MAY 2020

Shawano County Ag Newsletter

University of Madison Division of Extension

Extension
UNIVERSITY OF WISCONSIN-MADISON
SHAWANO COUNTY

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In This Issue

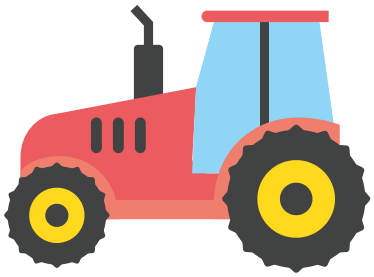
Hello All!

Wow! These are truly historic times. The one thing that I admire most about the agriculture industry is that it is a community before anything else. I have heard of many producer organized dairy and food drives across the state as well as locally in Shawano County. In addition to helping the community I know you all have been working hard to get the fields planted and animals taken care in order to supply the nation with food. Your hard work is truly appreciated. Please take time to take care of yourself, you all have been doing a great job taking care of others.

I am currently following Wisconsin Department of Health Services, UW-Madison, and federal guidelines due to the COVID-19 virus outbreak and have been working remotely. Even though I am working from home I and my Extension colleagues have been busy across the state adapting our programming to online formats as well has developing resources related to emerging issues this pandemic has caused. Since most of these resources have only been available online I wanted to put together a newsletter that contained some of them for those who are unable to access the internet. These resources have links to online websites. If you are looking for information on these sites and do not have internet access feel free to call me.

If you have questions I am still available by phone or email. My temporary number to reach me is 608-265-1144. This number though is only until I am back in the office. You can also leave voicemails for me at the office. The office is not currently open for regular business but if you need assistance please call either my temporary number or the office number.

I hope you all are staying safe!



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Extension
UNIVERSITY OF WISCONSIN–MADISON

Updated April 27, 2020

Paul Mitchell (608-265-6514 pdmitchell@wisc.edu) & Joy Kirkpatrick

Navigating Farm Support Programs During COVID-19

The coronavirus pandemic and COVID-19 have significantly disrupted our society and economy, with profound effects on agriculture that have yet to be fully understood. Commodity prices have collapsed, farmers are dumping milk, meat packing plants have closed and farmers markets are shut down. In response, the federal government has passed multiple new laws and changed rules to help the economy and agriculture recover. This array of new programs and possibilities layered on top of existing programs can be confusing and difficult to understand. Hence, we have developed this document to help farmers and those working with them to navigate the programs and options to identify the those that are likely to be the best choices for them to use depending on their situation. The situation is fluid, as state and federal agencies and their private partners are rushing to develop administrative rules based on laws that were passed a few weeks ago. This document will try to stay up to date on these changes as they occur.

The table below lists various issues or problems a farm may be having and the column on the right lists the program to explore that is meant to help. Below the table is then a list of the programs and resources. The focus is on new federal programs that can help farmers. Because many of the issues are financial in nature, communicating with lenders is an important part of the process not in the table. If you have a farm issue that is not in the table and you think Extension may be able to help, start with your Extension county agriculture agent.

Farm Problem	**Programs to Explore**
We are a farm struggling to pay our W2 employees, make mortgage payments, and pay other bills	• Paycheck Protection Program • Economic Injury Disaster Loans
We have a partnership or LLC and we are having trouble paying ourselves our regular salaries	• Paycheck Protection Program • Economic Injury Disaster Loans
We are family farm (sole proprietor) with no employees, struggling to make mortgage payments and pay other bills	• Paycheck Protection Program
We normally hire 1099 employees, but no longer can afford them, what program can they use?	• Paycheck Protection Program
We have been struggling to pay our payroll taxes for our employees	• Employee Retention Credit • Payroll Tax Deferral
We have been struggling to get our farm work done because some of us have been diagnosed with COVID-19 or are ill with symptoms, or we have been caring for our children due to school/day-care closures	• Pandemic Unemployment Assistance
My income has fallen due to low milk prices	• Dairy Margin Coverage • Coronavirus Farm Assistance Program

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Farm Problem	Programs to Explore
My income has fallen due to low beef and livestock prices	• Coronavirus Farm Assistance Program
My income has fallen due to low crop prices	• Agriculture Risk Coverage and Price Loss Coverage • Coronavirus Farm Assistance Program
We are struggling to pay the new mandatory paid sick leave for employees diagnosed with COVID-19 or who are caring for members in their household who are ill	• Families First Coronavirus Recovery Act
COVID-19 has shut down my farmers markets, produce auctions and direct sales customers and I have nowhere to sell my produce	• Pandemic Unemployment Assistance • Farmers to Families Food Box

Agriculture Risk Coverage and Price Loss Coverage
Existing price support programs for commodity crops administered by the USDA Farm Service Agency (FSA). Program election and enrollment for 2019 and 2020 ended on March 15, 2020. See https://aae.wisc.edu/pdmitchell/extension/arc-plc-signup/ and https://www.fsa.usda.gov/programs-and-services/arcplc_program/index.

