EXTENSION
VIEWS
A Product of Extension Clark County

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Extension
UNIVERSITY OF WISCONSIN-MADISON
CLARK COUNTY

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Questions from My Desk

Trash or Residue: Corn Stover

Richard Halopka, CCA
Senior Outreach Specialist
UW-Madison Division of Extension Clark County

Questions are asked about how to manage the trash on our corn fields? Many claims have been made that genetically modified organism (GMO) corn trash doesn't recycle like non-GMO, the best trash management is to bury trash or farmers must add nitrogen (N) or biological activators to promote residue breakdown. Let's review each of these issues with some research observations.

Trash: crop residue is not trash, because trash has literally no value. Crop residues are very valuable. Residues will naturally decompose feeding your soil critters, which then mineralize the nutrients present in residue providing crop plant food/nutrients for next year's crop; residue protects the soil surface from natural elements (erosion from intense rainfall), decrease potential rainfall runoff by increasing water infiltration, and helps store carbon.

Residue volume: corn yields in 2023 are much greater than 20 – 30 or 40 years ago. Increased yields will generate greater surface area of plant, thus a greater volume of plant material (residue). GMO's may contribute to better plant health and stay green, but believe it or not GMO doesn't automatically mean greater residue or increased time to recycle residue.

Bury residue: this may be the worst management practice. A teaspoon of soil has 10 billion soil critters (live microbial critters, worms, insects, etc.) image how many are in an acre? To recycle crop residue your soil critters will require oxygen, moisture and stable temperatures. Build them a house and they will flourish. When residues are buried, it is essentially out of sight out of mind, until the following year when tillage delivers the residue to the surface again. Burying the residue limits oxygen and reduces your soil critters activity as they require oxygen to live and thrive. A better management practice is to reduce the size of the residue during or after harvest to accelerate the decomposing process. Anchored roots with surface residue will keep your soil in place and provide a home for your soil critters.

(Continue on next page)

This newsletter is mailed to approximately 1,400 farmers and agriculture businesses in Central Wisconsin at a cost of .70 per newsletter. County budgets are tight and each department has been asked to reduce expenses. If you would like to view the Extension Views newsletter online versus receiving a paper copy please contact the UW-Extension Office at 715-743-5121 / mariah.stange@co.clark.wi.us. You can view the newsletter on our webpage at: https://clark.extension.wisc.edu/extension-views/ Thank you for considering this option!

(continued from page 1)

Adding N or biologicals: adding N or biological products to speed the decay process is a good theory. In theory, when composting a high carbon (C) material (corn stover) additional N may be required to provide a proper C/N ratio for composting organic material. If you were composting this may be a correct assumption, but a field setting is not a compost bin. There is no research to support a fall nitrogen application to improve the recycling of corn stover (Fernandez, 2011).Biological products, either bacteria or fungi products applied on stover is good in theory, but both practices (N and biologicals) have not proven to be economical in research. Fall is a period of declining air and soil temperature, which contributes to reduced activity of your soil critters and a factor reducing decomposition rather than lack of N or presence of biological critters (Staton, 2011). . Adding a green cover after harvest may provide a greater return on investment than spraying on a biological product to help breakdown residue.

A few residue management tips (Al-Kasi, 2011):

1. Reduce residue size, if the residue is removed plant a cover crop.
2. Allow standing stalks with roots in the field, roots with residue anchors the soil, reducing erosion, and adding a cover crop will reduce erosion.
3. Limit fall tillage to improve soil structure and reduce erosion potential.
4. If time allows consider a cover crop, your critters love live roots.

In summary, crop residue is not trash, but an important building block for the house you are building for your soil critters. Residues on the soil surface and roots in the soil provide food that your soil critters need to survive. Theories and observations are good for conversations, but unless it is proven by research, with decreasing margins in grains and forages, the return on purchased N or biologicals is many times greatest when products are not purchased. Soil provides all the required nutrients and critters to reduce and recycle residues. This article focused on corn residue, but the management practices can be adapted for all crop residues.

If you have questions related to crop residues, cover crops, or crops in general please call UW-Extension Clark County at 715-743-5121 or email richard.halopka@wisc.edu .

