances the microbial communities in size and diversity. More microbes mean more consumption of crop residue. Removing a portion of crop residue and replacing it with manure (high energy feed) will lower N requirements by allowing nutrients to be available for the crop to utilize faster.

Is persistent crop residue a problem or a symptom? Ag research is answering the question; persistent crop residue is the symptom and reduced soil biological function is the problem. Focusing on ‘what lies beneath’ the soil surface will promote long term \$green\$ above the soil surface!

2019 is over Here's to 2020!

By Jim Winn, LASA president



Friends of LASA,
WOW! 2019... Is
it finally over?

As we begin a
new year, I'm sure
we all have a few

interesting words to describe 2019 (some may not be printable), but it was definitely a wild ride. Wet weather seemed to be the norm the whole year as spring planting was delayed, and it's still fresh on our minds how silage harvest, corn harvest and manure applications dragged on and on due to rain, rain and more rain.

But there is good news! We can be proud of LASA's accomplishments this past year.

In February, we hosted our annual meeting with a great crowd, including many soil conservationists. It's going to be hard to top this annual meeting, but we are busy doing our best to come up with some great speakers and panelists to bring to you in 2020. (Mark your calendars for Feb. 25 and turn to the back page of the newsletter for more details.)

Beautiful weather was on the menu at our third annual field day in August at UW-Platteville's Pioneer Farm. We had the opportunity to see a rainfall simulator in action from our friends at Soil Health Partnership, our own Josh Kamps walked attendees through the soil pit demo and there were other demonstrations pertaining to soil health and water quality. All in all, it was another great

field day.

We are all focusing on the SWIGG study that is in its second year, and more information is coming to light. The research is showing the complexity of the challenges. I'm very proud that LASA got involved in the study as it shows that farmers do truly care about the environment and clean water.

Finally, we are anxiously awaiting to see what our farmer-member conservation practice survey numbers reveal about what kind of impact we had on the environment this year.

It is our hope that as difficult a year as 2019 was, our alliance still made a difference and other farmers in our area see what kind of change we can all make when we work together. It is my hope with our current membership (and hopefully some new members) that we'll have a few members step forward and try some more soil conservation enhanced methods, such as no-till into low-disturbance manure applications.

I would like to thank all of our members and especially our board members, who meet monthly, for all your hard work. We've made progress in the short time we've been working together, but we have lots more to do.

Here's to continued progress in 2020!

Sincerely, Jim

Conservation grant will help LASA with watershed work

From LASA

Lafayette Ag Stewardship Alliance has received a state grant to continue the farmer-led watershed conservation group's mission of protecting and improving soil and water quality in southwestern Wisconsin.

The grant, for \$20,000, 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.

"DATCP support has been critical for our organization," said Jim Winn, president of LASA and dairy farmer in South Wayne, Wis. "With their help, we have been able to reach more farmers and encourage conservation practices in our area, as well as document the practices being implemented by our members and the positive impact that is having on soil health and water quality. We are excited to continue our progress in the next year through collaboration with DATCP and others."

Learn more about the latest round of grants online at datcp.wi.gov. Click on "Programs/Services" and scroll to Grants and Other Funding Opportunities.

Save the date: Feb. 25

LASA's Conference & Annual Meeting

10:30 a.m. - 2:30 p.m.

Multi-purpose building, Darlington

All are welcome to attend this FREE event.

A members-only meeting will follow the public program.

See the back page of the newsletter for more details.

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 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



Plastic, corrugated tile.



Tile outlet with a rodent guard.



Repairing a tile blowout.

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

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LASA members see conservation come alive on their farms

By Mary Hookham for LASA

For Gretchen Kamps, a beef farmer from Belmont, accountability stands out as an essential benefit for members of Lafayette Ag Stewardship Alliance.

"Farmers are really creative and ingenuitive people, so when somebody comes up with an idea, we can share that with others, which can really make a difference," Kamps said.

Membership in LASA has allowed Kamps and her husband, Josh, to synchronize field work and animal care to create more harmony on their 250-head cow-calf operation. Conservation remains their top priority.

"Crops and animals can work really well together as long as you can get the nutrients on the fields at the right time and get the animals the right nutrients when they need them," she said.

The Kamps are among two dozen crop, dairy, beef and hog farmers using innovative practices to protect the quality of water in Lafayette County through LASA. The farmer-led watershed conservation group, which was launched in 2017, works to empower its members to experiment with practices tailored to their individual farms.

Hog and crop farmer Mike Berget

of Darlington is passionate about soil conservation. As a board member of LASA, he believes in the importance of preserving Wisconsin's valuable soil for future generations.

"There is no cookie-cutter approach to conservation," Berget said. "Everybody's operation is different."

Berget, along with his wife, Judy, and their four adult children, plant buffer strip cover crops to help retain that valuable topsoil. They also utilize strip-till and no-till management practices on much of their farm, something they've found to not only be beneficial for the soil but also for the bottom line.

"If we had to conventionally till all our ground, we would probably need three more employees and four more quad-track tractors," Berget said.

On 300 acres of pastureland, the Kamps maintain their Angus herd with calves arriving in the spring and fall. Their 150 acres of crops include rye as a winter cover crop, and tillage is minimal. The farm is unique because the Kamps keep their cows in confinement during gestation and calving to more easily manage any issues that arise.

"This system has allowed us to take a few more risks with the bulls we use that we may not be so sure of on calving ease," Gretchen said.

The Kamps have installed stream crossings in pastures, used perennial forage for soil stabilization and created a manure storage plan utilizing above-ground storage pits with roofs, safely storing manure until application conditions are best for spreading.

They continue to see improved soil quality with better water-holding capacity because of these techniques, she said. The farm also has increased resilience in extreme weather events.

The Berget family appreciates the research being done through the University of Wisconsin System and the demonstrations provided at annual field days. It's not only a great resource but also a chance for farmers to get back in touch with UW-Extension agents, Mike Berget said.

"Farmers did themselves a disservice by getting away from the assistance of their Extension offices," Berget said. "And we hope that what we're doing is helping preserve the land and water, but this research verifies it."

Install tile correctly the first time

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.



5741 Springbrook Rd
South Wayne, WI 53587

You're invited: LASA's Annual Meeting

10:30 a.m. - 2:30 p.m. | Tuesday, Feb. 25

Multi-purpose building, 11974 Ames Road, Darlington, WI 53530

10 a.m. - Registration

10:30 a.m. - Welcome, 2019 conservation practices lightning round discussion

12:00 p.m. - Lunch and LASA 2019 review

12:45 p.m. - RCPP update, Farmland Preservation update

1 p.m. - Keynote presentation: Dr. Brian Luck, Wisconsin Machinery Extension

1:45 p.m. - Equipment/precision technology panel presentation

2:30 p.m. - Conference adjourns, annual meeting begins (members-only)

RSVP today! Visit lafayetteagstewardship.org to register.

More information will be announced soon.