Coronavirus Farm Assistance Program
New program that will provide direct payments to farmers affected by coronavirus pandemic. Farm assistance will be administered by USDA Farm Service Agency, with more details to be announced soon. See https://www.farmers.gov/coronavirus.

Dairy Margin Coverage
Existing price support program for milk administered by the USDA Farm Service Agency (FSA). Program enrollment for 2020 ended on December 13, 2019. See https://www.nmpf.org/wp-content/uploads/2019/06/DMC-brochure61219-1.pdf and https://www.fsa.usda.gov/programs-and-services/dairy-margin-coverage-program/index.

Economic Injury Disaster Loans
New program administered by the Small Business Administration (SBA) to provide loans to small business (including farms) affected by COVID-19. Can be combined with Paycheck Protection Program. See https://farms.extension.wisc.edu/files/2020/04/April-25-Economic-Injury-Disaster-Loans.pdf and https://www.sba.gov/disaster-assistance/coronavirus-covid-19.

Employee Retention Credit
New provision in the CARES Act that allows employers (including farms) to receive up to a $5,000 credit per employee that they retain on their payroll through this COVID-19 crisis. See https://farms.extension.wisc.edu/cares-act/ and https://www.irs.gov/newsroom/irs-employee-retention-credit-available-for-many-businesses-financially-impacted-by-covid-19.

Families First Coronavirus Recovery Act
New law that temporarily requires employers (including farms) to provide two weeks of paid sick leave to employees affected by COVID-19 and expands medical leave under the FMLA, providing dollar-for-dollar reimbursement through tax credits to make it financially feasible. See https://aae.wisc.edu/pdmitchell/2020/04/08/families-first-coronavirus-recovery-act-legal-obligations-for-farms-with-employees-during-covid-19/ and https://www.dol.gov/agencies/whd/pandemic/ffcra-employer-paid-leave.

Farmers to Families Food Box
As part of the part of the Coronavirus Farm Assistance Program, new USDA program to purchase dairy products, meats and fresh fruits and vegetables from farmers and to distribute them to food banks, community and faith-based organizations, and other non-profits serving those in need. See https://www.ams.usda.gov/selling-food-to-usda/farmers-to-families-food-box, https://www.ams.usda.gov/publications/content/request-proposals-frequently-asked-questions.

Pandemic Unemployment Assistance
Farmers may be eligible for PUA by applying to the Wisconsin Department of Workforce Development (https://dwd.wisconsin.gov/uiben/pua/apply/). Farmers producing and selling products at farmers markets, produce auction or direct market to restaurants or other institutions now closed due to COVID-19 may qualify. Also, farm households with member diagnosed with COVID-19 or experiencing symptoms of COVID-19 awaiting diagnosis or caring for those diagnosed with COVID-19 may be covered (https://dwd.wisconsin.gov/dwd/publications/ui/pua-18774-p.pdf). See https://farms.extension.wisc.edu/pandemic-unemployment-assistance-in-wisconsin-what-does-it-mean-for-farmers/.

Paycheck Protection Program
New program administered by the Small Business Administration (SBA) to provide potentially forgivable loans to small businesses (including farms) to cover payroll costs and/or self-employment income during the COVID-19 crisis. See https://farms.extension.wisc.edu/ppp-and-farmers/ and https://www.calt.iastate.edu/blogpost/guidance-ppp-loans-self-employed-helpful-incomplete and https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program.

Payroll Tax Deferral
New provision in the CARES Act that allows employers (including farms) to temporarily defer payment of the employer's portion of the social security and RRTA payroll taxes (6.2%). See https://farms.extension.wisc.edu/cares-act/ and https://www.irs.gov/newsroom/deferral-of-employment-tax-deposits-and-payments-through-december-31-2020.

UW Extension Resources for Farmers
- Farm Management during COVID-19 (organized by topic): https://farms.extension.wisc.edu/coronavirus/
- Extension Responds to COVID-19: Agriculture https://fyi.extension.wisc.edu/covid19/category/topics/farming/

Defining Our New Reality – Where Do I Begin?

Written by:
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Stephanie Plaster, Extension Ozaukee & Washington Counties Agriculture Educator

When agricultural market conditions deteriorate, we need to keep our focus on the "WIN" or **W**hat's **I**mportant **N**ow. Taking the time to write out your farm's current situation may help you avoid financial missteps as you navigate the challenging conditions ahead. The long-term health and success of your family and farm operation depends on an accurate assessment of the farm's existing financial position. Tactical decisions based on quality information are crucial for a successful outcome. Seven key steps can help ensure an accurate assessment of your farm's existing strengths and vitality, while also revealing areas of concern. These concerns are sometimes viewed as opportunities.