References:
Al-Kaisi, M., 2011, Early Corn Harvest and Residue Management This Fall, Integrated Crop Management News, available at: http://www.extension.iastate.edu/CropNews/2012/0802al-kaisi.htm verified 7/2/2014
Fernandez, F., Can Fall Nitrogen Applications Break Down Corn Stover? ACES, September 8, 2011, available at: http://web.extension.illinois.edu/state/newsdetail.cfm?NewsID=26180 verified 8/18/2017
Staton, M., 2011, Corn Residue Management Begins in the Fall, Michigan State Extension, available at: http://msue.anr.msu.edu/news/corn_residue_management_begins_in_the_fall verified 7/2/2014

Putting Money in the Till

Richard Halopka, CCA Senior Outreach Specialist
UW-Extension Clark County Crops & Soils Educator

When working in private industry one day my boss told me "we need to put some money in the till." My first thought was what is he talking about? The simple answer is every day when you begin the day you turn on the lights and make coffee. Well, we need to pay those bills. How did we pay bills? We sold products and in business you have an inventory of products. Some turn over fast and some not so fast. So, when he said "put money in the till" some of the not so fast inventory was on the shelf to long. You all have heard of sale prices or even fire sale prices, that is putting money in the till.

Many farmers I'm sure may have the same problem. Some days we just need "money in the till." In tight margin times we may have to review our inventory and make decisions on our inventory.

Many will say "I don't have inventory," but you do and you may need to turn some inventory into cash. Look around your farm; you have an inventory of livestock, grain, forage, land, buildings, and equipment. I understand it is difficult maybe to view it as that, but farming is not much different than any business on Main Street or in the mall.

You grow crops to sell or feed to livestock; you trade some inventory of feed to produce milk or meat. You have an inventory of land to grow those crops and an inventory of equipment to plant and harvest crops. You have an inventory of buildings to house livestock and store crops. As a farmer you have a large inventory.

So in tight times how do I put money in the till?

Good question. It is hard to answer, but this is where management comes into play.

First take inventory of all aspects of your farming operation. Second, what inventory could I reduce? An example, if you have crops stored beyond 1 or 2 years you may need to consider selling crops or adding livestock to feed the crop out and turn it into cash.

Third, land inventory, are you renting or buying land because it is handy? Sometimes paying rent or owning excess land may not be best for the bottom line and forgoing the rent or monthly payment may return more cash to the farm.

Fourth, equipment inventory, are you buying something you want or need or do you have stuff parked you haven't used for greater than three years? Everybody likes owning stuff it makes us feel good, but at some point we may need to turn stuff into cash and put money in the till. There are wants and needs in life, cover the needs and ignore the wants until times improve. Operations must be completed each day on the farm, equipment is needed, but there may be alternatives to complete some tasks and some of the older unused or "parts" equipment may need to leave the farm to put money in the till. A person once told me if it has wheels you can always get rid of it.

Putting money in the till is a tough call, but as a farm manager you need to make tough decisions and get through these tight margin times.

If you need help please contact our office at 715-743-5121 or email me at richard.halopka@wisc.edu there is help for farmers who need assistance and there is no charge for the advice.

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2024 PAT SESSIONS PRIVATE APPLICATOR TRAINING & TESTING

PAT Manuals must be ordered from the state online or by mail. Contact your local Extension office for a paper form if online ordering is not an option for you.

CLARK COUNTY SESSIONS

Self Study is always an option. Call to schedule your test.

IN-PERSON

Taught by Richard Halopka

- February 7th @ Thorp Fire Hall

Taught by Glenn Nice

- March 15th @ Abbotsford City Hall

LIVE ZOOM TRAINING

Led by Test Proctor

- Feb 27th @ Clark County Courthouse

QUESTIONS?

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PAT WEBSITE:
(Visit website to see all training dates, sign up & order manual)
http://fyi.extension.wisc.edu/pat/private-applicator-training/

Other Live In-person PAT Test Dates and Locations

Taught by Glenn Nice (PAT Program Manager)

Jan 18—Stem Center, Green Bay

Jan 24—Metropolis, Eau Claire

Feb 7—Cranberry Station, Black River Falls

Feb 20—Arlington Ag Research Station, Arlington

Feb 29—Portage County Annex, Stevens Point

March 5—La Sure's Banquet Hall, Oshkosh

March 21—UW-Whitewater Community Engagement Center, Whitewater

If you need the PAT training and testing, but you do not have internet access to sign up and order your manual…

Please contact us at the Clark County Extension Office and we will help you.

DO NOT PROCRASTINATE!!!

If you would like to self-study, you need to order a manual and then call our office when you are ready to take the test.

Pass/ Fail for self– study is 70% correct to pass

Pass / Fail for attending a training and test date is 50%

Clark County Extension Office

715-743-5122

Managing Herbicide Resistant Weeds

Richard Halopka, CCA
Senior Outreach Specialist
UW-Madison Division of Extension Clark County Crops & Soils Educator

I'm sitting in a meeting with UW-Madison Extension weed specialist Vince Davis, I remember his words, "It is not if you find herbicide resistant weeds, it is when you find them".

It has been a number of years since I first identified resistant water hemp in a Clark County field.

Today, water hemp has been identified in many fields across Clark County. My caution to farmers is to make note of weeds you are familiar with and ask someone to identify the other weeds. Not all may be roundup resistant. By reviewing your records together we can have a plan of action to control potential resistant weeds on your farm.

