

Agriculture



The UW-Madison Division of Extension's Agriculture Institute uses applied research and educational outreach to support an economically viable agricultural industry that produces safe food in an environmentally responsible manner. The Institute's Horticulture Program also provides research-based information to help home-gardeners and green industry professionals manage landscapes to beautify communities while maintaining and improving the environment.

Working with researchers from the College of Agricultural and Life Sciences as well as educators across the state, the Agriculture Institute responded to urgent challenges and adapted outreach to virtual platforms during the COVID crisis.

Food supply chain issues, declining demand, decreased commodity prices and general operational disruptions are creating challenges for many Wisconsin farmers

The COVID-19 pandemic is affecting Wisconsin's agriculture sectors in many ways. The closing of schools and restaurants caused changes to the types of dairy products being consumed, resulting in some dairy processing facilities not being able to take additional milk. These facilities were forced to ask some Wisconsin farms to dispose of milk they could not process. After years of low milk prices, dairy farmers had just started to see recovery, but the hit to worldwide markets has resulted in milk prices that will not be sustainable for many dairy farms. Due to overall reduced demand for fuel, Midwest corn ethanol producers slowed production or closed. This and other global market factors contributed to a back-slide of grain prices at the start of this growing season. A reduction in ethanol production has also led to reduced grain byproduct availability, which is typically fed to the state's livestock. Meat packing plants have been forced to close or reduce processing due to employee sickness, leaving many dairy and livestock farms in the state without a place to ship their animals. Farm operations have had to keep essential production and operations running while adjusting to the new challenges that COVID-19 has created.

How Extension responded

Extension specialists and educators across the state developed online workshops and information to provide farmers with timely, research-based information to help

modify operations or manage with disrupted markets. Extension's close connections to the agricultural community allowed for a quick and flexible response and coordinated development of needed resources.

Examples of this include:

- An e-newsletter and social media campaign for dairy producers in crisis, women in agriculture, and agribusiness professionals so they can learn about programs, resources, and events to help them make good decisions to increase the profitability of their agricultural business and cope with COVID-19 business-change efforts being made during the pandemic articles.
- A webinar for dairy producers and industry professionals in which they learn how to reduce milk production and the possible effects it has on the dairy cow and dry cow management for extended dry-off periods. These were designed to support safely reducing production to address diminished dairy demand during the pandemic.
- Resources and webinars on best management practices were developed to manage milk surplus issues on farms. These included how to safely land-spread excess milk and feeding strategies for milk to dairy cattle and calves.
- A fact sheet developed for cattle feeders to determine the best option for adjusting feedlot management to cope with packing plant shutdowns and slowdowns.

Supporting farmers with managing emerging impacts on milk production

The Division of Extension Dairy Program developed and delivered a webinar series for dairy producers and industry professionals where they learned how to reduce milk production and limit the possible effects it has on the dairy cow. This webinar series was designed to support them in safely adapting their production to address the diminished demand of fluid milk during the pandemic. The dairy market situation with reduced demand for dairy products caused excess inventory to build up at some dairy processing plants and thus some dairy producers were instructed to reduce the amount of milk shipped from their farm. Some producers are feeding the excess milk back to their own livestock, land-spreading the milk or dumping it into manure pits. It may be more cost effective to reduce production using the strategies presented in these webinars, which includes culling strategies, earlier dry off, reducing milking frequency from 3x to 2x, and making diet modifications. It is likely one strategy alone will not meet the needed reduction, so a combination of several strategies may be needed. Utilizing a combination of strategies at lower intensity may also reduce negative impacts on animal health and welfare. Participants indicated that their knowledge prior to the webinar was very little and after the webinar they all strongly or somewhat agree that their knowledge was increased, and they are more comfortable implementing these practices or having these conversations with producers.



- Resources for beef and dairy farmers on selling or retaining market cows and bulls during market disruptions.
- Alternative feed options for beef and dairy cattle due to reduced availability of distiller's grains as it relates to ethanol production.
- Weekly grower gatherings organized by Extension educators for organic vegetable farmers to share ideas and information on managing operations during the COVID-19 outbreak.
- Guidance for farmers markets to continue operations under COVID-19, which are a major direct marketing channel for many farmers.
- Transitioning a training program for youth to an online format so they can be certified to operate agricultural equipment for their family farm.
- A beef market update series to assist producers in understanding current prices, market disruptions, and retail marketing strategies allowing producers to make informed marketing decisions.
- A fact sheet was developed for livestock and dairy owners highlighting ivermectin's role in animal health and why ivermectin for animal use should not be taken by humans to treat COVID-19.