1. Know the Value of Your Assets – Create an accurate and updated list of the values of all current, intermediate, and long-term assets. Do not forget to include feed, livestock, machinery, land, etc. Assigning realistic values to these assets helps establish what all of your time, effort, and sweat equity has yielded over the years.
2. Understand Your Obligations – Develop a comprehensive list of all outstanding creditors. Differentiate the secured and unsecured debt. Secured debt (e.g., mortgages, auto loans) has an asset or collateral put up to back the loan. Make sure to record the current amount owed, minimum payment amount, and when those items are due, and prioritize the handling of these obligations.
3. Communicate Openly and Honestly – Have conversations with the necessary professionals including your lender, accountant, financial consultant, and attorney. Be open and honest with them in order to get the best advice. Remember, they are there to support and assist you in the process of determining your current financial position and the subsequent options moving forward.
4. Determine Your Family Living Expense – Establish the baseline for what your family must have in order to live. Be realistic and don't underestimate what it takes for your family to function in a happy and healthy manner. Prioritize the needs of the family while minimizing the wants as you navigate this challenging time.
5. Put a Stop to New or Unnecessary Contracts and Spending – Evaluate the farm's current position before acquiring any additional financial burden or strain. Accepting new or unwarranted contracts may impede the farms ability to achieve the financial stability and resiliency required during difficult times.
6. Review and Understand Your Family, Farm, and Life Goals – Create and review your goals. Re-examine where the family wants to be in 1 year, 5 years, and 10 years down the road. Are these goals and expectations being met? If not, it's time to take steps to change that.
7. Plan Your Work and Work Your Plan – Develop an action plan. Determine exactly what needs to be done, assign someone to be responsible for it, and schedule a target date. Plans are not complete until you've decided how to implement them. Check-in periodically to monitor and re-adjust your plans as needed. Celebrate your successes as your tasks and goals are accomplished.

Completing these seven steps may be valuable to virtually all business owners in order to help them take control of their financial situation and to turn areas of concern into business opportunities.

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https://farms.extension.wisc.edu/whats-important-now/

Use of disposable milking gloves during COVID-19

Developed by:
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The use of disposable milking gloves has proven effective in preventing the spread of harmful bacteria during milking. There is some protection provided for the person wearing disposable gloves and therefore gloves may be considered personal protective equipment or PPE. Disposable gloves are also commonly used for other animal health care activities on the farm.Disposable milking gloves are designed to be used once and then properly disposed of. However, the COVID-19 outbreak has put pressure on the supply of personal protective equipment (PPE), including disposable gloves, as they are also used for human healthcare purposes. Demand may exceed available supplies in some Wisconsin locations. Farms may consider reusing disposable milking gloves. Here are a few items for farms considering their disposable glove options:

Photo by Bryce Richter /UW-Madison

Determine priority use of disposable gloves

It can be easy to wear gloves for many tasks when containers of disposable gloves are readily available. In the face of shortages, and for overall economic savings, farms should strategize where gloves must be used versus when washing or sanitizing bare hands is safe and appropriate. For example, save disposable gloves for the milking process and change practices for feeding calves to not use disposable gloves. When opting to reuse gloves, we suggest that the farm team meets to set parameters around how long gloves are going to be used and how they will be cleaned for reuse.

Extend the Use-time of Gloves

Review farm practices for when gloves are changed. Tears and leaks in gloves should stay as the top reason for changing gloves, followed next by when they must be removed for personal breaks, especially when eating, drinking or using the restroom. During milking, rinse and disinfect gloved hands periodically with teat dip or disinfecting solution as they become overly soiled, after finding clinical cases of mastitis, or after forestripping subclinical infected cows.

Review with users how to properly don (putting on) and doff (taking off) gloves for their best protection and reduce chances of developing tears in the gloves. Use a clean towel to dry hands. Gloves go on easier over dry hands.

Consider types of disposable gloves

Latex gloves are low cost and commonly used. They are associated with allergies and therefore, many industries are replacing their latex gloves with nitrile gloves. Nitrile is a synthetic rubber compound that has a higher puncture resistance than any other glove material. Nitrile also has a better chemical resistance than latex.

Most nitrile milking gloves are available in 4 mil and 8 mil thicknesses. Thicker gloves be are more durable and do not sacrifice the sensitivity needed during milking. They can be used several times before discarding. These gloves may be cleaned prior to reuse using procedures discussed below.

Gloves are available in various sizes and need to provide a comfortable and proper fit. While it may be possible to purchase gloves in sizes that would not be typically ordered, gloves that are too small or too large are prone to tearing. Overly large gloves may also get sucked into the inflations during milking. Replace gloves that tear and properly dispose of them. Prior to disposal, used gloves should be turned inside out.