Understand herbicide resistance can occur with all herbicide modes of action. Currently Roundup is the major concern as farmers and agronomist have relied heavily on the herbicide. The purpose of this article is not to inform you how a weed became resistant, but rather how to manage your crops to reduce the economic impact from weed competition. One point, a herbicide resistant weed does not have a gene in the plant DNA like a Roundup Ready (RR) crop. Rather, the plant develops a method to avoid death from the mode of action of an herbicide.

Herbicide resistant water hemp began as a misidentified weed. First and foremost if you have a "tough" weed, identify the weed. As an agronomist or farmer, contact your local county extension agriculture educator to help identify the weed. If the county agent isn't able to identify the weed we have a group of weed specialist's to help.

Moving forward, what can a farmer do to manage crops once an herbicide resistant weed is identified?

1. Use herbicides only when necessary. With annual crops it may be difficult to avoid the complete use of herbicides. A management change may be allowing a few weeds that are not an economical drain on the crop to avoid a second herbicide pass.
2. Mode of action of an herbicide. Review A3646, Pest Management in Wisconsin Field Crops. Today many herbicides have generic trade names. Know the active ingredient and the herbicide's mode of action. Remember, it is important to incorporate multiple modes of action to prevent herbicide resistant weeds. The day of using one herbicide to control all weeds is history. Understand herbicide mode of action and rotate herbicides. Use different modes of action and change modes of action in future years to reduce potential herbicide resistance.
3. Crop rotations. This is tough, as many farmers are dialed into two crops in a rotation. Bringing a third or fourth crop into a rotation may provide another commodity to sell and prevent herbicide resistance. Adding a perennial crop may reduce soil erosion compared to annual crops and reduce herbicide use. Consider the use of cover crops. Summer or fall seeded cover crops compete for nutrients, preventing weed seeds from germinating and help prevent soil erosion. A cover crop may also provide forage.
4. Integrated pest management (IPM). IPM combines the use of mechanical, cultural practices, and herbicides to control weeds. Scouting is the most important aspect of IPM and will determine if there is a need to implement a pest control. If you use a no-till system, tillage will not be a component of weed control. You should consider a burn down with residuals and then scout the field and you may forgo a post application of herbicide. If you don't have time to scout your fields, hire someone. Scouting will pay dividends every year by preventing unnecessary pesticide applications and applying pesticide only when there is a potential economic loss. With tight margins a farmer can't justify applying pesticides unless there is an economical loss from a pest.
5. Clean equipment. Weed seed arrives in farm fields from purchased equipment, custom harvest, livestock feed, or migrating wildlife. Currently if there is only one field with an identified herbicide resistant weed: till, plant and harvest that field last then clean your equipment. If that is not an option, clean the equipment after working that field to prevent moving the weed seed to another field. Remember tillage equipment can move weed seed. If you are purchasing used equipment clean the equipment before it is used on your farm. Used equipment purchased from other areas has brought some interesting weeds onto farms in central Wisconsin. If you do custom work or use a custom operator, remember to ask questions and clean equipment before the fieldwork begins and after you're done to avoid spreading resistant weed seeds.
6. Currently resistant water hemp is one of the most common resistant weeds, but giant ragweed is becoming common in the county.

Herbicide resistant weeds are here. Herbicide resistance is not new, it has happened in the past. Herbicide resistant weeds can be managed to prevent an economical loss on the farm. As a farmer, don't be afraid to ask for help, your extension agriculture educator is a phone call away. Email me at richard.halopka@wisc.edu or call 715-743-5121

2023

BADGER CROPS & SOILS UPDATE MEETINGS

Click or scan to register

Balancing Sustainability and Innovation

Extension
UNIVERSITY OF WISCONSIN-MADISON

The annual UW Badger Crops & Soils Update meetings will be offered in 4 one-day in person sessions along with 1 virtual session this year.

Five CEUs are approved for the following areas: 2.0 crop management, 1.0 pest management, 1.0 soil & water and 1.0 nutrient management.

The meetings will present the latest information on agronomic, pest, and nutrient management research coming out of University of Wisconsin with a lens to on-farm application.

The in-person registration fee of $150 includes lunch. The virtual registration fee is $125. Registration deadline is November 17th.

