



EXTENSION CENTRAL NEWS

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Protein Sparing Diets

By Matt Lippert, Dairy and Livestock Agent
Clark County

Protein prices are up sharply this summer. Soybean meal, canola meal all have become major areas adding cost to the ration. Milk prices are high enough that feeding adequate protein for maximum production is justified, but sometimes protein is fed in excess.

Many of us think of protein in the diet as if it were a single factor in the ration. Protein is actually a complex of nitrogen containing ration factors. There are specific **amino acids** needed for production. There are many amino acids, we tend to consider about 15 that are called as **essential** and must be provided in the diet. **Lysine** and **methionine** we hear about most often from nutritionists, they are described as "**first limiting**" meaning they are usually at the level of concern for maintaining production.

Rumen microbes need nitrogen compounds, sometimes they block our ability to feed the cow efficiently, breaking down important amino acids for their own use and depriving the cow of amino acids we have supplemented. At considerable expense there are **rumen protected amino acids**, that are designed to get past rumen bacteria and avoid wasteful breakdown. Rumen microbes can also build amino acids for use later by the cow. Very available forms of nitrogen such as feed urea, and high protein alfalfa haylage benefit from bacteria to make these nitrogen forms useable for a ruminant while other animals cannot utilize them. Urea is a nitrogen source, not a true protein, but can be used to build protein by rumen microbes. This type of protein is variously described as **soluble protein** or **rumen degradable protein (RDP)**.

Microbes build proteins from digestible carbohydrates (starch and sugar) and RDP and are an important factor for protein creation by the cow. A cow with a healthy appetite is an important component of delivery of large amounts of protein to the intestine to be converted to meat and milk.

To utilize protein components most effectively rations need to be balanced for



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specific amino acids, for adequate digestible carbohydrate and rumen degradable protein. Relying too much on one specific protein source often will not meet these several required minimum amounts, feeding more of one protein source, raising total CP to obtain a minimum level of specific amino acids is inefficient and wasteful. Diets for 100-pound milk production groups or 150 plus pound cows can be developed that only include 15-16% CP maybe even less. Without paying attention to required levels of amino acids and relying on only one protein source, or simply over feeding protein will result in diets that are in the 18% range.

Milk urea nitrogen (MUN), also is a good indicator if the protein complex is being overfed or if carbohydrate amount and type is poorly matched with protein supplies. Over feeding protein especially this year is expensive. There are many high producing herds with low (9-11) MUN.

Also look at replacement heifer diets. Calves fed milk or milk replacer are growing very rapidly, do not have a functioning rumen and require diets over 20% CP. Calf starters mimic this range and are often 18 -20% CP. As a calf transitions to dry feed, begins consuming forage, growth rate slows in relation to intake, protein requirements drop quickly. Calves over 6 months of age do well with diets that are 12-14% CP. Feeding higher levels may make you feel better about your care for the calves, but the benefit is for you, not the calves.

Over the long term, when proteins become more expensive, milk price generally responds. You need to be your own protein price cop, because on a day-to-day basis we can have protein prices that don't "fit" with the milk price. This summer looks to be one of those times.



Cover Crops following Wheat in Wisconsin

By Ben Jenkins

Green Lake County, Extension Agent

Overview

Wisconsin's short growing season doesn't provide a lot of time for growing cover crops. However, the early harvest of winter wheat allows an excellent window for cover crops to grow, protect the soil and provide other benefits. NRCS has some dollars to help farmers plant cover crops. If you are new to the cover crop practice, now is a great time to start and try a few acres.

Cover crop recommendations typically change depending on where you are in Wisconsin but because of the early harvest of wheat, cover crop choices are pretty similar across the state.

Competition from volunteer or re-seeded grain from the combine can sometimes present a challenge. If this is expected, it may be advantageous to allow growth of the volunteer grain to begin and apply a non-selective

herbicide before planting the cover crop. This may be difficult if the cereal grain is harvested after mid-July.

Cover Crop Options for Winter Wheat in Wisconsin

Small grains/grasses

Oats and **spring barley** will grow rapidly in late summer and continue until a hard freeze. Spring barley and oats will typically have three months or more to grow after wheat harvest and will produce significant amounts of residue to aid in reducing soil erosion the following spring. Barley and oats can also be harvested in the fall as a forage, however this reduces their effectiveness in reducing spring erosion.



Annual ryegrass (ARG) is a somewhat popular and economical cover crop but planting ARG is discouraged due to concerns with its potential to become a difficult to control weed. It can overwinter in the Midwest with mild conditions. It can be a prolific seed producer in the seeding year and several glyphosate resistant biotypes have been identified. If it over-winters, it can be difficult to control with herbicides.

Winter rye or **winter triticale** can be planted August-September for a late summer and over-winter cover. Planted in August, rye will produce a thick cover in the fall and then will grow rapidly in early spring. Rye and triticale used as cover crops need to be terminated by late April before they grow too large and become difficult to manage. Rye and triticale can also be harvested in the spring as a forage

Brassicas (radishes and turnips)

Radish (e.g., Tillage, Groundhog, NitrDaikon, oilseed or forage radish) is a fast growing cover crop, capable of producing a large taproot that can extend several feet deep if planted in July or August. These radishes are often touted to alleviate soil compaction by "bio-drilling" down through compacted layers within the crop root zone. Research suggest, however, that radish root growth can be restricted by compaction zones and often does not break up compaction.

Other brassicas: Turnips, Rapeseed, will have similar tap-rooting to radish, with less root volume. Turnips typically winter kill, but depending on the variety, rapeseed will likely survive the winter and require herbicide termination in the spring. Due to a more rapid rate of decomposition, as compared to the grasses, monoculture stands of turnips and/or radishes often do not provide sufficient residue cover for erosion reduction. Choosing varieties that are slow to bolt and have limited hard seed will reduce the likelihood of volunteer plants during the next growing season.

