

# corn<sup>talk</sup>

Official Publication of the Minnesota Corn Growers Association • May 2022



## Inside:

- ▣ MCGA addresses ethanol misinformation
- ▣ Meet the 2022 MCGA scholarship recipients
- ▣ Corn check-off research projects drive innovation

# Ethanol: Fueled by innovation and advocacy



## About the cover

Lab work at the Guardian Energy ethanol plant in Janesville. Through the Minnesota corn check-off, Minnesota's corn farmers fund research that increases sustainability and boosts farm profitability.

**T**his winter, as ethanol faced unprecedented uncertainty, the Minnesota Corn Growers Association (MCGA) worked hard to ensure that consumers would have uninterrupted access to the higher ethanol blends they rely on.

In April, thanks in part to advocacy efforts by corn farmers in Minnesota and across the U.S., President Joe Biden announced that outdated restrictions on summertime E15 sales would be waived in 2022 (see page 3). Additionally, grassroots leadership by corn growers has Minnesota well positioned for another strong year of E15 sales.

In 2022, MCGA will continue to advocate for policies that advance ethanol in Minnesota and beyond. But we need your help. By joining MCGA, you're helping to ensure that MCGA remains a strong advocate for ethanol and the many benefits it provides to rural communities and all Minnesotans. You're also helping to strengthen rural economies and safeguard a bright future for the next generation of farmers.

To learn more about the benefits of membership, or to join MCGA, visit [mncorn.org/join](https://mncorn.org/join).



Look for this sticker to learn about research, promotion and outreach efforts fueled by farmers' investment in the Minnesota corn check-off.

Official Publication of the Minnesota Corn Growers Association

Published six times a year from the state MCGA/MCR&PC office:

500 E Travelers Trail  
Suite 600  
Burnsville, MN 55337  
P) 952-233-0333

May 2022

Corn Talk Advisory Committee:

Adam Birr  
Bryan Biegler  
Brandon Fast  
Richard Syverson  
Doug Albin  
Editor: Nate Gotlieb

**3** MCGA addresses ethanol misinformation

**4** MCGA follows key bills at state Legislature

**4** Trade School briefs farmers on global markets

**5** 2022 MCGA scholarship winners

**5** Growers reminded of treated seed BMPs

**6** Farmers invest in their future

**9** 2022 Innovation Grants

**12** Converting corn into plastic

**11** Research Q&A

**11** Identifying Oil Content

**13** MN Corn announces 2022 sponsorships

**13** CommonGround kicks off spring events

**14** County highlights

**15** MCR&PC election results announced

**15** MN Corn website updated

**16** Calendar of events

Follow us on social media:



[twitter.com/mncorn](https://twitter.com/mncorn)



[facebook.com/MinnesotaCorn](https://facebook.com/MinnesotaCorn)



[instagram.com/MinnesotaCorn](https://instagram.com/MinnesotaCorn)



[youtube.com/MNCornVids](https://youtube.com/MNCornVids)

# MCGA combats ethanol misinformation

After April's positive news about summertime E15 sales in 2022, the Minnesota Corn Growers Association (MCGA) has worked to ensure consumers and policymakers have the most accurate information on the benefits of ethanol-blended fuels.



MCGA's efforts to educate consumers about ethanol have continued this spring.

In mid-April, one of several MCGA ethanol-focused blogs addressed many of the long-disproven myths that re-emerged in the wake of the Biden administration's announcement on summertime E15 sales. Critically, the post notes how concerns about summertime E15 sales leading to additional smog are unfounded and how research shows E15 actually reduces smog-causing pollutants compared to standard gasoline.

Additionally, MCGA grower-leaders addressed myths about ethanol-blended fuels through interviews with media outlets across Minnesota. That included pieces on KAAL-TV in Rochester, WDIO-TV in Duluth, and WCCO radio.

On April 12, after months of grassroots advocacy by corn farmers in Minnesota and across the country, President Joe Biden announced that the EPA would use its emergency power to ensure summertime E15 sales in 2022.