	Monday November 27	Tuesday November 28	Wednesday November 29	Thursday November 30
	9:00 am – 3:00 pm			
IN-PERSON SESSIONS	Deer Valley Lodge **Barneveld**	UW–Oshkosh Fond du Lac Campus **Fond du Lac**	Holiday Inn **Stevens Point**	Best Western Plus Conference Center **Eau Claire**
VIRTUAL SESSION		Webinar broadcast		

FOR REGISTRATION INFORMATION:
https://cropsandsoils.extension.wisc.edu/badger-crops-and-soils-update-meeting/

Storing Drought Affected Grain

Sam Bibby
UW-Madison Extension Regional Crops Educator
Sauk, Vernon, and Juneau Counties

If your corn or beans suffered from the drought this growing season and, you are probably ready to be done with 2023 and begin to plan for 2024 growing season. However, if you store grain on your farm you should not forget about the 2023 crop going through the dryer or sitting in the bin. Preservation and optimization of grain stored on the farm, especially drought-affected grain, can greatly affect the dollars paid at the elevator this coming winter or spring.

Drought affected corn should be handled as carefully as possible. It may be low in test weight and could be damaged when handled compared to well filled corn kernels. To preserve test weight consider drying corn slowly with as low a temperature as possible. Low-test weight corn dried at 220°F on average is 1.5 pounds per bushel lower in test weight than corn dried at 70°F. The result may be a return of around 4.5 cents per bushel the result of avoiding dockage from reduced bushel weight.

Drought affected corn is prone to stress cracks and when moved through grain handling equipment can break causing increased fines in the grain. Fines will plug up gaps between kernels in the bin preventing adequate airflow, which, eventually may result in moldy or unsaleable corn. Fines also act as a glue creating grain removal problems later in the season. To avoid this issue cleaning grain as it enters the bin and/or "coring" the grain bin immediately after filling and clean the cored grain or sell it (to a livestock farm or feed mill).

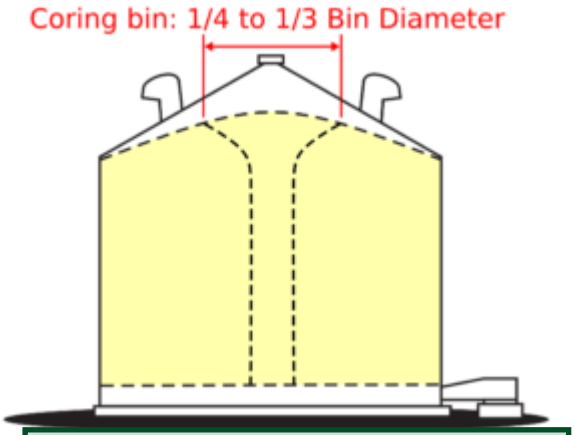


Illustration from James Dyck and Field Crops News

Soybeans affected by drought may dry down earlier than expected and many growers may be stuck harvesting soybeans below the standard 13% moisture. This is a bigger problem than many farmers realize. When you deliver beans to the elevator, you may be docked if they are too wet, but you will not be paid more if they are too dry. If you sell 10,000 bushels of soybeans at 10% moisture rather than 13% with a price of $12 per bushel, you are effectively missing around $4000 (calculated using the inverse shrink factor).

Adding water to grain to increase moisture is illegal in the US. However, there are a couple of strategies to avoid or counteract this problem. The easiest and least risky is to harvest on time when possible. Not only will this avoid the lower moisture levels, but also you are less likely to experience as much shatter loss from the combine header. When soybeans are harvested below 13% moisture, you may consider reconditioning them to add moisture and avoid missed revenue. This is done by turning on bin fans during the right weather conditions to slowly humidify the soybeans. Soybeans will reach an equilibrium moisture of around 13% when exposed to air with a relative humidity of 70%. This process poses several risks, the greatest of which is bin damage due to expanding grain and the subsequent nullification of any warranty left on the bin. Another risk is over conditioning soybeans, which increases their moisture too much resulting in mold and/or rot along with other problems. While this process is risky, it can certainly pay off when considering the loss in profit calculated above. Some of the best resources for reconditioning soybeans safely come from Dr. Ken Hellevang a Professor and Extension Engineer at North Dakota State University (NDSU). Full instructions and safety considerations can be found in the NDSU soybean production guide at https://www.ndsu.edu/agriculture/sites/default/files/2023-01/a1172.pdf.

https://fieldcropnews.com/2019/10/drying-and-storing-corn-with-low-test-weight/
https://www.pioneer.com/us/agronomy/drought-stress-grain-harvest-cropfocus.html
https://www.ndsu.edu/agriculture/ag-hub/ag-topics/crop-production/drying-storage/considerations-when-conditioning-too-dry-soybeans
https://www.canr.msu.edu/news/harvest_considerations_for_overly_dry_soybeans
https://www.ndsu.edu/agriculture/sites/default/files/2023-01/a1172.pdf

SAVE THE DATE

JAN 31, 2024—SOIL HEALTH MEETING
CAM CENTER — THORP

TOPICS:

