



DEEP ROOTS

A NEWSLETTER FOR
FARMERS AND FARMLAND OWNERS
IN IOWA COUNTY WISCONSIN

LAND
Conservation
DEPARTMENT

2022 WINTER

WINTER MANURE SPREADING

Keep valuable nutrients in the ground

WEATHERING THE STORMS

Bill Spurley takes a holistic approach to farm management

SAVING MONEY WHEN INPUTS GET PRICEY

Start with checking the savings under your feet

PRECISION DECISIONS

Responding to in-field variations will likely benefit anyone farming in the Driftless Area

STREAMBANKS & FILTER STRIPS

Stabilization projects are one solution to protecting fields, roads, and water quality



LAND Conservation DEPARTMENT

HEALTH AND HUMAN
SERVICES BUILDING
303 W CHAPEL ST, STE 2100
DODGEVILLE, WI 53533
608.930.9891

WWW.IOWACOUNTY.ORG/
DEPARTMENTS/LANDCONSERVATION

STAFF

KATIE ABBOTT

COUNTY CONSERVATIONIST
Katherine.Abbott@iowacounty.org
608.930.9893

LONDON BAUMGARTNER

CONSERVATION SPECIALIST
Landon.Baumgartner@iowacounty.org
608.930.9895 office
608.574.1460 cell

SARAH HOVIS

CONSERVATION TECHNICIAN
Sarah.Hovis@iowacounty.org
608.930.9894 office
608.574.7469 cell

MAYME KEAGY

DEPARTMENT ASSISTANT
Mayme.Keagy@iowacounty.org
608.930.9892

COMMITTEE

DAVE GOLLON

BOARD CHAIR

DON LEIX

VICE-CHAIR

DAN NANKEE

SECRETARY

RON BENISH

COUNTY
SUPERVISOR

KEVIN BUTTERIS

COUNTY
SUPERVISOR

BOB BUNKER

MEMBER AT LARGE

VACANT

MEMBER AT LARGE

JASON JAMES

FSA MEMBER

Deep Roots is published by the Iowa County Land Conservation Department. To receive a copy via email, please contact mayme.keagy@iowacounty.org to subscribe.

Copyright 2022 by the Iowa County Land Conservation Department. All rights Reserved.

WINTER MANURE SPREADING

LONDON BAUMGARTNER
CONSERVATION SPECIALIST

Winter has arrived, and with it frozen ground, snow, ice, periodic thawing, and even rain. This combination of conditions can make it difficult for manure to stay put where it's spread. There are a few things to keep in mind when spreading in winter to keep valuable nutrients in the ground and usable come spring, and to protect water quality.

First, keep at least 300 ft away from water as long as soil is frozen. Any closer than this and risk of runoff to water skyrockets. This buffer also applies to any direct conduits to groundwater, like sinkholes, mineshafts, wells, or bedrock fractured at the surface. We learn more about the location of these each year, so double check your most recent nutrient management maps.

Here in the Driftless Area, it is common for fields to have slopes of 6% or more, or to have concentrated flow channels. If you are part of this majority, make sure to follow at least two of the following winter spreading practices on these fields:

- Use contour buffer strips or contour strip cropping
- Leave all crop residue and have no fall tillage
- Apply manure in intermittent strips on no more than 50% of the field.
- Apply manure on no more than 25% of the field with a 14 day break between applications



- Reduce manure application rates to 3,500 gal/acre or 30 lbs/acre of phosphorus, whichever is less
- Do not apply manure within 200 ft. of concentrated flow channels (e.g. grassed waterways)

Make sure liquid manure applications do not exceed 7,000 gallons/acre over the course of the winter.

Winter spreading is not really a window of dates, but is applicable whenever soils are frozen or snow-covered. Sometimes, even when we try our best, extreme weather and other variables can make situations unpredictable. If there is active runoff of manure into water call the manure spill hotline at 1-800-943-0003 ASAP. Spills need immediate attention and can be managed if reported and addressed quickly. Being proactive by creating a spill response plan will save time if a problem ever occurs.