When the EPA approved sales of E15 in 2011, it didn't allow for the fuel to be sold during the summer months because of outdated fuel volatility restrictions stemming from the 1990 Clean Air Act amendments. Recognizing that these restrictions were no longer applicable in a modern fuel market, in 2019, the Trump administration granted E15 a waiver so the fuel could be sold during the summer months. From 2019–21, thanks in part to that waiver, sales of E15 soared to record levels.

But never one to lose its grip on market share without a fight, Big Oil and its allies challenged the E15 waiver in court. They argued that, because the 1990 Clean Air Act amendments only mentioned E10, or standard gasoline, as being eligible for a waiver, E15 couldn't be sold during the summer. This was even though E15 is no more likely than standard gasoline to contribute to evaporative emissions.

Unfortunately, a federal appeals court sided with Big Oil and nullified the rulemaking process that allowed for summertime E15 sales. Recognizing the impact this would have on corn farmers and consumers, who have come to enjoy the cost-savings and clean-air benefits of

E15, growers throughout the country rallied to find a solution. Biofuels advocates worked with policymakers to introduce legislation that would permanently put E15 on the same footing as standard gasoline when it comes to volatility. They also urged federal officials to use their authority to ensure E15 parity, or to at least use emergency authority to allow summertime E15 sales in 2022 while a long-term solution was developed.

Fortunately, officials acted, allowing for 2022 summertime sales as a permanent solution is developed. The move will ensure that momentum around E15 — which has become a popular fueling option for consumers in Minnesota and beyond — continues without interruption this year. In the interim, MCGA will continue working hard to ensure a permanent solution for E15 parity going forward.

## A fuel of choice

As mentioned, even despite some uncertainty on the policy front, E15 has become a fuel of choice for many Minnesota drivers in recent years. Last year, sales of this cleaner-burning, lower-cost fuel — which saves consumers, on average, 3 cents to 20 cents per gallon — reached record levels in Minnesota. This year, E15 sales are off to another great start and should continue at high levels.

This momentum is, in no small part, thanks to the efforts of Minnesota's corn farmers, who have worked hard to ensure that policymakers and consumers are aware of the benefits of E15. In 2021, for example, corn growers successfully advocated for the creation of a state-run biofuel infrastructure grant program to ensure that fuel retailers who want to sell E15 can have the equipment needed to do so.

In total, the state allocated \$6 million to the program for the current biennium (2022–23). MCGA, in conjunction with the Minnesota Corn Research & Promotion Council (MCR&PC) contributed an additional \$1 million.

Applications for the program were open this past winter. Over 70 were received. As this edition of Corn Talk went to press, applications were being reviewed, with funding decisions expected to be made this summer.

In addition to advocacy, Minnesota Corn has continued to educate consumers about the benefits of ethanol-blended fuels through the Better Fuel Initiative. Featuring KPAN "Power Trip" morning show co-host and producer Chris Hawkey, new Better Fuel ads have been playing on a variety of media outlets throughout Minnesota this spring. They note how easy it is to fill up with E15 and the many benefits the fuel provides.

Additionally, Minnesota Corn maintains a robust blog about the benefits of ethanol-blended fuels at [betterfuel.org](https://betterfuel.org). The site also has an E15 station finder, so consumers can easily find one of the more than 410 Minnesota fueling stations carrying E15.

MCGA thanks the many Minnesota elected officials who have championed biofuels in recent months, including U.S. Sens. Amy Klobuchar and Tina Smith, Gov. Tim Walz and Reps. Angie Craig, Tom Emmer and Michelle Fischbach. We also thank NCGA and other state and federal partners for their tireless efforts on year-round E15.

To learn more about E15 and the benefits of ethanol-blended fuels, visit [betterfuel.org](https://betterfuel.org).