POTASSIUM FORAGES—MATT LIPPERT
BIOLOGICALS—DAN MARZU
FIXING A "SICK" SOIL—RICHARD HALOPKA
CLARK CTY PROJECT AT CLARK TURNERS—JIM ARCH

Webinars for WI Gardeners

Join us for our **FREE** webinar series! These engaging mini-webinars are 30 minutes including Q&A. Mini-webinars are free, but registration is required. Please click on the topics below to register. Webinars will be recorded for later viewing. For questions about the webinars contact us at: horticulture.webinar@extension.wisc.edu

2023 SERIES 5: Houseplant Myth Busters, Tool Ideas, and Succulent Spotlight

- **Adaptive Gardening Tools: What to think about for success next season**
  - **Date/Time:** Thursday, November 9, 12:00 p.m.
- **Growing *Adenium* (Desert Rose) – The Flamboyant Succulent**
  - **Date/Time:** Tuesday, November 14, 12:00 p.m.

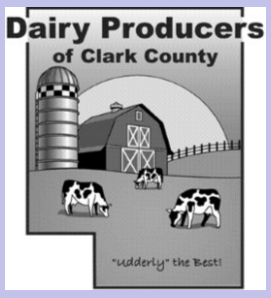
Past 2023 Webinars are recorded and available for viewing

- Soil Testing – Why, When, and How
- From Scraps to Soil: Composting Basics
- Growing Garlic in Wisconsin
- Hydrangeas: Know Them and Grow Them
- Beyond Birdfeeders – How to be a Bird Friendly Gardener
- Gardening for Pollinators
- Spotted Lanternfly: am Invasive Insect Knocking on Wisconsin's Door
- Understanding Your Garden Soil
- Bee Lawns: Using Your Lawn to Provide Food for Pollinators
- Indoor Plant Care During Winter
- Rejuvinating Neglected Apple Trees
- Planning for a Seed Saving Vegetable Garden

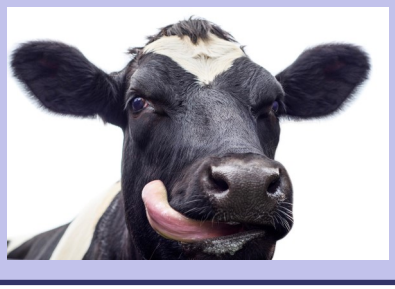
Also available are Archived 2022 Webinar Videos

Dairy Farmers…

Start thinking SCC



I will be asking for your SCC averages in January for the Dairy Promotions SCC awards . January / February issue will have the SCC awards deadline and information about the Annual Dairy Promotions Meeting and SCC Awards.



Save the Date

December 12—Cows & Crops Chat

Kow Kickin Café—Greenwood

9:30 a.m.—11:00 a.m.

Coffee and a cinnamon roll will be provided by Extension. All other menu items will be your own

Call for more information

715-743-5122

Forage Testing Functionality

Lyssa Seefeldt - Regional Extension Dairy Educator for Chippewa, Dunn, & Eau Claire Counties.

"You cannot manage what you do not measure." Forage testing is a part of the gold standard of consistently achieving good production / performance levels using the forage that you have available. While you can formulate a ration based on expected performance and assumed values, you are relying on averages to help you achieve herd performance goals. This method relies on the fact that you are assuming your forage is achieving at least the average values based on whichever laboratory averages, research reference, etc. that you or your nutritionist are relying on. The result may be a ration that is missing the mark, leaving pounds of milk on the table, or paying for ingredients that may not have been necessary.

Lactating dairy cows have been shown to eat more dry matter and produce more milk when consuming forages with higher neutral detergent fiber (NDF) *digestibility*. The NDF digestibility is an estimate of the amount of total NDF that the cow and microbes in the digestive tract can utilize before the forage material is expelled from the cow as manure. Since NDF digestibility decreases as forages mature, this is one reason that we have seen high-producing herds shift to a less mature crop for ensiling compared to what the normal may have been 30 years ago.

Key take-home message: Why forage test?

1. More economical ration

2. More pounds of milk

3. Forage tests are relatively inexpensive

When using forage testing, there are many different types of analysis that can be completed. Laboratory chemistry and digestive chemistry (wet chemistry) have been the industry standard for learning about the characteristics of the forage being tested. While considered more accurate, wet chemistry is more expensive and slower to get results. Near Infrared (NIR) has become a popular analysis method due to the quick turn-around time to complete and are less expensive. Why might you want to choose one type of testing method over another? When measuring an alternative forage (not standard corn silage, alfalfa or grass-based silage), you may not want to utilize NIR as the reference calibration database may not be as robust as that of the standard forages, creating less reliable results. For forages that are commonly used and tested regularly, NIR results generated by a laboratory will generally be adequate for routine use.