Whether a field was in a row crop or alfalfa, tilled or untilled, or had a high or low stand density affects an ideal winter spreading strategy. With planning and awareness, livestock operators can manage their nutrients and water quality in winter, or any time of year. Contact your agronomist, or the County Land Conservation office to learn more.



For more information contact
Landon Baumgartner at 608-930-9895,
landon.baumgartner@iowacounty.org.

WEATHERING THE STORMS: A HOLISTIC APPROACH TO FARM MANAGEMENT

KATIE ABBOTT
COUNTY CONSERVATIONIST



PHOTO: MAYME KEAGY

With floods and drought alternately plaguing the Midwest, we need more ways to balance profitable farming with water quality and healthy soil. Bill Spurley's farm near Linden is a great example of that.

When heavy rain flooded roads and washed away banks in other places along Pecatonica River, the Spurley's stretch held up thanks to stream buffers planted over 18 years ago through the Conservation Reserve Enhancement Program (CREP). These buffers are made up of trees, shrubs, grasses, and wildflowers that soak up water and have deep roots to hold the soil in place. The stream buffers border the river on his mom's property, where Bill grew up, and a tributary on Bill's 160-acre farm next door.

Installing perennial vegetation along the stream made sense for several reasons. "The bottom ground was harder to farm," explained Bill. "It was too wet and we often lost the crop or it didn't yield well. I also liked the idea of having a buffer between the fields and stream, and my mom wanted to see more trees."

The tree and shrub species include white pine, spruce, oaks, cranberry, hazelnut, and plum, planted with a rented tree planter. Bill borrowed a drill from Pheasants Forever to plant the grasses and wildflowers. With patience and occasional mowing or tree trimming, the buffer is now a thriving home to more wildlife, including a doe and her twins that like to visit the homestead.

The stream buffer isn't the only way that Bill is balancing farming with healthy soil and water. He uses no-till on most of the 900 acres he runs (both owned and rented land) for corn, beans, winter wheat, and alfalfa. While tilled crops may emerge earlier in the season, Bill's no-till crops easily catch up. "No-tilled fields are much better in a dry year, and there's less runoff when it rains. I have very little standing water after heavy rain, while on some tilled fields the water sits on top."

In addition to conservation benefits, there are also economic motives for using these practices. Looking at the numbers helped Bill decide how to manage his farm. In low-yielding areas, annual CREP payments are often higher than profits from farming. On better ground, no-till saves money by reducing inputs of time, fuel, and equipment.

Bill is starting to plant cover crops too, partly influenced by a soil pit demonstration at a UW-Extension field day a few years ago. "You can see the difference. I was impressed with how far the roots went down, and there are more worms," he recalled.

With his thoughtful management decisions, Bill's farm will be able to better handle future weather extremes while improving soil structure, water quality, wildlife habitat, and, perhaps most importantly, the farm's bottom line.

For more information contact
Katie Abbott at 608-930-9893,
katherine.abbott@iowacounty.org



SAVING MONEY

WHEN INPUTS GET PRICEY

LONDON BAUMGARTNER
CONSERVATION SPECIALIST

By now, awareness has spread about the recent price increases for agricultural inputs. Management recommendations are quickly changing for everything from macronutrients to soil amendments. How should we adapt? First, check the balance on that huge savings account under your feet: get your soils tested, or break out your most recent reports. It may be the most profitable thing you do to start 2022. For nutrients, think of the following:

Are your phosphorus, potash, and micronutrient levels low, optimal, or high?

Your recommended rate could be as low as 0 lbs/acre for some or all of these. For those with widely varying test results, consider variable rate applications.

- Consider your pH levels. Could a lime application correct some historical deficiency issues? Or could you go another few years without paying for lime if the market is in short supply?