When handling chemicals, read the chemical label or safety data sheet (SDS) to determine the type of glove needed

Use of disposable milking gloves during COVID-19 cont.

Reuse of disposable gloves

Review and post your glove use protocol, setting parameters around how long gloves are used.

For personal biosecurity, EACH WORKER should reuse their own gloves. Consider using a drying rack or clothesline. Use clothespins to secure gloves while drying and label each pin with the user's name.

Follow these cleaning procedures for reuse of disposable milking gloves:

- Rinse gloved hands in cool, clean running water for 20 seconds.
- After rinsing, thoroughly wash the gloved hands in warm water with a mild soap or detergent for 20 seconds
- Remove gloves without turning them inside out.
- Pat dry any excess water from the outside and inside of the gloves.
- Air dry gloves on drying racks or a clothesline – DO NOT machine dry with heat or expose gloves to a heat source other than direct sunlight.
- Lastly, the worker must thoroughly wash their hands with soap and warm water for 20 seconds, followed by drying them. Alternatively, hand sanitizer may be used after handling and cleaning used gloves.

Always start the milking shift or any other farm task with clean, dry hands. Workers are to wash their hands with soap and water or sanitize them before donning gloves. It is easier to don gloves with dry hands. Using a powder may aid in applying gloves to hands, but proceed with caution! Powders may be associated with skin and inhaled allergies; workers must be careful of their own sensitivities and those of their co-workers.

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https://fyi.extension.wisc.edu/dairy/use-of-disposable-milking-gloves-during-covid-19/

Strategies to Reduce Milk Production with Limited Impacts on Future Production

Developed by: University of Wisconsin-Madison Division of Extension Dairy Program Educators

The current dairy market situation with reduced demand for products has caused excess product to build up at some dairy processing plants. To reduce milk supply, some dairy producers have been instructed to reduce milk shipped with some feeding excess milk to calves, heifers, and lactating cows, or disposing of milk into manure storage facilities or land spreading. However, it may be more cost effective to reduce production using the strategies presented in this factsheet. It is likely one strategy alone will not meet the needed reduction, so a combination of several strategies may be needed. Using a combination of strategies at lower intensity may also reduce negative impacts on animal health and welfare that may occur with more intense changes. To minimize impacts on future production, we suggest to selectively reduce production of mid- to late-lactation cows and avoid changes for transition and early/peak lactation cows. When considering these options, make sure to consult your veterinarian, nutritionist, cattle sales outlet, and Extension personnel to discuss available options and scenarios.

Culling Opportunities

Reducing milk shipped by culling cows should be managed carefully. Sale of cull cows should be limited to healthy, mobile animals able to be shipped. The ability to cull and sell cows also depends on the availability of buyers and meat processors. Cows with chronic high somatic cell counts or that are low producing and not pregnant after three inseminations are good candidates for culling. In the case where a cow is thin, there are not interested buyers, or processing plants are closed; producers can retain these cull cows for a period of time (30 to 60 days) to improve condition and carcass value, and allow time for processing plants to become available.

Strategies to Reduce Milk Production with Limited Impacts on Future Production cont.

Earlier Dry Off

When considering drying cows off earlier than the farm's normal management practice, one can anticipate an average 500 pounds less milk from the lactation (assuming a 25,000 pound lactation) for every 10 days increase to the dry period. This would equate to approximately $60 less Income Over Feed Cost (IOFC) for every 10 days, when milk price is $0.15 per pound and feed cost is $0.10 per pound DM.

Reduce Milking Frequency from 3x to 2x

For dairies milking 3X, switching to 2X is an option to reduce milk production. This may result in a reduction of about eight pounds of milk per cow per day for cows switched. High producing (over 100 pounds) cows may be stressed if switched to 2x (leaking milk, discomfort, increased mastitis, and reduced lying time). Better candidates for reducing milking frequency include fresh cows, mid- to late-lactation cows, do not breed (DNBs) cows, and cows past peak production. Possible advantages of partially going to 2X is a decrease in feed intake in addition to a reduction in other costs (labor, supplies, and electricity. The UW-Madison Extension Dairy Management site (https://DairyMGT.info) has the tool Economic Analysis of Switching from 2x to 3x Milking (Tools -> Production) that is useful.

Diet Modifications

Changing the diet can reduce production through reduced nutrient intakes. Work with a nutritionist to formulate diets to ensure nutrient needs are met and to base changes on available forage. Increasing fiber content through greater forage content, lower quality forages, or high-fiber byproducts will lead to lower energy and feed intakes. Cornell University advises increasing aNDFom to 33-35 percent for peak production cows and 38 percent aNDFom for post-peak cows to maximize fiber intake, with other nutrients balanced to meet energy allowable milk. Decreasing fat supplements and optimizing protein will help reduce production and may be useful for post-peak cows switching to 2x milking.