All brassicas are good options to diversify rotations. Because there are no brassicas in our traditional crop rotations, adding a brassica may help diversify the soil microbial community.

Continued on page 3

Questions from My Desk

By Richard Halopka,
Senior Outreach Specialist
Clark County, Soils & Crops

Legumes

Legumes will fix nitrogen (N) as they grow and provide nitrogen to next year's crop. Clovers are also harvestable as forage. All are good choices for a wheat-corn-soybean grain crop rotation. Legumes are typically planted in a mixture with grasses or grasses and brassicas in order to provide enough spring residue cover for erosion reduction.

Berseem clover is fast-growing clover that will winter-kill. Performance may be limited with dry conditions.

Crimson clover typically winter kills but may, in a warm winter, survive in Wisconsin. It is slightly more tolerant of dry conditions than berseem, but pH sensitive. Grows fast in spring if it survives the winter.

Field peas are a large-seeded, cool season annual. Best companion-seeded with a spring cereal grain to encourage climbing and minimize lodging.

Medium red clover (MRC) is short-lived perennial that is best companion planted with spring cereal grains or frost seeded (March-April) into fall established cereal grains.

Mixes

Research is very limited in terms of the soil health benefits that accrue from planting particular species of cover or green manure crops. Some principles with likely merit:

- Species with high biomass potential will add more organic material and recycle more nutrients;
- The fibrous root structures of cereal grains and forage grasses improve soil structure and may help alleviate compaction.
- Planting a multi-species mix that includes a grass, legume and brassica MAY achieve an ecological synergy that includes enhanced biological and physical benefits to soil health.

Suggested mixes for radish plantings:

- Radish at 5 to 8 lbs per-acre + 30 lbs per-acre oats or spring barley.
- Radish, 5 to 8 lbs per-acre + 35 lbs field peas + 30 lbs per-acre oats or spring barley
- Radish, 5 lbs per-acre + 8 lbs berseem clover + 10 lbs annual ryegrass

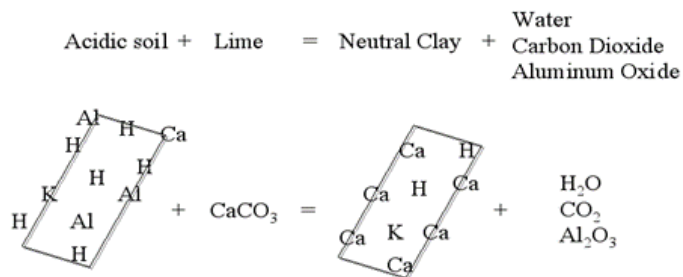
Check out the Midwest Cover Crop tool for more help with cover crop selection using this link: <http://mccc.msu.edu/>

Feel free to give Ben Jenkins a call (920-294-4037 or send an email (ben.jenkins@wisc.edu) for help in making cover crop choice decisions. It is better for the soil to have a planned crop growing during our entire growing season, than to have it fallow or growing weeds. Plant roots improve soil structure and organic matter, and reduce compaction over time.

My agronomist is marketing a liquid lime product and claims it is more efficient than aglime for correcting pH. Is this a true?

After reviewing the information you provided, along with a request for a detailed label, the company has not responded. Let us review A2809 and to answer the question, why do we use ag lime to correct pH? See figure 1.

Figure 1. How lime neutralizes acidic soil



January 1999, Noble News & Views

When testing soils pH, stands for parts of Hydrogen (H). Therefore, the amount of H present in your soil sample will determine the acidity or neutrality of your soil. If you want to correct pH to plant a crop like alfalfa, which will require a pH of 6.8, aglime will provide the best economical choice to correct pH. From figure 1, it is the carbonate fraction of the lime component that will chemically release H from the soil profile, not the calcium or magnesium fraction of lime.

Reviewing the limited label provided, this product contains 20% calcium, 24% calcium carbonate, with a 14% calcium equivalent. From research and science, we know carbonate is required to neutralize soil solution and calcium or magnesium then replaces H on our soil profile (see figure 1). The literature on the label repeatedly mentions adding calcium to your soil and does refer to basic cation ration saturation of calcium on 60-75% of the sites in the soil profile. Therefore, the focus is adding calcium, not correcting pH.

To correct pH generally requires a ton or more of lime per acre to neutralize an acid soil. If we use one ton of dolomitic lime per acre in a 80-89 mesh, 880 pounds of carbonates have been add to the soil profile along with 440 pounds of calcium and 440 pounds of magnesium. If you choose, to use high calcium lime then 760 pounds of carbonates were added and 760 pounds of calcium.

The label of this product recommends 3-5 gallons per acre, no weight of the product is listed on label, so let us estimate it weighs 12 pounds per gallon, we apply 5 gallons per acre, the product is 24% calcium carbonate, so let us do the math.

Continued on page 4

12 pounds per gallon x 5 gallons per acre x 0.24 per cent of carbonate = 14.4 pounds of carbonate were added with one application, an extremely small amount of carbonate and very little pH correction.

The label provides a focus of added calcium. Yes, I have used products like this over the years. Not to improve pH, but in specialty crops grown in low pH environment, and the crop has a high calcium requirement. Will the product work? Yes, it will. Is it economical? Probably not in a conventional cropping system. Will it improve pH in your soil? Probably not. Will the crop benefit from the application? Yes, it will. Is it economical? No, unless it is a specialty crop situation as mentioned earlier.

Bottom line, plants will respond to the application, however the cost of the application and product will not capture an economic return unless you are in specialty crop requiring high calcium demand, while growing in low pH soil (potato, ginseng, these crops may require high heavy metal fungicides).