When it comes to nitrogen, remember we are coming off a drier year. A nitrogen credit may remain from residual ammonium that has not transformed into nitrate.

Consider taking a 12"-24" pre-plant nitrate soil test for around \$10-\$15/sample tested to see what carryover you have. Try to take these as close as possible to the time you have to make nitrogen-purchasing decisions.

Consider making in-season N applications to have more time to make these decisions. Have you considered switching to a side-dress system with pre-side dress nitrate tests? Keep in mind these are usually UAN or urea and require extra trips across the field.

The higher the cost of nitrogen, the more practical it becomes to look at additives like urease or nitrification inhibitors. Explore the availability of these nitrogen management tools.

For those with animals on the farm, if you have manure, this may be a good year to see how far you can stretch the contents of that spreader.

Book values can differ enough from true tested value to influence your fertilizer purchase decisions. For around \$20 per sample, send in a sample or two to find out.

Fertilizer savings from hauling manure farther to fields may more than offset hauling costs, even if they didn't before. The farther from the barn you get, the more likely a field could use that manure.

As always, call or email our office for tools, consultation, or if you have any nutrient management questions. Other resources through the UW system are also available. The situation is changing rapidly, so stay tuned and take some time away from the daily grind to see what savings you can find.

MORE RESOURCES

- Video about strategies to maximize return on fertilizer: <https://tinyurl.com/uwlab>
- Wisconsin's Corn N Rate Calculator app: <https://tinyurl.com/cornrate>
- Soil Nitrate Tests for Corn Production in Wisconsin: <https://tinyurl.com/cornnitratetest>
- UW Nitrogen Guidelines for Corn: <https://tinyurl.com/nitrogenguide>
- Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin: <https://tinyurl.com/nutrientguide>



For more information contact
Landon Baumgartner at 608-930-9895,
landon.baumgartner@iowacounty.org

SAVING MONEY

PRECISION DECISIONS ON CROPLAND AREAS

KATIE ABBOTT
COUNTY CONSERVATIONIST



2020 corn yields, taken as a screenshot from Climate FieldView

Efficiently applying expensive fertilizer, soil amendments, seed, and pesticide can be a challenge in our region, where a variety of soils, slopes, moisture levels, and shade levels occur, often within a single field.

When highly variable fields are run the same, not every acre will yield enough to turn a profit. This is where precision decisions come into play. This practice of observing, measuring, and responding to in-field variations (sometimes called “precision agriculture”) will likely benefit anyone farming in the Driftless Area.

Many farmers have an intuition that they have unprofitable cropland acres, but aren't sure what to do on those acres. The first step is to take a closer look at the cost of inputs and the yield variations within each field to find places where the two don't add up. Not farming negative return-on-investment (ROI) acres is a quick way to improve the bottom line, especially when operating costs are high. In other places, a tweak to management systems or adoption of different equipment may be worth a look.

Pheasants Forever, a non-profit wildlife and habitat organization, hires Precision Ag and Conservation Specialists (PACS) to help farmers determine break-even yields and which acres have a negative ROI. PACS also work with the producer to determine causes of and solutions to managing low yielding areas. If the Pheasants Forever precision ag and conservation program is of interest to you, contact Josh Bendorf, the PACS that covers Iowa County, at (608) 574-7558 or jbendorf@pheasantsforever.org.



Average profit from the 4-year period (2017-20).

The Iowa County Land Conservation department recently held a webinar called “Precision Decisions: Refining Farm Profitability on Cropland,” in collaboration with Pheasants Forever, UW-Madison Extension, and County Conservation Departments from Grant, Lafayette, and Green Counties. The webinar is available free on the Iowa County Land Conservation website: <https://www.iowacounty.org/PrecisionDecisions>.