The pandemic has amplified existing stress and mental health issues for farmers and farm managers.

The ongoing economic conditions in agriculture are taking a toll on farm families and their rural communities. The associated chronic stress is also impacting mental and physical well-being, relationships, and decision-making. The COVID-19 pandemic has drastically amplified those challenges. Chronic stress, left unmanaged, will wear down the body over time. Increased blood pressure, higher risk of heart disease and stroke, and elevated blood sugar levels that can contribute to type-2 diabetes are often connected to chronic stress. Additionally, long-term stress affects the brain in measurable ways and can stifle farmers' abilities to plan and communicate.

How Extension responded

Extension helps farmers, families, businesses, and communities remain resilient by learning how to manage stress and use planning tools to make sound decisions and create a roadmap for the future. During the pandemic, we have adapted and expanded our

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Recognizing signs of stress in farmers and families



Suicide rates among dairy farmers have increased due to financial hardships farmers have had to endure during this last decade. The COVID-19 pandemic made everything worse and harder for farmers who thought they would have a better 2020. In response, Extension delivered a one-day online training focused on agriculture professional consultants who are typically the first to recognize acute stress in the farmers they work with on a regular basis. The workshop focused on three skills: asking a person about suicide, persuading someone to get help and, referring someone to the appropriate resource. Brown and Dane Counties joined efforts to organize the online training. This program was also shared with people who work in county or state agencies that offer services to farmers.

existing programming related to farm stress to ensure that farmers have online access to vital resources and training.

Examples of this include:

- A one-day online training for ag-professionals in which participants learned to prevent suicide using skills learned in a workshop to help farmers under stress.
- A live, online webinar series for Women in Agriculture (producers) in which participants learned new skills to address the concerns that they may be experiencing due to COVID-19's "Safer at Home" order while mitigating social isolation through connecting with other participants.
- A three-part video series, highlighting insight on the COVID-19 pandemic impacts on the farm and finding ways to regain a sense of control to put these stressful times into perspective with specific ways to throttle back on the normal stress response.
- A webinar for farmers and agribusiness professionals in which they learned COVID-19's impact on national dairy policy, dairy supply chain disruptions and bottlenecks, and resources and tools for stress management.

Threats to farmer and farm employee health are leading to new operational challenges

Farm operations cannot pause, even during a pandemic. Farmers needed guidance on keeping themselves and their employees safe while milking cows, caring for livestock, and raising crops. Farmers also needed to develop best practices while service providers and vendors continue visiting the farm to support ongoing farm operations. Across the state, farmers looked to Extension for help with a variety of issues related to health, such as concerns related to employee safety, tool and equipment sanitation, contactless deliveries, on-farm u-picks, farmers market best practices, and more.

How Extension responded

Educators and researchers developed web-based resources that took current health guidelines and recommendations and adapted them to be relevant and appropriate for farmers and farm workers. Extension adapted content to be linguistically

accessible and culturally appropriate, especially for dairy workers who may speak Spanish.

Examples of this include:

- Videos and fact sheets for agricultural producers and their employees that demonstrate how to properly wash and sanitize milking gloves so they can be safely re-used on a dairy farm during this time of possible equipment shortage.
- Resources were developed to help farmers maintain a healthy workplace. This included videos in Spanish for workers to learn more about COVID-19 response/resources to prevent transmission of disease on the farm. Additionally, a checklist of protocols was created to assist in reducing risk of virus spread when farm service providers enter the farm.
- "COVID-19 Response Plan Template for Fruit and Vegetable Farms" was developed to provide risk assessment questions and sample responses to help farmers write COVID response plans for their farms.
- An outreach education program for local farmers markets, where market managers and vendors gained new information and assistance in adapting the upcoming market season for the social distancing guidelines related to COVID-19. Materials were translated into Hmong and Spanish
- Weekly grower gatherings for organic vegetable farmers in which best practices related to fresh market vegetable production and the impacts of COVID-19 were discussed.
- Resources for farmers on developing protocols and creating plans to ensure their operations continue in the event of illness.
- A collection of educational resources for livestock producers to better understand COVID-19 transmission between animals and humans.
- A webinar for Conservation Agency staff members highlighting the pandemic's impact on Wisconsin's dairy and livestock industries along with producer mental health, communication, and decision making.