The label states aglime requires up to three years to be fully active in soil, agreed. This product will work, it will have a limited economical return, plants will respond, but again there are better management options to consider.

If neutralizing soil is the goal, use an aglime of your choice. Foliar products do work, but may not provide an economical return on investment. The factor that bothers the most is when requesting information and they would not send a detailed label or cost per acre for their “program”. One more comment, if you need to add calcium to your soil an economical option would be calcium sulfate or gypsum. It provides an excellent source of calcium and sulfur at an economical price. Sometimes when working in agriculture the old method is the soundest, provides the best economical return, even though it will require time. Remember Rome wasn’t built in a day and you will not change soil pH in a day.

If you have questions on correcting soil pH or other agronomy questions please contact richard.halopka@wisc.edu.



Managing Worms on Summer Pastures

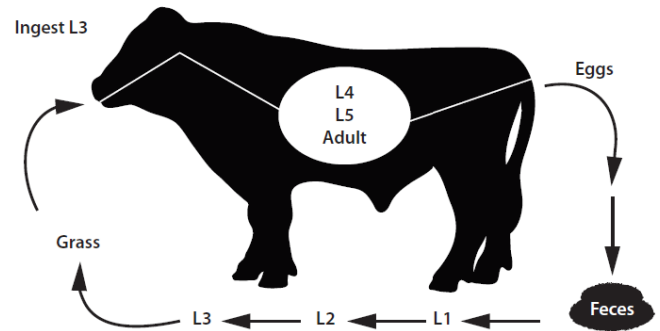
By Sandy Stuttgen, DVM
Taylor County

Protein prices are Parasitic worms of cattle include the nematodes *Ostertagia*, *Cooperia*, and *Haemonchus*. The worm’s life cycle occurs within cattle and on grass. Worm reproduction occurs within cattle intestines. Eggs and the first two larval stages are found in feces. The third infective stage (L3) resides on grass, and the last two larval stages and adult worms are found inside the animal. One female worm may produce tens of thousands of eggs.

Temperature, moisture, and grass management profoundly influence the population of the infective L3s. Infestation is

highest during spring and fall when precipitation is plentiful, temperatures are moderate, and grass is rapidly growing. During such times, 99% of the total worm

Typical gastrointestinal parasite life cycle.¹⁹



Gastrointestinal Parasites and Cattle in Wisconsin: Understanding and Managing the Relationship. Pg. 1 life cycle graphic adapted from Streckler, T. 2015. Herd health considerations: parasites. Dixon Springs Agricultural center University of Illinois. PowerPoint Presentation.

population is found on grass. Pastures are not treated to kill these larvae. Current deworming products are administered to cattle to kill the intestinal larval stages.

During hot and dry times of the year, much of the worm population resides inside cattle and can re-infest pastures when environmental conditions improve. For example, *Ostertagia* will ‘hibernate’ within the animal’s gut in a state of *hypobiosis* during times of suboptimal grass conditions. L3 themselves do not feed; they need to be consumed so that their life cycle continues inside the animal. Hot and dry pasture conditions will dry them out and speed their consumption of body reserves.

Talk with your veterinarian and/or nutritionist about deworming cattle during hot, dry weather when worm populations are likely to be high inside the animal. A fecal egg count (FEC) of 20 animals or 20% of the herd (whichever is greater) can provide an indication of overall worm burden. After deworming, a fecal egg count reduction test (FECRT) should be used to gauge the treatment’s efficacy; less than 90% reduction indicates worm resistance. Typically, the FECRT compares pre-treatment FEC to a 14-day post treatment FEC. A minimum of six but preferably ten to fifteen animals should be sampled for FECRT. Research indicates it’s better to compare pre- and post-FEC on individual animals rather than pooling the samples. With evidence of resistance, lab identification of the surviving worms becomes critical for managing them.

L3 are present when temperatures and rainfall support actively growing grass. Infective L3 remain close to the soil surface where moisture levels are more consistent. As a rule of thumb, when weather conditions support a morning dew, larvae are up on the grass waiting to be ingested. Four inches is considered the maximum vertical height larvae can achieve. Maintaining a minimum of four inches residual plant height and using an appropriate stocking rate will balance utilization of the

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pasture and minimize risk of exposure to larvae.

Grazing permanent pastures (set-stocking, not rotational) at a light stocking rate can provide adequate worm management as cattle selectively graze around well-formed manure pats. L3s move 5-12 inches away from fecal pats. Further lateral movement is facilitated by hoof traffic. Set stocking results in poor pasture utilization; often 50-60% of the pasture forage is wasted as cattle choose to overgraze selected areas. Overgrazing increases the risk of consuming L3 and increases weed pressures and erosion issue due to reduced pasture plant vigor.

Cattle on intensively managed rotational systems will be grazing actively growing grass that better supports larval survival, so it is important to not allow the cattle to graze below four inches grass height. When short rest periods between grazing events are used, the return to the paddock will coincide with high L3 populations resulting from eggs deposited and larval maturation from the previous grazing cycle.

Intensive rotational grazing systems may also increase the stocking rate recommended for set-stocking systems. High stocking rates increase manure deposition and additional hoof traffic results in greater fecal distribution, so eggs are

more widely distributed across the pasture. Selective grazing is decreased with higher stocking rates and cattle are more likely to consume grass that is contaminated with L3 unless plant residual heights are maintained.

To decrease the potential for grazing L3s in a rotationally grazed system, use short grazing occupancy times (less than four days) so that cattle don't graze plants below four inches and use multiple paddocks to ensure longer rest intervals (30-60 days or more) for optimal pasture regrowth. Incorporating mob grazing events that leave substantial residual plant biomass and extended rest intervals (60 days or more) may also help manage the number of L3 consumed. Including alternative pasture forage, such as cover crops, small grains, and hay aftermath as part of the grazing system strategy can also decrease exposure to helminths from permanent pasture areas. As an added bonus, these strategies also support grass survival during hot, dry summer conditions.