## Did you know?

*E15 is a fuel blend containing 15% ethanol. It's also known as Unleaded 88 because of its 88 octane rating.*



# MCGA follows key bills at state Legislature

In April, a bill to ensure that Minnesotans can access E15, also known as Unleaded 88, and higher ethanol blends received an informational hearing at the state Capitol.

The Senate Commerce and Consumer Protection Finance and Policy Committee discussed the Liquid Fuel Modernization Act on April 25. The legislation is sponsored by Sen. Gary Dahms (R-Redwood Falls) and Rep. Mike Sundin (DFL-Esko).

The bill would provide the resources needed for infrastructure improvements to allow every fuel retailer in Minnesota to offer higher ethanol blends within 10 years. Specifically, it would reimburse fuel retailers that replace equipment incompatible with higher ethanol blends.

Funding for the program, which would be administered by the state Department of Commerce, would come from a new 1.3-cent-per-gallon fee on fuel distributors. The goal would be to reimburse \$52 million annually for equipment replacement at fuel retailers.

Nearly 80% of underground fuel storage tanks in Minnesota are at least 20 years old. Modern tanks are compatible with 100% ethanol blends, so replacing tanks now will ensure Minnesota has the infrastructure in place to enable even higher ethanol blends in the future.

The Minnesota Corn Growers Association (MCGA) has worked with the Minnesota Petroleum Marketers Association (MPMA) on the bill. We thank MPMA for their efforts to advance the legislation and increase consumer access to higher ethanol blends.

In addition to the Liquid Fuel Modernization Act, MCGA has closely followed multiple bills this legislative session that would impact corn farmers and their families. As of late April, both the House and Senate had been considering legislation that would establish a soil health grant program. In March, MCGA President Bryan Biegler testified in support of the Senate's proposed grant program, as outlined in a bill sponsored by Sen. Bill Weber (R-Luverne).

"Farmers face barriers to implementing soil-health practices, but there is great interest and an opportunity to scale up such practices," Biegler told lawmakers.

MCGA has also been closely following a proposed relief package for farmers affected by last year's drought. At the time of publication, a conference committee was sorting out differences between House and Senate versions of the bill.

The House bill would allocate \$5.1 million for drought relief and allow individual farmers to receive up to \$10,000. It would also allocate \$13.3 million to the Department of Natural Resources (DNR) and transfer \$5 million to the Rural Finance Authority (RFA) for disaster recovery loans.



Grower-leaders meet with state Rep. Paul Torkelson and House Minority Leader Kurt Daudt.

The Senate bill would allocate \$7 million for drought relief and allow individual farmers to receive up to \$5,000. It would not allocate any funding to the DNR and would transfer \$1.5 million to the RFA.

In early April, Gov. Tim Walz signed into law a bill that allocates \$1 million in emergency funding to address avian influenza. As of late April, 54 sites in Minnesota had been infected with the disease.

The 2022 Minnesota legislative session will run through May 23. To read the latest updates on legislation affecting Minnesota's corn farmers, visit [mncorn.org/blog](https://mncorn.org/blog).

## Trade School provides overview of global markets



Farmers learned about key trade topics at a Minnesota Corn-supported Trade School in March.

In March, as part of its efforts to ensure Minnesota farmers are well-equipped to discuss global trade topics, Minnesota Corn co-sponsored a Trade School in Alexandria, Minnesota.

Over 50 farmers attended the Trade School, which discussed the importance of trade agreements to U.S. agricultural producers and the importance of policymakers providing support for them.

Minnesota Corn partnered with the National Corn Growers Association, the North Dakota Corn Utilization Council and the U.S. Grains Council (USGC) on the event. Speakers detailed the scope of U.S. agricultural trade, the history of U.S. trade deals, market-development efforts and current factors affecting global trade.

Since the 1970s, because of globalization and trade agreements, the U.S. has been exporting exponentially more agricultural products. With that growth, agricultural exports now support more than 1 million U.S. jobs and account for a significant portion of U.S. farmer revenue.