NEW IN 2022: PRECISION AG INCENTIVE PAYMENTS

The Iowa County Land Conservation Department has new funding for a precision ag pilot program. Farmers can earn \$5/acre to work with Pheasants Forever or other conservation staff on yield map and budget analysis to find negative ROI acres. An additional \$25/acre will be paid in any areas converted to perennial vegetation as a result of the analysis. Contact Katie Abbott at Iowa County with questions or to be added to a waiting list.

For more information contact
Katie Abbott at 608-930-9893,
katherine.abbott@iowacounty.org



STREAMBANK PROTECTION

SARAH HOVIS
CONSERVATION TECHNICIAN



If you were to take a drive through Iowa County, you would encounter no shortage of beautiful, meandering streams. While streams can enhance the aesthetics and habitat next to fields and pastures, they can become problematic as they move over time and cut into cropland or even threaten road and building stability. In addition, excess sediment and nutrients are deposited in the stream through bank soil loss, which can degrade water quality.

Streams can change course due to storm events which cause bank soil erosion and may deposit obstacles like branches and debris in the stream channel. Cattle with unrestricted access to waterbodies can also cause bank erosion by “beating up” the banks while moving in and out of streams. As more soil falls from the banks into the channel, it can start to fill in the bottom of the stream. This causes water to stay out of the banks longer during storm events, posing a greater risk of frequent flooding of cropland and roadways located in the adjacent floodplains.

Streambank stabilization projects are one solution to protecting fields, roads, and water quality. In order to handle high velocities of water, this practice involves excavating below the stream bed and placing rock rip-rap along the areas needing protection. The ground above the rock is also shaped, and the rock is covered with soil and seeded down. Wildlife habitat features can be installed as well during streambank repair, and some areas may only need the banks shaped back instead of rock installation. Streambank protection can complement other practices like stream crossings, fence, filters strips, or livestock watering systems.

The Iowa County Land Conservation Department is able to help with both Streambank Protection design and cost sharing. Streambank projects may take longer to design and install than some of our other practices due to DNR permit requirements and recent changes to the design standards. If you are considering streambank protection at your property, contact us as soon as possible.



BLANCHARD'S CRICKET FROG

This small amphibian lives in banks and backwaters of Iowa County streams. DNR waterway permits limit work dates for Streambank Protection if Blanchard's Cricket Frogs are found nearby. Prior to construction, Cricket Frog sites must be swept for frogs, which are then relocated downstream of the work. This sweep can only be conducted by individuals licensed to do so under a DNR endangered species permit working for Iowa County or as Private Contractors. There is typically a fee associated with cricket frog sweeping; a list of certified individuals can be obtained from the WI DNR.



For more information, technical assistance or to inquire about possible cost-sharing opportunities contact Sarah Hovis at 608-930-9894, sarah.hovis@iowacounty.org



YOU CAN RECEIVE ANNUAL PAYMENTS FOR PROTECTING YOUR STREAMS!

The Conservation Reserve Enhancement Program (CREP) pays landowners to install filter strips along waterways or to return continually flooded fields to wetlands. The size of land put into CREP varies, and can be a strip as narrow as 30 feet with no minimum acreage size. This allows landowners to enroll land as needed and leave the remainder for farming.

Enrollment options are either a 15-year agreement or a perpetual easement. CREP financial incentives include:

- Cost-sharing of conservation practice installation
- Upfront incentive payments
- Annual rental payments

CREP is a joint effort between federal, state and county governments. Landowners interested in enrolling in CREP should contact their local Farm Service Agency office for more information (608-935-2791x2 in Iowa County).



4NEUS CC BY 2.0

FILTER STRIPS

SARAH HOVIS
CONSERVATION TECHNICIAN

The steep slopes, high number of streams, and increased rain intensity in our area mean our streams are more vulnerable to sediment and nutrient pollution. In fact, 46% of the watersheds in Iowa County are considered “impaired” by WI DNR, most of them due to phosphorus and sediment. One way to help this issue is installing filter strips (also called ‘buffers’). Filter strips are a great way to reduce sediment and contaminants in runoff, keeping them out of surface water and protecting environmentally sensitive areas. The perennial vegetation in a filter strip slows down runoff water, allowing it to soak in more quickly and drop the sediment and nutrients it may be carrying.