For more details see *Gastrointestinal Parasites and Cattle in Wisconsin: Understanding and Managing the Relationship*. A4139. Cooperative Extension Publishing. To order, call toll-free 1-877-947-7827 or download for free from learningstore.uwex.edu

BQA Certification Trainings Available

By Sandy Stuttgen, DVM
WI BQA Co-Coordinator, Taylor County

UW-Madison's Division of Extension and the Wisconsin Beef Council will be hosting a set schedule of in-person Beef Quality Assurance (BQA) certification meetings over the coming months. In-person sessions are intended for those who cannot complete the online certification available by going to <https://www.bqa.org/> and clicking on 'Certification'. Fall 2021 through Spring 2022 marks the BQA renewal time for nearly 2,000 Wisconsin beef producers. So check the expiration date on your card and do not wait until the last minute to earn BQA certification or to recertify. It is better that a current certification overlaps rather than expires.

To attend these free in-person meetings, farmers must register seven (7) days before the meeting date as attendance is limited based on location capacity and to follow any COVID guidelines in place at that time. NO walk-ins will be allowed. Due to limited capacity, it is encouraged that one individual per farm attend the in-person meetings. The individual attending the meeting will hold the BQA certification; family members and employees are covered by that certification when it is filed with the market(s) you use. It is each individuals' responsibility to share certification details with markets. Online registration is preferred at <https://tinyurl.com/2hr5karf> or call the location you wish to attend. Registration for each location closes one week prior to the event date. *Note that for all Extension meetings, masks and social distancing may be required. Indi-



viduals not willing to comply will be asked to leave.

Buyers representing some large packers and processors (including Tyson) only purchase cattle from farms selling beef breed types of finished cattle that are BQA Certified. In addition, JBS requires that producers selling cattle directly to their plants sign an affidavit stating that they are "in compliance with all applicable state or national BQA certification and verification programs." National Dairy FARM (Farmers Assuring Responsible Management) certification is considered a BQA equivalent. The packer requirements represent their policy, not that of BQA or the Beef Checkoff program. Farmers with questions about BQA certification requirements should contact their markets or buyers directly.

BQA does more than just help beef producers capture more value from their cattle: BQA also reflects a positive public image and instills consumer confidence in the beef industry. When producers implement the best management practices of a BQA program, they assure the cattle they sell are the best they can be. Consumer research, conducted by the Beef Checkoff, showed that learning about BQA made consumers more confident in beef safety and animal welfare and improved positive consumer perceptions of how cattle are raised for food.

Education Station



Extension
UNIVERSITY OF WISCONSIN-MADISON

In the education area, you will be able to visit with UW-Madison Division of Extension educators who can provide expert advice on all aspects of Agriculture and Horticulture. Stop by one of the pop-up tents to learn more about the innovative applied research programs being undertaken to support people, communities and businesses. Stop by a tent or plot to discuss with an educator about the topic you are interested in.

Crop and Soils

Extension Crops and Soils Program educators will provide exhibits of various **alternative crops and potential cropping systems**. Crops on display will include malting barley, sunn hemp, hops, kernza, canola, small grains, industrial hemp, and many others. **Alfalfa inter-seeding** and various **combinations of grass and clover species for forage production** will also be on display. Local county extension educators will provide information and be available to answer questions on crops and soils applied research from across Wisconsin.

Dairy and Livestock

Extension Dairy and Livestock Program educators will have a display and information on the **welfare of cattle** including **heat abatement, care of dairy** to encourage a healthy environment for your cattle to thrive in. Producers will learn about techniques and tools to **reduce / abate stress in their cattle**. Farmers will learn about ways to use their **production records from data management software**, such as, Dairy Comp 305 and Bovisync, to identify times of heat stress to intervene early before production drops significantly. **Care of beef x dairy calves** will be discussed to maximize growth potential including: navel care, feeding, castration, and disbudding.

Farm Management

Extension Farm Management Program educators will have an interactive spin-the-wheel game for attendees to play and learn about farm management topics, including financials, farm succession, stress management, mental health resources, human resource management, dairy markets, farm policy, and communication. Educators will be on hand for you to ask your most pressing farm management question. In addition, stop by the tent to see the "Thank a Farmer" displays generated from notes written by 2019 Farm Aid Festival attendees. Leave your own "Thank a Farmer" note or read the supportive messages left for farmers!

Grazing and Goats

Extension UW-Madison educators will have an interactive display and information on the **grazing of goats and other small ruminants**. Educators will be on hand to share their knowledge on establishing, improving, and monitoring **pastures** for small ruminants and livestock. Information on **grass and legume species** selection and **interseeding** of pastures will also be highlighted. Finally, resources will be available on designing **grazing systems**, such as proper fencing, lane establishment, forage management, animal health, and watering systems.

Horticulture and Master Gardeners

Visit the Horticulture booth where Master Gardener Volunteers and area Extension Horticulture Educator are available to answer your yard and garden questions. We will have an array of planted containers demonstrating container gardening techniques, garden fact sheets for you to take home, and a fun bean bag toss game for the kids to play. Stop by to learn about becoming a Master Gardener volunteer!

ACHIEVING MORE TOGETHER



UW-Madison Division of Extension works alongside the people of Wisconsin to deliver practical educational programs where people live and work – on the farm, in schools and throughout urban and rural communities. With educators in all 72 counties, on 5 campuses and within 5 tribal nations, we're helping our neighbors put their own great ideas into practice with the support of our expertise, resources and university research.

An EEO/AA employer, University of Wisconsin-Madison Division of Extension provides equal opportunities in employment and programming, including Title VI, Title IX, the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act requirements.