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https://fyi.extension.wisc.edu/dairy/strategies-to-reduce-milk-production/

Hay Market Demand and Price Report for the Upper Midwest For April 27, 2020.

Upper Midwest Hay Price Summary by Quality Grade

Hay Grade	*Bale type*	*--------- Price ($/ton) ---------*		
		Average	Minimum	Maximum
Prime (> 151 RFV/RFQ)	Small Square	$235.00	$170.00	$290.00
	Large Square	$213.00	$125.00	$290.00
	Large Round	$219.00	$130.00	$255.00
Grade 1 (125 to 150 RFV/RFQ)	Small Square	$192.00	$160.00	$224.00
	Large Square	$149.00	$100.00	$220.00
	Large Round	$129.00	$80.00	$190.00
Grade 2 (103 to 124 RFV/RFQ)	Small Square		No Sales Reported	
	Large Square	$117.00	$90.00	$175.00
	Large Round	$100.00	$55.00	$150.00
Grade 3 (87 to 102 RFV/RFQ)	Small Square		No Sales Reported	
	Large Square	$111.00	$70.00	$160.00
	Large Round	$91.00	$50.00	$130.00

https://fyi.extension.wisc.edu/forage/h-m-r/

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Considerations in Reducing Milk Production

Switching Cows from 3X to 2X Milking

Scott Gunderson | Dairy Agent | Extension Manitowoc County
Victor Cabrera | Dairy Management Specialist & Professor | UW Madison Extension & Department of Dairy Science

For those dairies milking 3X per day, switching from 3X to 2X is an option to reduce milk production that could be used until the impacts of COVID-19 on the dairy supply chain subside. This may result in a reduction of approximately eight pounds of milk per cow per day for most herds. However, this option has to be considered carefully.

Switching high producing cows (greater than 100 pounds per day) from 3X to 2X may cause animal stress resulting in leaking milk, increased mastitis, reduced lying time, and discomfort to cows. Observations from Cornell University researchers suggest high producing cows should continue being milked 3X until past peak milk production at which time that can be switched to 2x. As cows freshen, it is suggested milking fresh cows 2X, with these cows switched to 3X milking after the COVID-19 pandemic subsides.

Altering the diet prior to moving high producing cows from 3X to 2X will reduce nutrients to the mammary gland and decrease milk production. After a natural reduction due to the nutritional changes occurs, cows may transition easier when switched from 3X to 2X milking. When making this transition, standing time in the holding area must be closely monitored. The goal for 2X herds is no more than one hour of standing time in the holding area per shift.

Eliminating one milking shift must also be evaluated. Producers who received Paycheck Protection Program (PPP) loans from the Small Business Administration need to maintain their employees in order to not repay a portion of the PPP loan. Switching from 3X to 2X will mean a portion of the milkers may need to be trained to do other work on the dairy, such as working a shift feeding calves an extra time each day or assisting with field work. Considering shift pay, versus hourly pay, may help ensure the cows are milked properly and on time so that they can return to their pens in a timely fashion.

Milking select groups of cows 2X may be a good option. As cows freshen, mid- to late-lactation cows, do not breed cows (DNBs), and cows past their peak production may be good candidates for 2X. These cows will either exit the herd as cull cows, or they will have an opportunity after dry off and calving to be placed back on a 3X schedule. Another advantage to moving these cows from 3X to 2X is a decrease in

dry matter intake (DMI). On average, each pound of dry matter (DM) results in about two to three pounds of increased milk production. If milk production is reduced by eight pounds per cow per day as a result of switching to 2X, DMI will decrease by about three pounds. Based on $0.11 per pound DM, the decrease (DMI) would result in savings of approximately $0.30 to $0.35 cents per cow per day. Other savings in addition to labor and feed include milking supplies, electricity, and equipment maintenance. It is important to contact your vendors to inform them of any milking changes you make and to ask for their professional advice.

To help determine an individual farm's decision to switch from 3x to 2x milking based on herd parameters, University of Wisconsin-Madison Extension Dairy Management portal (https://DairyMGT.info) has a tool named **Economic Analysis of Switching from 2x to 3x Milking** (Tools -> Production) that could be useful in determining the additional costs and revenues of switching 2X to 3X milking, which corresponds exactly with the opposite, switching from 3X to 2X milking.

Switching cows from 3x to 2x milking provides one of the largest opportunities for reduced milk production of approximately eight pounds per day per day. However, it is only one of several strategies that can be used for milk reduction due to COVID-19 impacts. Farmers are encouraged to to consult with their team of advisors and service-providers to determine which strategies work best for the farm's management, facilities, finances, and goals.

Image source: Extension Kewaunee County Agriculture Agent Aeria Bjurstrom
Peer reviewed by Extension Fond du Lac County Dairy & Livestock Agent Tina Kohlman; Extension Vernon County Agriculture Educator Ashley Olson; and Extension Green County Agriculture Educator Jackie McCarville.