As part of its mission to create opportunities for corn farmers, Minnesota Corn supports multiple organizations dedicated to developing markets abroad including USGC.



To learn more about Minnesota Corn's efforts to support the development of international markets, visit [mncorn.org/utilization](https://mncorn.org/utilization).

# 2022 MCGA scholarship winners announced

The Minnesota Corn Growers Association (MCGA) is proud to announce that four college students from Minnesota have been awarded the organization's 2022 young-adult scholarship.



Ross Herber of Utica, Heidi Hoffman of New Ulm, Kaitlyn Lorang of Morton and Nadia Phillips of Silver Bay will each receive \$5,000 for their college educations. Minnesota Corn awards the scholarships each year as part of its mission to support rural communities and opportunities for youth across the state. This is the fourth class of annual scholarship recipients.

Herber, a 2020 Lewiston-Altura High School graduate, is a sophomore at South Dakota State University (SDSU) studying dairy production. His work experience includes working on his family's farm and at the SDSU Dairy Research & Training Facility. At SDSU, he is a member of the Alpha Lambda Delta Honor Society and the Agronomy/Precision Agriculture Club and is treasurer of the Dairy Club.

Hoffman graduated from New Ulm Cathedral High School in 2019. She's currently a junior at the University of Minnesota-Twin Cities studying animal science and agricultural communication and marketing. She has been a member of multiple agriculture clubs, and last summer, she was an intern with Minnesota Pork. This summer, she will be an insurance office intern with Compeer Financial.

Lorang, a 2020 graduate of Cedar Mountain High School, is also a sophomore at SDSU where she is studying agricultural communications. During college, she has been an SDSU admissions ambassador, a Minnesota 4-H agriculture ambassador and a member of multiple agriculture clubs and organizations. In high school, Lorang interned with Minnesota Agriculture in the Classroom and participated in the state and national FFA conventions.

Phillips, a 2021 Mankato East High School graduate, is a freshman at the University of Minnesota-Twin Cities studying plant science. This school year, she is working as a student assistant in the USDA Cereal Disease Lab in St. Paul. In 2020-21, Phillips was the leader of the Mankato FFA Floriculture Career Development Event group.

To learn more about agriculture scholarship opportunities, visit [mncorn.org/scholarships](https://mncorn.org/scholarships).



Ross Herber



Heidi Hoffman



Kaitlyn Lorang



Nadia Phillips

## Growers reminded of treated seed BMPs

As farmers gear up for the 2022 planting season, they are reminded of treated seed best-management practices.

The BeSure! campaign encourages farmers to follow label directions, use advanced seed-flow lubricants that minimize dust, remove and properly dispose of treated seed and keep all treated seed out of commodity grain channels. Additionally, farmers are reminded to be aware of any honey bees and hives near fields before making an application and to communicate with neighboring beekeepers.



Farmers are also encouraged to eliminate flowering plants and weeds in and around fields prior to spraying. For foliar applications, ensure that sprays are directed away from any flowering plants, follow established buffer zones and calibrate equipment to minimize spray drift.

Neonicotinoid products help protect plants and increase crop yields, allowing farmers to meet society's needs for corn without farming additional acres. The products are selective, effective, and safe for the environment when used correctly and according to label instructions.

To learn more about neonicotinoid and crop protection tool stewardship this growing season, visit [growingmatters.org/besure](https://growingmatters.org/besure).

The website also contains multiple resources for seed stewardship, including seed-treatment guides from the American Seed Trade Association (ASTA) and Growing Matters. The National Corn Growers Association is one of more than 700 ASTA members.



For detailed information about stewardship of treated seed, visit [growingmatters.org/besure](https://growingmatters.org/besure).





feature story . . . . .

# Farmers invest in their future

Each year, as part of its mission to promote opportunities for corn farmers while enhancing quality of life, Minnesota Corn invests corn check-off funds in research aimed at improving on-farm practices and identifying new markets for the state’s corn crop. That’s no exception in 2022.