Tuesday • Wednesday • Thursday
July 20 • July 21 • July 22 2021
 9:00am - 4:00pm

Huntsinger Farms
 S3020 Mitchell Road
 Eau Claire, WI 54701



Buy Your Tickets Online!
www.wifarmtechdays.org
 Adults \$10 • Youth 12 & under FREE • Parking FREE

Facebook.com/FarmTechnologyDays2021
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EAU CLAIRE COUNTY
2021
 JULY 20-22



WISCONSIN FARM TECHNOLOGY DAYS
 THE FUTURE OF FARMING IS HERE!

Wisconsin's World Class
 Agricultural Show

July 20-22, 2021
9:00am - 4:00pm

Huntsinger Farms, Inc.
Silver Spring Foods, Inc.
 S3020 Mitchell Road
 Eau Claire, WI 54701

Your 2021 Host Farm & Family



Photo © Codi Leigh Photography

Huntsinger Farms and its subsidiary, Silver Spring Foods, Inc., was founded in Eau Claire, WI in 1929 by Ellis Huntsinger who is nationally recognized as a pioneer in horseradish farming. Still family-owned by Huntsinger's granddaughter Nancy Bartusch and two great-grandsons, Eric and Ryan Rygg, Huntsinger Farms is now the world's largest grower and processor of horseradish.

Huntsinger Farms uses a five to seven year crop rotation of 1400 acres of corn, 2100 acres of soybeans, and 310 acres of snap beans to support the production of 700 acres of horseradish. They are vertically integrated with Silver Spring Foods, Inc. and grow and harvest approximately 9 million pounds of horseradish per year. Crews harvest horseradish in the spring and fall after plants have been in the ground about 12-24 months.



"We've put an emphasis on being innovative and incorporating cutting edge technology in our farm and manufacturing operations."

- Eric Rygg, President and Owner of Huntsinger Farms, Inc.

Huntsinger Farms Statistics

- The world's largest grower & processor of horseradish.
- Approximately 9 million pounds of horseradish is grown annually.
- Horseradish utilizes a 5-7 year crop rotation.
- Over 700 acres of horseradish are cultivated annually.
- Approximately 5,500 acres of cropland has continuous production.
- Other crops grown consist of corn, soybeans, snap beans, alfalfa & rye.
- Farm land is operated in both Wisconsin and Minnesota.



Eau Claire County

Agriculture is an important economic force in Eau Claire County. Family-owned farms, food processors and agriculture-related businesses generate thousands of jobs and millions of dollars of economic activity while contributing to local income and tax revenues. Eau Claire County, though dominated by the dairy industry, raises everything from meat goats to milking sheep to apples, grapes and vegetables.

Eau Claire County Agriculture

4,641 Jobs provided for Eau Claire County residents

\$1.12 Billion accounted for in economic activity

\$325 Million contributed to the county's total income

\$19.1 Million paid in taxes
This figure does not include all property taxes paid to local schools.

The county has seen farm numbers rise, while farm acreage has declined to an average farm size of 155 acres. Migration from the city to rural areas has resulted in smaller farms producing a variety of products. A diverse population has created opportunities to fill ethnic and specialty food niches. Meanwhile, county institutions and farmers have joined forces to produce fresh, healthy products to meet a growing demand for local food.

EAU CLAIRE COUNTY 2021 JULY 20-22



WISCONSIN FARM TECHNOLOGY DAYS
 THE FUTURE OF FARMING IS HERE!

Thank You to Our Executive Committee

Mike Gintner, Mark Hagedorn, Tammy Smith-Schroeder, Eric Rygg, Ken Traaseth, Loren Anderson, Andy Bourget, Lee Caraher, Kelly Jones, Andy Ferguson, Cathy Leibke, Kayla Martinson, Emily Maier, Cathi Meyer, Jane Mueller, Connie/Ron Odgaard, Rebecca Reinhardt, Kori Richter, Jack Running, Dean Schwartz, Margie Thornton, Adam Wehling, Dustin Wiesme

Buy Your Tickets Online!

Adults \$10 • Youth 12 & under FREE • Parking FREE

www.wifarmtechdays.org

Facebook.com/FarmTechnologyDays2021
 Instagram.com/wiftd2021

Wisconsin Farm Technology Days 2021 July 20 - 22

500+ Exhibitors

- Large & small equipment vendors
- Agricultural products & services
- Vintage equipment display
- "Ride & Drive" opportunities

Innovation Square

- A wide range of innovative area farms including the world's premier kidney bean growers, the award-winning gouda cheese maker and its dairy farm, the largest aquaponics farm in the US, the world's largest grower & processor of horseradish, and one of the largest apple growers in the Mid-West.



Farm Tours

- Bus tour of Huntsinger Farms
- Bus tour of Nellie Holsteins Dairy Farm
- Bus tour of Solar Panel Farm
- Small grain harvesting

Food Tents

- Enjoy a variety of locally grown food
- Specialty food including the "Big Rygg" sandwich
- Silver Spring Foods horseradish & condiments

Compeer Youth Tent

- Wisconsin FFA High School Tractor Driving Contest
- Hands-on learning
- Farm safety education
- Explore high demand careers

Rural Mutual Insurance Rural Event Center

- Vendors of arts & crafts and home & lifestyle
- Entertainment

Super Singer/Song Writer CHRIS KROEZE Performs Every Day!