Extension
UNIVERSITY OF WISCONSIN–MADISON

IOWA STATE UNIVERSITY
Extension and Outreach
Iowa Beef Center

Considerations for Slowing Feedlot Cattle Growth due to the COVID-19 Pandemic

Iowa State University Extension Beef Specialists, Iowa Beef Center
University of Wisconsin Extension Livestock Program Educators, and University of Wisconsin
Department of Animal Science Faculty

The COVID-19 pandemic continues to disrupt cattle markets. Cash sales for the week of April 13-17 were depressed as packing plants operated at reduced capacity or shuttered their doors due to labor issues spurred by the Covid-19 pandemic. Having a market that will take finished cattle at a suitable date has become a concern. In addition, the current live market prices, and limited sale opportunities for fat steers have left many cattle feeders searching for solutions to reduce their economic loss.

In times of depressed markets many cattle feeders lean towards the "hold and hope" method of selling fed cattle, where they retain their cattle longer than is ideal with the hope of waiting out the down turn in the market.

The strategy to hold cattle longer will depend on the goals of the operation and the stage of feeding of the cattle. The good news is that cattle are adaptable to a variety of feeding systems and programs, and their growth can be programmed in a very predictable way through changing the net energy of the ration or using "programmed feeding."

For cattle ready or near ready for market it may be best to sell these cattle when opportunities present themselves even if prices are not ideal. Cost of gain and maintenance is high for animals at this stage of growth. Modeling of recent closeouts suggests that incremental feed conversion of cattle beyond today's market weights of 1400-1500 lbs. may exceed 10-11 pounds of feed dry matter per pound of gain. It is important to keep in mind the costs (feed and yardage) of owning the cattle longer and the potential losses from discounts due to oversized carcasses, high yield grades, and potential death loss.

It is unrealistic to expect a group of cattle on feed to achieve zero gain while waiting for the market to regain ground. However, reducing the rate of gain and holding condition may be possible if done properly.

The following are suggestions and guidelines to think about while deciding on marketing decisions. These are costly strategies but would allow cattle to be held until they can hopefully be assigned a harvest date within a reasonable time frame. Keep in mind, longer holding periods do not guarantee demand and better prices for fed cattle due to uncertainty within the present market and an unknown timetable for return to normal business.

Maintain a daily gain of at least 2.5 lb. per day to maintain marbling deposition. This would require a diet that is at least approximately 50-55 Mcal of NEg/CWT dry matter. Many feeders may choose a more moderate approach of providing 55-58 Mcal/Cwt with or without slightly limiting feed intake.

It is important to keep in mind that holding beef type cattle versus Holstein steers can look very different. Holstein steers can be fed high energy rations for a longer period of time compared to beef type cattle without having negative effects on their fatness. Overall weight will still need to be monitored to ensure steers do not incur carcass weight discounts.

Simple methods to reduce energy are to increase forage in the diet by 7.5%-10%. This step down can happen abruptly by feeding an increase in clean corn stover, dry hay, haylage, corn silage, etc. with no negative impact on rumen health. Cattle feeders could feed up to 40% corn silage or 15% dry hay in the ration that would allow cattle to gain around 2.5 lbs. per day while still maintaining sellable condition and quality grades. Of course, a higher forage diet will be associated with lower dressing percentage.

It may be beneficial to step back the potency of your implant program or even consider skipping the terminal implant on cattle that are about due for it to help limit rate of gain and reduce negative impact on quality grade if a lower energy holding ration will be fed to animals within 100 days of harvest.

If using limit feeding as part of the process to slow cattle down, one option is to allow the cattle on feed to only consume 90% of their current ration. Any use of limit feeding will only work effectively if there is adequate bunk space for the entire group to step up to eat at the same time. This method should not be used in a self-feeder situation as dominant cattle will continue to consume their share while imposing a greater feed intake limitation on the more submissive cattle in the same group. Whichever option fits your situation, please work with your nutritionist to ensure balanced diets are being fed.

Feeders should be mindful of intentionally feeding cattle to excessive weights by holding them too long. Excessively heavy cattle do not tolerate heat and are more susceptible to AIP (acute interstitial pneumonia; respiratory distress). Harvest-ready cattle with black hair coats lacking shade and experiencing a temperature-humidity index of 79 or greater with no night-time cooling are most susceptible to death from heat stress.

As cattle get too heavy and lay down too much condition, they may also receive discounts due to poor yield grades. Large cattle are also more susceptible to bruising and injury due to being too large to easily move through cattle handling systems and fit through some trailer doors. To reduce the risk of fatigued cattle syndrome, these cattle must be handled quietly during loading and unloading. Cattle feeders and truckers should be sure to follow BQA guidelines when handling and transporting cattle.

(4-24-20)

My ethanol co-product inventory is low. What protein sources can I feed my cattle?