This year, Minnesota Corn is investing over \$2 million in research projects covering everything from efforts to develop and improve corn-based polymers and plastics, to a field trial that evaluates the effectiveness of an enzyme at preventing corn bacterial diseases. Nine projects are new; the other nine have been funded previously.

Like in past years, the 2022 project-selection process was primarily led by the Minnesota Corn Discovery & Development (D&D) Team. The team includes members of the Minnesota Corn Research & Promotion Council (MCR&PC) and the Minnesota Corn Growers Association (MCGA) board of directors. Team members evaluated projects based on their novelty, how well they addressed Minnesota Corn’s research priorities, and the value they will provide to Minnesota corn farmers.

The following provides a rundown of the projects Minnesota Corn is funding in 2022. Throughout the year, visit [mncorn.org/research](https://mncorn.org/research) to read progress reports from these projects, as well as summaries of research projects funded in previous years.



## Education

**Supporting nutrient-management, water-quality education for corn farmers**

*Project lead:* University of Minnesota Extension

*Project overview:* This project supports an Extension Educator position dedicated to these topics. The position is currently held by soil scientist Brad Carlson.

*Why it matters:* By funding water-quality and nutrient-management education, Minnesota Corn is helping ensure that farmers have the latest information when making stewardship decisions.



**\*Indicates newly funded project**





Daniel Krajovic (left) and Dr. Satu Häkkinen from the Hillmyer Lab at the University of Minnesota.

### Helping corn farmers make the best nitrogen-management decisions

**Project lead:** Brad Carlson, University of Minnesota Extension

**Project overview:** This project supports the University of Minnesota Extension Nitrogen Smart Program. The program provides education on how nitrogen behaves in the environment, with the goal of helping farmers make nutrient-management decisions that are best for their farms. Nitrogen Smart is in its eighth year in 2022. The program includes a three-hour “fundamentals” course that features basic training on how nitrogen behaves in the environment and three “advanced” sessions covering manure, the 4Rs of nutrient management and adapting nitrogen management to a changing climate. Minnesota Corn is also funding an effort to develop an advanced Nitrogen Smart course focused on conservation practices that reduce nitrate losses.

Nitrogen Smart is offered in person and online. Look for information about future in-person sessions at [mncorn.org](https://mncorn.org). Online sessions can be accessed at any time.

**Why it matters:** A better understanding of how nitrogen behaves in the environment can lead to more efficient use of nitrogen fertilizer, increasing economic return and minimizing nitrogen losses.

## Expanded uses for corn

### Developing corn-based polymers and bioplastics

**Project lead:** Marc Hillmyer, Center for Sustainable Polymers (CSP), University of Minnesota

**Project overview:** The project aims to improve existing corn-based plastics and to develop new corn-based materials. It consists of seven different research projects within CSP. Minnesota Corn has funded the slate of projects since 2019.

**Why it matters:** Improving existing corn-based products and developing new ones can create new markets for corn producers. It can also reduce greenhouse gas emissions, given that corn often replaces petroleum as a feedstock for plastic products and other polymers. (See page 12 for more information.)



### \*Laying the groundwork for CO2 capture in ethanol plants

**Project lead:** Will Northrop, University of Minnesota

**Project overview:** The project will work to determine the energy and cost benefits of converting carbon dioxide emitted at ethanol plants into methanol and the synthetic fuel e-gasoline. Specifically, the research will focus on determining the energy requirements, capital costs and financial benefits of installing a CO<sub>2</sub>-to-fuel system. University of Minnesota researchers will collaborate with Chippewa Valley Ethanol Company on the work.

**Why it matters:** More effectively using CO<sub>2</sub> emissions would reduce the carbon intensity of ethanol production.