UW-Extension

- Talk with crop & livestock experts
- Review the latest university research
- Educational displays

Fleet Farm Equine Area

- Educational demos & clinics
- Showcasing local & national presenters

Collectible For Sale • Huntsinger Farms Semi Truck & Trailer

Purchase a collectible 1/64 scale Huntsinger Farms semi truck & trailer. Limited availability. Cost: \$60 plus S&H. Get an order form online at www.wifarmtechdays.org or at the Eau Claire County UW-Extension Office • 227 1st Street W • Altoona, WI 54720 • 715-839-4712

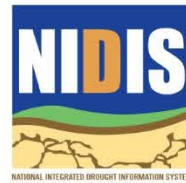


CALLING VOLUNTEERS!

Are you or your group interested in getting involved? Contact us today! **Volunteer Coordinator Kayla Martinson** kaylamartinson1@gmail.com 715-214-3062



Horseradish Harvest • Huntsinger Farms • Eau Claire, WI

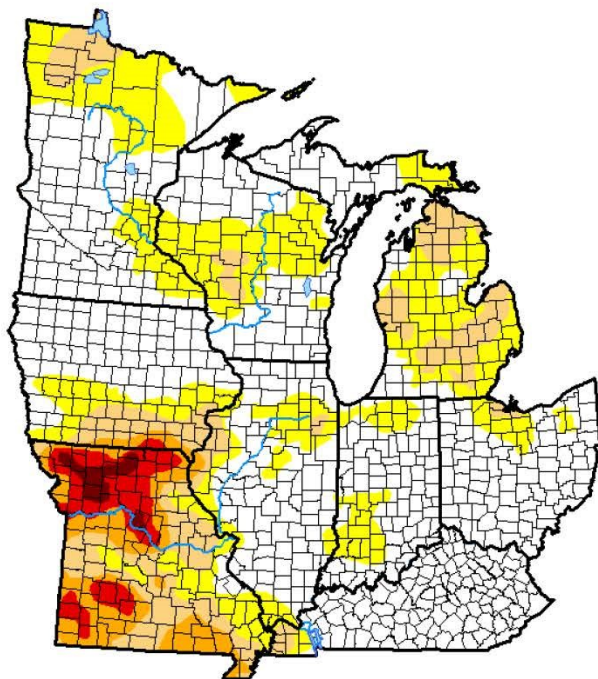


Drought Monitoring Resources for Annual Vegetable Crops in the Midwest—Through the Seasons

Fall/Winter

Many crop producers depend upon fall and winter precipitation for soil moisture and aquifer recharge. Agricultural droughts may emerge at any time of the year when below average rain or snowfall results in decreased soil moisture or snowpack. Drought monitoring information can help the grower plan fall cover crops, as well as the crops and varieties to be planted in the spring.

U.S. Drought Monitor (droughtmonitor.unl.edu)

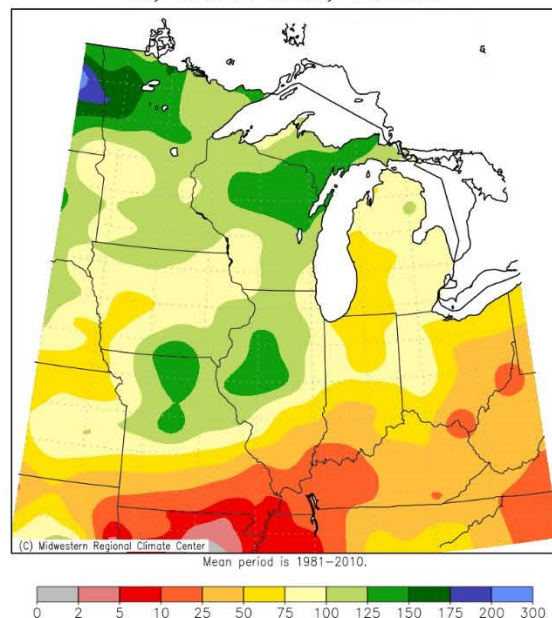


Areas in yellow are experiencing abnormally dry conditions that could develop into drought or are recovering from drought but are not yet back to normal. Areas in darker tan and red colors are currently experiencing moderate to extreme drought, indicating where it may be difficult to recharge soil moisture or aquifer levels before the growing season begins.

Midwestern Regional Climate Center's Climate Watch (mrcc.illinois.edu/cliwatch)

"Seasonal Maps" tab

Accumulated Snowfall: Percent of Mean
July 1, 2019 to May 10, 2020

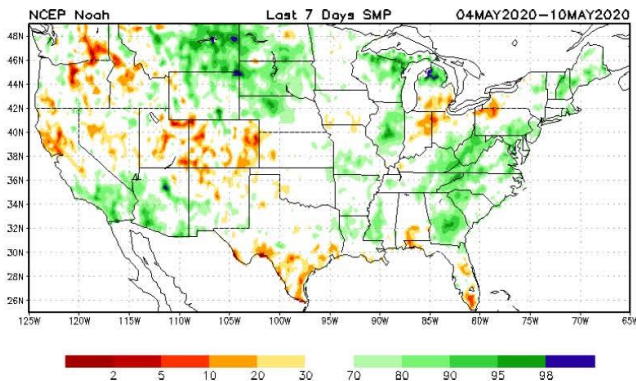


"Percent of Normal" maps show how current snowfall compares to the 30-year normal. Areas in green/blue have received more snow than normal, while areas in orange/red have received less snow than normal. These maps can provide an early indicator of soil conditions come spring.

Spring

Spring is a busy season of tillage, planting, and fertilization. Soil temperature and moisture information guides planting dates, and seasonal drought, precipitation, and temperature outlooks may be used to make final decisions about crop varieties, rotations, and timing. A spring flash drought bringing high temperatures, constantly-sunny skies, strong winds, and lack of precipitation can damage sprouts and seedlings.