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Due to pricing and availability, many producers have become accustomed to buying corn ethanol co-products such as dried distiller's grains with solubles (DDGS) to use as protein sources in rations. Several ethanol plants have had to shut down or scale back on production due to significant reductions in fuel ethanol demand as a result of the COVID-19 pandemic. This is causing a supply shortage and an increase in price of distillers grains. So, the question is what else can I feed in place of distillers grains?

Ethanol Co-Product Alternatives

Fortunately, several alternative protein options are available. However, for this discussion only dry protein sources will be considered. The first alternatives would be other plant derived protein sources. The most common plant derived protein sources available in Wisconsin are soybean meal or corn gluten feed. Some beef producers may consider utilizing raw soybeans they have grown on their farms. Information for feeding raw soybeans can be found in this article Considerations for feeding raw soybeans at the Wisconsin Beef Information Website.Another protein alternative option is non-protein nitrogen sources (NPN), such as urea. Non protein nitrogen sources have limitations on how they can be used depending on the other feed sources and energy levels of the ration, which will be discussed later in this article. Protein levels for a variety of feedstuffs are shown in Table 1.

Feedstuff	Crude protein, %*
Alfalfa meal	16
Brewers grains, dried	22
Corn gluten feed, dried	21
Corn gluten meal, dried	57
Cottonseed meal, solvent extracted	42
Dried distiller's grains w/ solubles	28
Flaxseed/Linseed meal	20
Soybean meal	46
Soybeans, whole, raw	38
Urea (non-protein nitrogen source)	287

*Source: https://animalnutrition.org/feed-composition-database accessed 3/20/20 excluding urea. Values are expressed on a 90% dry matter basis.

The various pellets, crumbles, and tubs that many feed companies have available are also a protein option. Some of these products are labeled as a "natural" protein supplement. Natural refers to not having an NPN source. These natural protein products often range between 24-38% crude protein. Many protein products from a feed company will include sufficient minerals eliminating the need for additional mineral supplementation. Natural protein products will be slightly more expensive on a price per pound of crude protein basis. In addition, feed companies also sell protein products that include a blend of plant derived protein and NPN sources. Urea is the most common NPN source utilized in dry feeds, but biuret is a slower rumen degrading form of NPN that may also be utilized. On a price per pound of crude protein basis, urea is usually the cheapest source of protein .

My ethanol co-product inventory is low. What protein sources can I feed my cattle? cont.

Considerations for Feeding NPN

Feeding NPN as a protein source is best utilized when feeding diets containing rapidly fermenting carbohydrates such as starch. Feedlot diets containing mostly corn and/or other cereal grains are ideal for urea. Urea should be avoided when feeding feedstuffs high in NPN as excessive ammonia production in the rumen can lead to disorders and potentially death. Alfalfa haylage, drought stressed corn or sorghum silages which have accumulated nitrates are examples of feedstuffs in which supplementing with urea should be avoided. If water sources are known to contain elevated NPN sources urea should not be offered. Additionally, urea should not be fed in combination with raw soybeans due to the urease activity of soybeans and risk of ammonia toxicity.

One rule of thumb is NPN sources should not provide more than 1/3 of the total crude protein in the diet. For example, if a diet contained 13% crude protein, urea should not provide more than 4.3 crude protein units (13% * 0.33). Another feeding guideline is that the diet should contain no more than 1.5% of urea on a dry matter basis. This is simplified by recommending no more than ¼ to a 1/3 of a pound of urea be fed daily to a finishing animal. Generally, urea is avoided in light weight calves and diets comprised of low-quality forages. In larger feedyards, urea is often delivered mixed into liquid molasses. Having the urea mixed into a liquid supplements improves mixing and reduces the risk of sorting. When adding urea sources to diets, ensure it is evenly mixed with the other feedstuffs.

Cost Considerations

The cost of the protein source needs to be considered as well. A commercial feed that includes the minerals would eliminate the need to provide additional mineral supplement. It is important to take into account the value of the minerals and other feed additives that are included in some of the manufactured feeds when comparing different feed options. In many instances, one may purchase alternative protein supplements in bags instead of bulk. Bagged feed prices will be higher and discounts will be seen if ordered in bulk.Determining the price per unit of protein is one approach at determining which protein source may be economically better. Price alone is not the only decision driver. Handling, mixing, sorting, risk of feeding disorders and other factors should also be considered. UW-Division of Extension has a decision tool “Feed Cost Comparison for Protein and Energy” to help determine cost considerations of protein alternatives. This tool is available on the Wisconsin Beef Information Center Decision Tools and Software section. Please note that all information in blue cells in the spreadsheet tool, including prices, are examples and should be updated to fit your situation.