If you are evaluating mineral content in your forage to help with DCAD balancing for transition diets, laboratory chemistry is going to give you more accurate results. Forage testing using NIR is relying on light reflectance which works the best with large molecules such as fiber and protein. Minerals on the other hand tend to be smaller, so NIR will have a harder time giving an accurate result. Digestive chemistry and standard laboratory chemistry are always going to be more accurate compared to NIR.

Having a forage test also allows us to target the right feedstuffs to the right group of animals. This can be especially important if we know that there is variability in the forage we harvested. Knowing what we actually have allows us to feed the quality of forage to the group where it will be most effective. High producing animals may see a greater response to high NDF digestibility forage compared to lower productivity animals.

Forage testing can also help us monitor mineral levels in our forages. Potassium levels are a critical piece of the puzzle to monitor when formulating dry and transition cow diets. Potassium levels in your forage test can be a reflection of your nutrient levels present in your soil. Forages low in potassium are ideal for feeding to prefresh cows during the last three weeks prior to calving. Once the cow has calved, her potassium demands increase with lactation and she is more able to utilize higher potassium content that is often found in harvested forages.

Going beyond a standard chemistry forage test may well be worth the extra cost of completing a digestive chemistry to get a better understanding of where your forage NDF digestibility is at. This could allow you to tailor feeding higher producing animals higher NDF digestibility forages.

Forage testing also has another application: you can get a better idea of if your forage fermented correctly if ensiled, you can elect to test for contaminants if you know there are potential yeast, mold, or toxin issues, etc. More information on this topic can be found at https://bit.ly/ForageStability. Sampling your forage also gives you an opportunity to simultaneously work with a nutritionist to evaluate particle length or request a particle length evaluation in addition to your analysis to make notes about adjusting the cut length for the future.

Forage testing has the potential to allow you to more effectively utilize your forages. Using test results can help you realize more pounds of milk from your cows by helping you decide where to best use your forages and how to complement them in your ration. Using forage testing is a relatively inexpensive way to maximize your efficient use of forage.

References:

"Understanding NDF Digestibility of Forages." 2001. Access at https://fyi.extension.wisc.edu/forage/files/2016/10/NDFDig-2.pdf.

"Target the right quality forage to the right cows." 2023. Access at https://hoards.com/article-34136-target-the-right-quality-forage-to-the-right-cows.html.

"Using lab tests to estimate forage stability and fermentation efficiency." 2023. Access at: https://dairy.extension.wisc.edu/articles/using-lab-tests-to-estimate-forage-stability-and-fermentation-efficiency/.

Reviewed by:

Jackie McCarville | Extension Regional Dairy Educator | Grant, Green, Iowa, & LaFayette Counties

Matt Lippert | Extension Dairy Educator | Clark & Wood Counties

CONSERVATION CORNER

Jim Arch, CCA
Clark County Land Conservationist

Hello from the Land Conservation Department. I hope you have managed to get some of your crops harvested between the rains, what a change from the hot/dry summer we experienced. Being so wet and crops still in the fields, I don't expect a lot of cover crops going in the ground this fall. That will be unfortunate, because cover crops protect soils from erosion and help dry out wet soils in the spring. I know some of you may have planted cover crops last fall, and because of the hot/dry summer we had, your yields may have been negatively impacted and you're blaming it all on the cover crop you planted. My suggestion is not to fall into the "I'll never planted a cover crop again thought". Remember cover crops need to be managed in the spring especially if it turns dry and looks to stay dry you'll want to terminate those cover crops earlier than you would otherwise. Also, if you keep planting cover crops your soil organic matter levels will increase and that will increase your soils water holding capacity, so your soils will be more resilient to drying out in a dry year.

We had our Cover Crop Field Day at the new site in early October. The weather wasn't the nicest with some rain, wind and cool conditions, but we managed to pull it off. The interseeding we did using the no-till drill turned out impressive. We used the County's drill and modified it by taking out some springs and ratcheting up the gangs on the 2nd, 6th, 10th and 14th rows so we weren't running down corn rows. Even as dry and hot as it was I could not see any negative effects the cover crop interseeding had on the corn compared to where we did not plant a cover crop. Note: If some of you took a look at the cover crop plots in August you may have wondered about the condition of the corn. The nitrogen deficiency symptoms were due to errors made by the applicator when the corn was being side dressed not from the interseeded cover crop.

The County has had it's no-till drill now for seven years some of you may wonder how much use it has had since we purchased it in September 2016? The drill has been used on 5,213 acres in seven years. When the drill was purchased the County was pretty much the only entity renting no-till drills out in Clark County since that time the number has grown to probably close to six. I do not see that as competition, I see that as a good sign as interest in no-till, cover cropping continues to grow.