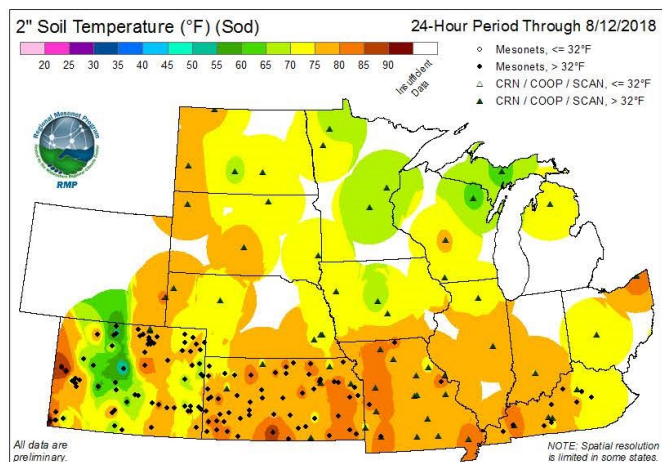
Soil Moisture Maps of the U.S. (www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml)



These maps show how soil moisture in different layers of the soil column differs from normal. The soil moisture data account for regional differences in soil moisture field capacity. Yellow and orange colors indicate where there is less soil moisture than normal for that time of the year, while green colors show that the soil conditions are wetter than normal. The user can view current conditions as well as the past week or month.

Mesonet Soil Temperature Maps (mrcc.illinois.edu/RMP/currentMaps.html)

Soil temperature can be affected by soil moisture conditions. Information gathered at Mesonet sites can provide clues to local soil temperature conditions.

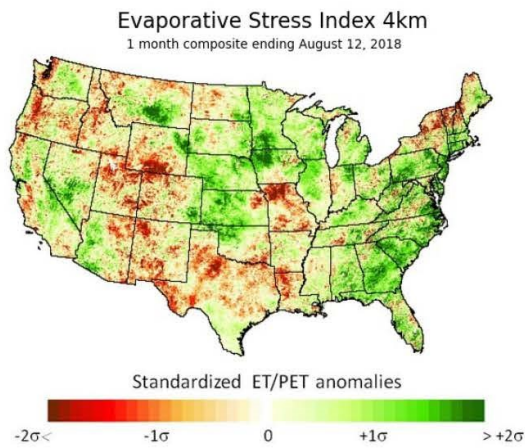


Drought can develop quickly in the summer when the atmospheric evaporative demand is higher than normal. This can be caused by warmer temperatures, sunnier skies, lower relative humidity, and strong winds. It is important to keep an eye on tools that can alert growers to emerging drought conditions.

Satellite-based monitoring tools track vegetation health with high spatial resolution, showing the cumulative impact of elevated evaporative demand and dry soils. These tools monitor relatively fast changes in vegetation conditions, and can act as an “alarm” of rapidly developing drought.

Evaporative Stress Index (ESI)

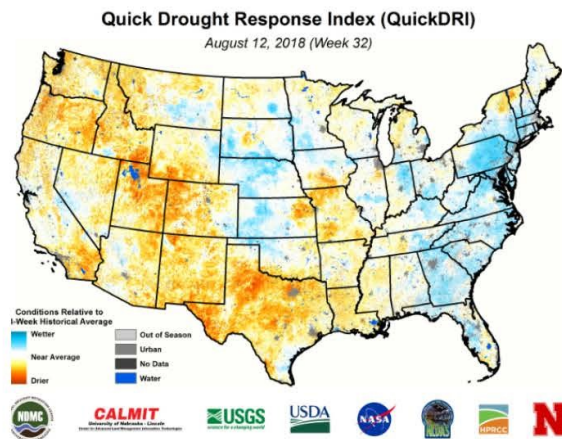
(hrsl.ba.ars.usda.gov/drought/index.php)



Orange-to-red colors indicate plant stress due to abnormally high evaporative demand. Green colors show areas where the vegetation is healthy.

Quick Drought Response Index (QuickDRI)

(quickdri.unl.edu)

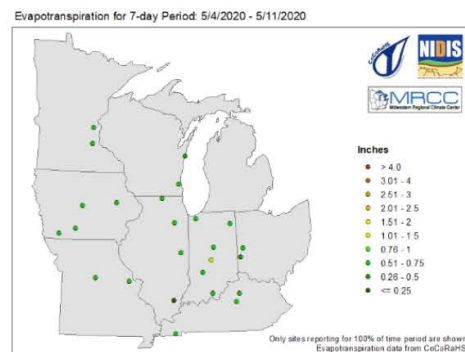


Regions in yellow-orange-red are rapidly becoming drier while regions in blue shades are rapidly becoming wetter.

Evapotranspiration and Water Balance Maps

(mrcc.illinois.edu/cliwatch/drought/drought.jsp)

While many growers of irrigated high-value crops have in-field monitoring equipment, there are some tools that can help monitor daily evapotranspiration rates. Use of these tools can improve the efficiency of variable rate irrigation, and help the grower conserve water when possible while protecting plant health and yield. These of course tend to be very specific to conditions at the station location and will not provide anything close to the spatially continuous, high-resolution data provided by satellites and models.



Looking to the Future

Outlooks can provide vegetable growers with information on what the coming weeks, month, and season might bring as far as precipitation, temperatures, soil moisture, and drought development.