Filter strips are placed immediately downslope of the areas of concern. They should be at least 20’ wide to remove sediment, and 30’ wide to remove nutrients. They differ from grassed waterways because they do not protect areas where water concentrates, and from vegetated treatment areas because they don’t treat

direct barnyard runoff. Filter strips should not be used as a travel lane for vehicles or farm equipment, but in some cases can be used for limited haying or grazing. Annual harvesting can be good for streambank vegetation to reduce trees and brush overgrowth, and remove phosphorus accumulated in the plant material.

A variety of plants can be used in filter strips. Plants should be suitable for the site location and soil type. They should be quickly established, able to withstand herbicide drift from neighboring fields, and able to thrive in partial sedimentation as the solids drop out of runoff passing through. Native grasses and wildflowers are preferred, and also provide wildlife habitat, including pollinators and other insects that may benefit a farm operation. Maintenance includes controlling invasive plants, regular harvesting, and possible removal of sediment if too much accumulates over time.

DEEP ROOTS



LAND CONSERVATION DEPARTMENT
303 W CHAPEL ST, STE 2100
DODGEVILLE, WI 53533

608.930.9891

www.iowacounty.org/departments/landconservation

EVENTS & RESOURCES



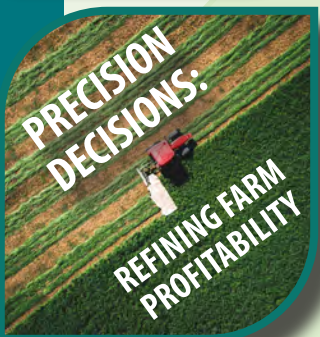
NUTRIENT AND PEST MANAGEMENT TRAINING FOR FARMERS JANUARY 4, FEBRUARY 7, MARCH 1, MARCH 15-2022

This online training will cover the basic concepts of soil fertility management in Wisconsin and is meant to cover the material required to write your own nutrient management plan for your farm. This is a 5 hour class and will be taught via presentations shared over Zoom. All the classes are identical and you only need to attend one class. The materials from the class will be shared with participants, however, the course will not be recorded. The class will conclude with a brief introduction to SnapPlus. To register: <https://go.wisc.edu/2024y1>



WISCONSIN COVER CROP CONFERENCE CENTRAL WISCONSIN CONVENTION AND EXPO CENTER, ROTHSCHILD, WI FEBRUARY 24, 2022

Topics include creating new opportunities for in-season manure, managing equipment for planting green, adaptive rye management, incorporating cover crops in vegetable rotations, cover crops as forage, and MORE! Many of the presenters will be Wisconsin grain and livestock farmers speaking from experience about what has worked and hasn't worked in their Wisconsin conservation cropping systems. <https://go.wisc.edu/covercrop>



PRECISION DECISIONS: REFINING FARM PROFITABILITY RECORDED WEBINAR BY UW-MADISON DIVISION OF EXTENSION, UW-MADISON NUTRIENT AND PEST MANAGEMENT PROGRAM, PHEASANTS FOREVER, AND COUNTY CONSERVATION DEPARTMENTS OF IOWA, GRANT, GREEN, AND LAFAYETTE COUNTIES.

Farm fields are not created equal. Variations in soil, slope, depth, moisture, and shade mean some areas of a field may actually be losing you money year after year. Hear from local farmers and experts from UW-Madison Extension and Pheasants Forever. Learn how farms of all sizes and budgets can use their farm-specific information to identify areas where management changes or voluntary conservation programs can improve efficiency and profitability. <https://www.iowacounty.org/PrecisionDecisions>