I'm sure many of you have seen your manure storages fill up fast in the last few weeks if you weren't able to empty it out this fall yet. At my place I received about 9" of rain in the last few weeks a manure storage that is 120' X 160' at the top of the berm will gain about 106,992 gallons of liquid with that amount of rain. The idea of Maximum Operation Level (MOL) that is installed on newer manure storages is so they are pumped down before manure reaches the MOL, so that when these monsoon periods happen there is some buffer there to allow room so that manure storages are less likely to run over. Now with the fields being saturated and delays in getting crops harvested some difficult decision are going to need to made. Number one decision is to not let your manure storage run over, number two decision should be, when applying manure on these saturated soils you may need to apply lower rates than you would like to. Remember, the soil is not going to absorb much manure at this point so it will be more likely to runoff when the next rain event comes. Going around the field with a chisel plow a couple times can help at least keep manure in the field but it's not a cure all. Try to apply manure where there is a crop residue left after harvest, corn grain fields would be the best, followed by hay fields. If you are able to incorporate your manure that would also be beneficial; though, fall tillage will lead to more erosion potential until something is planted next spring. Another practice that you need to consider doing is cleaning the mud off the road when you are done with a field. I heard of one accident already this fall where the farmer left a mess of mud on the road after applying manure and someone hit it with their vehicle and ended up totaling out their truck.

If you are interested, we still have some money available to cost-share nutrient management planning on fields that have never had a nutrient management plan before. At $40 per acre, that is way more that what it would cost to have someone soil sample your fields and write the nutrient management plan.

Hope your harvest ends safely and satisfying, as always give us call with any projects you are considering or questions about Farmland Preservation or nutrient management planning and we will try to help you out. Clark County Land Conservation 715-743-5102

Great Families

Matt Lippert, Dairy Educator

Cattle are very productive utilizing forages. Today's dairy rations are corn silage based, supported by alfalfa and a few other legumes and grasses. When looking further it is interesting how diverse the options are and how they relate to each other. Modern agriculture relies on a few great families.

Grasses: This family is so large it has many subdivisions. Grasses can be characterized as annual or perennial, warm season (C4) or cool season (C3). C3 or C4 refers to a difference in how the plant metabolizes carbon during photosynthesis. Warm season grasses are more drought tolerant and excel during hotter than average days, locally C3's start growing much earlier in the spring and fit our normal season well. C3's are more digestible as a rule but the BMR gene found in many C4's improves digestibility greatly.

Perennial cool season grasses: perennial ryegrass, meadow fescue, tall fescue, orchard grass, bluegrass, brome grass, timothy. Harvest these young for great digestibility.

Perennial warm season grasses: switch grass, bermuda grass, and other prairie grasses. These are not typically utilized in our area but there is interest in some of these for bio-fuel production, drought resistance and less need for reestablishment and tillage.

Annual cool season grasses: These are mainly cereals, more on that later, also annual ryegrass.

Annual warm season grasses: corn, teff, millet, sorghum, sudan grass. These grasses may also be cereals and vary in the amount of heat needed and drought tolerance.

Grasses can also be classified as cereals if they are capable of producing grain, but these crops don't have to be used for grain production. Corn, rye, wheat, oats, barley triticale, teff are all utilized as grain in some regions but also can be made as corn silage, teff hay, ryelage, trit-lage, oatlage etc.

The term rye confuses many people. Ryegrass, cereal rye, rye are not interchangeable terms or indicators or intergrades between one another. Cereal rye or just rye is a very winter hardy winter annual that is used for cover crop, conservation, grain and forage. Ryegrass is unrelated and can be an annual, perennial or in some varieties that are only moderately winter hardy a short lived perennial. Ryegrasses are highly digestible as forage, rye is not very digestible unless harvested very young.

When we speak of grass fed livestock, the exclusion of corn or corn silage is usually implied because corn is a grain, but even corn is a grass.

Legumes: Alfalfa, clover (red, white, sweet…), soybeans. These powerhouses produce their own nitrogen which is a superpower for reducing the cost of fertilizer and for delivering high protein pasture, forage or oil seeds.

Brassicas: After accounting for all of the grasses and legumes, there are so few others that it is clear these two truly are great families, but another family with abundant representatives are the brassicas. This may be even more so in the garden: cauliflower, broccoli, cabbage, kale, brussel sprouts, turnips, radish, arugula, watercress, kohlrabi, bok choy, collard greens, horseradish. Alongside their garden cousins add mustard, and agronomical adapted crops radish, turnips, rapeseed, canola etc. Brassicas are utilized in annual mixtures, often for grazing. They are very high in moisture, and high in energy. The term rocket fuel is sometimes used. They need to be balanced with other dryer, lower energy and protein feeds.

The catch all category: not a family, but collectively known as forbs. These are found in mixtures for cover crops and for grazing: Chicory, plantain, buckwheat, etc. They provide diversity.