Applying to financial relief programs is complex, and policies change rapidly; this creates a barrier for farmers to receive support that helps them in saving and maintaining their businesses

The COVID-19 pandemic has intensified Wisconsin farmers' existing struggles for financial survival, mainly due to diminished demand and unreliable supply chains. State/national relief efforts are being launched, but policies for applying for these programs and receiving relief is often time-consuming and requires information that farmers may not have at hand. Navigating complex and changing policies creates additional pressure for farmers during a time of already amplified stress.

How Extension responded

Extension educators and specialists are developing and updating guidance and fact sheets that help farmers navigate relief effort applications. Some applications require specific metrics related to the farm operations. Extension educators and researchers have developed various online calculator tools to help farmers provide the information necessary to receive relief funds.

Examples of this include:

- Direct outreach to farmers and agribusinesses about the farm support programs under the CARES Act, including the Paycheck Protection Program, Pandemic Unemployment Insurance, Economic Injury Disaster Loans, and business tax provisions.
- Consulting sessions for farmers to help them navigate eligibility for unemployment and the Paycheck Protection Program due to market disruptions caused by the COVID-19 pandemic.
- A series of farm financial management articles for popular press focusing on navigating decisions for economic recovery that puts farm families and their businesses in the best position post-crisis.

Increased interest in growing safe food at home, and interest in supporting emergency food operations in Wisconsin

Anxiety around access to safe food and renewed interest in outdoor activities led to a unique need and surge in relevance for online gardening classes. Wisconsinites who

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Navigating financial farm support programs



A webinar for farmers and agribusiness professionals was conducted in which participants learned about federally funded financial support and farm support and loan programs available to farms. Of those who participated and rated the event, 94% indicated the program was valuable to them and confirmed they were more comfortable navigating farm support programs because of their participation. Both farmers and professionals indicated the program delivered information of use to their farms or to their clientele. Industry professionals responding to the evaluation annually work with nearly 1,800 farms.

may have never gardened before sought research-based educational opportunities. Seed companies and nurseries also saw an increase in sales, resulting in them seeking guidance and direction on how to adapt their businesses to meet this need with social distancing recommendations in place.

How Extension responded

Extension educators and specialists quickly adapted and expanded existing resources related to home gardening and leveraged a statewide volunteer network

of Master Gardeners to reach and support residents interested in growing food. Additionally, farmers and engaged residents who supply food to emergency food operations sought guidance so they could continue to provide healthy food to Wisconsin residents during the pandemic.

Examples of this include:

- Online workshops were developed for topics like seed starting, beginning gardener techniques, growing potatoes, and composting to help participants learn to grow their own food to improve food security.
- Resources were developed for county community garden coordinators on guidelines for operating and maintaining safe community gardens during COVID-19. These materials were translated into Hmong and Spanish.
- Extension county offices across the state traditionally help clientele diagnose issues and concerns with their plants. During COVID-19, Master Gardener volunteers were trained to answer horticulture questions from remote locations using newly developed online tools

and procedures. An online form was developed for county residents to submit their horticultural questions.

- Widespread media outreach was conducted to teach people how COVID-19 was impacting community gardens, farmers markets, garden centers, and home gardeners.
- Extension educators engaged county health officials to develop guidance on procedures related to safe operation of greenhouses and nurseries.
- A collaboration was developed between the City of La Crosse, La Crosse Neighborhood Associations, and volunteers to plant, maintain, and harvest victory gardens to provide fresh produce for community members, educating participants about gardening and food preservation to improve food security and health.
- A local food website for eaters and farmers in the Chequamegon Bay region of Wisconsin was created, supplying information about where to purchase local foods and how to access food-security programs to help residents and farmers deal with COVID-19 impacts.

in **72** COUNTY OFFICES
on **5** CAMPUSES
and within **5** TRIBAL NATIONS

7 Agriculture Program Areas and Topics

- Crops & Soil
- Dairy
- Farm Management
- Horticulture
- Livestock
- Discovery Farms
- Master Gardener

More ways we're helping businesses, communities, youth, and families

Keeping a focus on our values to transform lives and communities, UW-Madison Extension is leading businesses, communities, youth, and families in the response to the COVID-19 outbreak. We are uniquely positioned across the state to link university research to those in need of guidance and practical resources. Extension staff in counties and tribal nations are making connections to financial aid and instruction, providing best practices for emerging needs, and reinforcing connections for healthy communities. To see how Extension responded to COVID-19 across the state and across program areas, visit fyi.extension.wisc.edu/covid19/impacts.