Closing Thoughts

In summary, when a protein source becomes limited in availability there are other alternatives to seek out. Availability of different protein sources may vary over the next few months and it may be necessary to adapt as needed to what is available. Do your homework to learn protein, energy and other nutrient levels in the feedstuffs that are available. Consider the price on a nutrient basis. Work with your nutritionist to develop a new feed ration that will meet the nutrient needs of the animals and avoid feeding disorders. For more information contact your county Extension office and visit with your nutritionit.

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UNIVERSITY OF WISCONSIN–MADISON

Are You Worried About COVID-19 Transmission to and from Animals?

Dated April 17th, 2020

How does COVID-19 end up on your farm? Are farmers immune to COVID-19? Can you get COVID-19 from your animals? Can infected farmers spread it to their animals? Here are a few resources to help explain the situation as we currently know it.

How does COVID-19 end up on your farm?

It is important to know that if you live on a farm that has physical space surrounding the property, that COVID-19 virus cannot suddenly "show up" on your farm. It is transmitted by a person who is infected through droplets in the air or droplets that directly or indirectly reach contaminated surfaces.

Much of the work and activity done on farms includes people who are working either by themselves, outside, or six feet (or further away) from others. So, risks for most farmers and farm workers are likely lower than if working in a crowded indoor space (like an office) or attending an event where multiple people have gathered (school events, church services, and restaurants). With that said, we are still concerned about farm operators, their employees and their families becoming infected.

Symptoms tend to be worse for older individuals, though the U.S. has also seen severe illness in younger individuals. Everyone should follow ALL prevention guidelines provided by the state and federal government.

For more see:

- *Center for Disease Control: How to Protect Yourself & Others* https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html
- *COVID-19: I'm a farmer and I am afraid – what are my risks?* https://farms.extension.wisc.edu/risk-to-farmers/
- *COVID-19: Social Distancing for Farmers* https://aae.wisc.edu/pdmitchell/2020/04/03/covid-19-social-distancing-for-farmers-2/
- *COVID-19: I'm having seed, feed, chemicals and other products delivered – what precautions should I take?* https://farms.extension.wisc.edu/covid-19-im-having-seed-feed-chemicals-and-other-products-delivered-what-precautions-should-i-take/

Are farmers immune to COVID-19?

There are reports of a notion making the rounds that individuals who work with cattle have a natural resistance or immunity to COVID-19, because of exposures to the broader family of coronaviruses. These Coronavirus types cause scours in pre-weaned calves, winter dysentery in

confined cattle, or associated with certain pneumonias in cattle. At this time, there is no known resistance for any human to COVID-19, including farmers, their families or their employees. We don't have to worry about the safety of food being produced on farms according to Dr. Gregg Hanzlicek, Kansas State University Veterinary Diagnostic Lab Director. He notes, "Milk, eggs, beef pork…whatever the source of your protein, people do not have to worry because those products don't carry COVID-19."

For more see:
Could farmers and farm employees have resistance or immunity to COVID-19?
https://farms.extension.wisc.edu/farmer-resistance-to-covid-19/

Can you get COVID-19 from your animals? Can infected farmers spread it to their animals?

Certain species may be more prone to contracting viruses from the humans in their environment, a process called reverse zoonosis. In turn, animals can give certain viruses to humans (zoonosis). At this time, the American Veterinary Medical Association (AVMA) reports that there have been no reports of pets or livestock becoming ill with COVID-19 in the United States. There is also no evidence at this time that domestic animals, including pets and livestock, can spread COVID-19 to people.

For more see:
American Veterinary Medical Association: COVID-19
https://www.avma.org/resources-tools/animal-health-and-welfare/covid-19

The USDA Animal and Plant Health Inspection Service (APHIS) has issued a report about a tiger in New York that contracted COVID-19 from its handler. Further studies are needed to understand if and how different animal species could be affected by COVID-19.

When your animal is showing signs of illness, APHIS recommends that you call your veterinarian. Make sure to tell your veterinarian if your animal was exposed to a person sick with COVID-19. USDA and CDC do not recommend routine testing of animals for this virus. Veterinarians who believe an animal should be tested will contact state animal health officials who will work with public and animal health authorities to decide whether samples should be collected and tested.

For more see:
USDA Statement on the Confirmation of COVID-19 in a Tiger in New York
https://www.aphis.usda.gov/aphis/newsroom/news/sa_by_date/sa-2020/ny-zoo-covid-19

For More Information

Contact the authors of this fact sheet, your local Extension Educator, or your veterinarian. Additionally, Dr. Darlene Konkle, DVM, Wisconsin State Veterinarian, can be contacted at darlene.konkle@wisconsin.gov or (608) 224 – 4884.

This situation is changing, and we will continue to learn more as the pandemic evolves. For up to date information, along with visiting the sites listed in this article, visit: *University of Wisconsin-Madison Division of Extension COVID-19* https://fyi.extension.wisc.edu/covid19/

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