When growing grain or oilseeds (corn, wheat, soybean), monocultures are often preferred and easier to manage. For grazing, forage production and perennial management systems there are advantages for diversity. Grasses and legumes complement each other. For more diversity in grazing and cover crops brassicas (annual mixes) and other forbs increase diversity.

Understanding great families will help you develop a better crop rotation and feed your livestock better.

Are you part of a great family? Of course you are! If your family has been doing it for a century or more, see the information on how to apply for century farm recognition in this newsletter.

Nutrient Management Planning

These courses are in partnership with the Marathon, Clark, Lincoln, Taylor and Wood county UW-Extension offices and the county conservation departments from Marathon, Clark, Lincoln, Taylor and Wood counties.

These are the anticipated dates and times for classes. These and the prices are subject to change.

GET STARTED TODAY
To register call
715.675.3331 and press "1"
or visit
www.ntc.edu/ce

For updated Dates, Times, Pricing Questions
Contact Continuing Education at (715) 803-1034 or email ce@ntc.edu

This course is designed to develop a nutrient management plan that will meet the NRCS 590 Standard requirements. Participants will enter soil test information into the software program, SNAP Plus, and will develop a plan using the data. Subjects include conservation plans, field mapping, soil test analysis, manure management and crop selection and requirements.

It is highly recommended that you have current soil tests no more than four years old, sampled on a one sample per five acre basis and analyzed by a DATCP approved lab.

Soil Testing Payments: Participants will receive reimbursement for up to $750 of eligible soil testing costs. (Please contact your local County's Conservation Dept. with questions.)

6—2-HOUR SECTIONS

Thursdays, 1/18, 1/25, 2/1, 2/8 2/15, 2/22
Time: 7-9pm
NTC Spencer Campus
$260.00

3—4-HOUR SECTIONS

Fridays, 1/5, 1/12, 1/19
Time: 10am – 3pm
NTC Medford Campus
$260.00

Wednesdays, 1/17, 1/24, 1/31
Time: 10am – 3pm
NTC Wausau Campus
$260.00

Thursdays, 1/18, 1/25, 2/1
Time: 10am-3pm
NTC Spencer Campus
$260.00

Tuesdays, 3/7, 3/14, 3/21
Time: 10am – 3pm
River Block Building (Wisc. Rapids)
$260.00

Century and Sesquicentennial Farm Application

Wisconsin State Fair officials are pleased to announce that applications are now available for the **2024 Century and Sesquicentennial Farm and Home Award**, a prestigious award given to families who have dedicated their life to Wisconsin farming for 100 or 150 years.

To qualify for the award, families are required to provide proof of continuous family ownership of a property in the state of Wisconsin for either the last 100 or 150 years. All property owners will be honored at a special **Century and Sesquicentennial Farm and Home Award Program** held on Tuesday, Aug. 6 in conjunction with the 2024 Wisconsin State Fair which takes place Thursday, Aug. 1 – Sunday, Aug. 11 at Wisconsin State Fair Park in West Allis.

Honorees will receive complimentary Fair admission tickets, an invitation to the awards breakfast, a commemorative photo, a certificate, and an outdoor display sign.

The Century Farm and Home Program began in 1948 in conjunction with the State of Wisconsin's Centennial Celebration. There are currently **9,982 Century Farms and Homes** nestled throughout the Badger State. The Sesquicentennial Program similarly originated in 1998 as part of the State's Sesquicentennial Celebration and has since honored **1,044** families.

Applications for the Century and Sesquicentennial Farm and Home Award are available now and must be postmarked by the application deadline **Friday**, **March 1, 2024**. Only one certificate may be issued per property.

Applications can be found online at:
https://www.midwestfarmreport.com/century-and-sesquicentennial-farm-application/

You can also contact your local Extension office to receive an application. Clark County Extension 715-743-5121

Upcoming Meetings/Events

Make sure to listen to WCCN and WAXX for any cancellations

DATE	EVENT	LOCATION	TIME
November 27-30	***Badger Crops & Soils Update Meetings***	See page 5	9:00 am - 3:00 pm
December 12	***Cows and Crops Chat***	Kow Kickin Kafe 313 N Main Street, Greenwood	9:30 am - 11:00 am
January 31	***Soil Health Meeting***	CAM Center W8872 Pine Rd., Thorp	TBD
January-February	***NMP classes***	Black River Falls Medford Spencer Wausau	Varies
January - April	***PAT trainings***	See page 3	9:00 am - training 1:00 pm - testing

The Clark County Extension Office will be closed the following dates:

* Statewide Extension Conference
  > Nov 1-3, 2023
* Holiday observances
  > Nov 23-24, 2023
  > Dec 22-25, 2023
  > Jan 1, 2024

Extension
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