Find Monthly and Seasonal Outlooks at Any of These Websites:

U.S. Drought Monitor Outlooks tab
(droughtmonitor.unl.edu/ConditionsOutlooks/Outlooks.aspx)

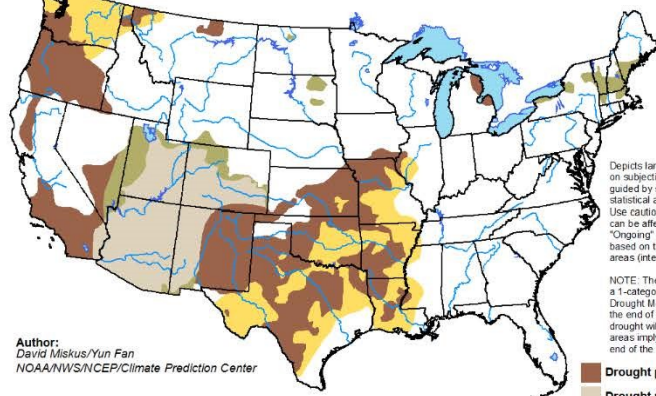
National Weather Service's Climate Prediction Center
(www.cpc.ncep.noaa.gov)

Midwest Regional Climate Center Drought Information Page
(mrcc.illinois.edu/cliwatch/drought/drought.jsp)

National Integrated Drought Information System Outlooks and Forecasts
(www.drought.gov/drought/data-maps-tools/outlooks-forecasts)

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for July 19 - October 31, 2018
Released July 19, 2018



Author:
David Miskus/Yun Fan
NOAA/NWS/NCEP/Climate Prediction Center

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. *Ongoing* drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



<http://go.usa.gov/3eZ73>



Monthly Drought and Climate Webinar and Climate Outlook Summary

Want more context and discussion? NOAA and the U.S. Department of Agriculture's Midwest Climate Hub offers a monthly webinar and two-page climate outlook summary that can help put the current conditions into context with prior years. Register for the webinars and find outlook summaries here: (www.climatehubs.usda.gov/hubs/midwest/climate-outlooks).

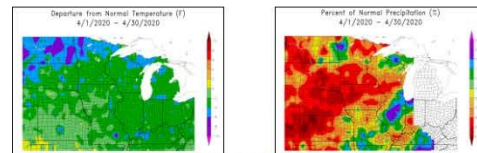
USDA Midwest Climate Hub U.S. DEPARTMENT OF AGRICULTURE

May 1, 2020

Midwest Ag-Focus Climate Outlook

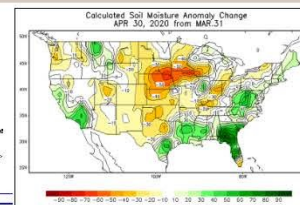
Current Conditions

Conditions have taken a fairly remarkable shift across much of the corn belt which has allowed planting to move ahead much more quickly than expected. Precipitation has been pretty limited with well below average precipitation over the last 30 days (and much longer in some areas – not pictured). The totals for the last 30 days have been less than an inch in some areas of the plains which is less than half or even to 25% of average in places. The mid-month cold still dominates the 30 day temperature averages with 2-4° below average common around the region.



Impacts

The limited precipitation has allowed the surface soils to dry despite the colder-than-average temperatures. Winds have also helped the drying process. One soil moisture model from NOAA's Climate Prediction Center shows a 30 mm (1.2") loss of moisture in the last month in part of the region as well as decadalizing elsewhere. This change has dried surface soils sufficiently to allow more widespread planting than was expected even a few weeks ago. Most of the drying is at the surface. Most soil moisture profiles are still quite full. The drier surface soils are somewhat beneficial in allowing planting and starting to develop root systems, which can reach the soil moisture below.



Soil Moisture Map generated by the Climate Prediction Center



For more information, please visit:
<https://www.climatehubs.usda.gov/hubs/midwest>

Climate Information Needs of Midwest Specialty Crop Growers is a project of the National Drought Mitigation Center and the University of Wisconsin, with the U.S. Department of Agriculture Midwest Climate Hub and the National Integrated Drought Information System. We are grateful for the participation of advisors representing Iowa State University, the Iowa Winegrowers Association, University of Missouri Extension, University of Wisconsin-Madison Extension, Wisconsin Potato and Vegetable Growers Association, and Wisconsin State Cranberry Growers Association. The project was funded by the National Oceanic and Atmospheric Administration Sectoral Applications Research Program the NOAA Climate Program Office.



Extension
UNIVERSITY OF WISCONSIN-MADISON
WOOD COUNTY

Wood County
PO Box 8095
Wisconsin Rapids, WI 54495

Upcoming Events

July 13—6:30 pm: Developing a Farmland Lease pre-register go.wisc.edu/1384s0

July 20—6:30 pm: Local Resources Available to Assist Rural Landowners pre-register go.wisc.edu/1384s0

July 12—6 pm: Tri-County Produce Growers IPM Meeting with Amanda Gevens and Russ Groves N2075 Indian Mound Road Kingston, WI 53926

August 21—10 am-2 pm: Land and Lake Families Field Day at Avalon Creek Farm, W1774 County Road K, Markesan, WI 53946

South Central Wisconsin Absentee Landowners Webinar Series

UW-Madison Division of Extension has been offering a series of meetings for landowners who rent land or landowners who are thinking about renting their land out. This series will help you to better understand your soil, how to protect it, how to develop a lease agreement with your renter to make sure it stays protected and get exposed to possible resources from your local conservation and FSA offices. There are two meetings left and are open to all but pre-registration is required. **To register go to: <https://go.wisc.edu/1384s0>. Please feel free to reach out to the Green Lake County office at 920-294-4037 for any questions or for help registering for the classes.**

July 13th 6:30 P.M. The importance of a multi-year written lease, the economics of crop production, what goes into a good lease and determining a fair price.

July 20th 6:30 P.M. Learn about the county, state, and federal resources available to assist you and your renter achieve your conservation goals. **Save the dates in your calendar today by registering at: <https://go.wisc.edu/1384s0>.**

Please contact your local Extension Office for the following:

- ⇒ To receive this as an eNewsletter emailed to you
- ⇒ Any changes to your email address or physical address (if mailing)
- ⇒ To unsubscribe to this newsletter completely

EXTENSION CENTRAL NEWS

A cooperative effort of multiple
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Wisconsin Extension.



Extension
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