### \*Assessing the potential of food-grade DDGs

**Project lead:** Jason Robinson, Agricultural Utilization Research Institute (AURI)

**Project overview:** This project will assess the practicality of converting dried distillers grains (DDGs), a byproduct of ethanol production used as animal feed, into a human food ingredient. The research is also looking to assess the potential market for food-grade DDGs. If such a process appears economically and technically feasible, the researchers will propose the next steps for commercializing the product.

**Why it matters:** Converting DDGs into a human food ingredient may increase the value of ethanol and corn.



### \*Evaluating fortified DDGs diets in weanling pigs

**Project lead:** Hans Stein, University of Illinois

**Project overview:** This research will test how weanling pigs fed high-protein corn co-products, such as DDGs, respond when their diets are supplemented with the amino acids isoleucine, tryptophan and valine. Specifically, it will evaluate how fast these pigs grow compared to pigs fed a control diet of corn and soybean meal, and how the experimental diets affect the pigs' health.

DDGs and other high-protein corn co-products contain higher levels of the amino acid leucine, which creates a deficiency of isoleucine, tryptophan and valine and slows pig growth. By supplementing pigs' diets with additional isoleucine, tryptophan and valine, the effects of higher leucine levels could be mitigated.

**Why it matters:** Ensuring the effectiveness of DDGs-based diets could increase the use of such diets. That could increase the value of ethanol co-products, providing an economic boost to corn farmers.

## \*Identifying the fatty acid profiles of corn inbred lines and hybrids

**Project lead:** Candice Hirsch, University of Minnesota

**Project overview:** This research will identify differences in the composition of oil and fat among different corn inbred lines and commercial hybrids.

**Why it matters:** Understanding the variation that exists in oil characteristics is an important step in determining the possibility of developing higher-value products, such as renewable food, fuel and plastics, Hirsch says.



## Determining how nitrogen-fertilizer rates affect yield, environment

**Project lead:** Fabian Fernandez, University of Minnesota

**Project overview:** Fernandez is exploring how the application of nitrogen fertilizer at various rates affects grain yield, nitrate-leaching rates, nitrous oxide emissions and ammonia volatilization. The research is being conducted on tile-drain plots at the University of Minnesota Southwest Research and Outreach Center in Lamberton.

**Why it matters:** A better picture of the intersection between optimum nitrogen rates from economic and environmental perspectives could help farmers with nutrient-management decisions.

## Evaluating how an enzyme prevents bacterial infections in corn

**Project lead:** Mikael Elias, University of Minnesota

**Project overview:** This research will explore why the enzyme lactonase inhibits the capacity of the bacteria *Clavibacter michiganensis* subsp. *nebraskensis* (Cmn) to cause Goss's wilt disease in corn, as a small-scale field experiment has discovered. Additionally, it will replicate the study on several mid-sized fields and evaluate whether lactonase inhibits the capacity of the bacteria *Xanthomonas vasicola* to cause bacterial leaf streak.

**Why it matters:** The research could give farmers a more effective method of controlling bacterial infections in their crops, increasing yields and boosting profitability.

## Determining conservation-practice effectiveness on a watershed scale



**Project lead:** Gary Feyereisen, USDA Agricultural Research Service

**Project overview:** This project aims to evaluate how the implementation of conservation practices on all cropland in a small watershed in southern Minnesota affects nutrient losses via runoff and tile drainage. This year, the researchers will continue monitoring water quality and quantity at the outlet of the watershed in which the conservation practices will be implemented to establish a baseline data portfolio. They will also continue to monitor water quality and quantity at an adjacent watershed that will serve as a control for the experiment. They expect conservation-practice implementation to begin in 2024.



## \*Analyzing the prospects of hydrogen derived from ethanol

**Project lead:** Luca Zullo, AURI

**Project overview:** Hydrogen has a variety of industrial uses, including as a component of sustainable aviation fuel, fuel cells and renewable diesel fuel. This project will assess the economic viability of ethanol-derived hydrogen and the technical capabilities needed for its production.

**Why it matters:** Creating another viable ethanol co-product could increase the value of the fuel.

## \*Evaluating the toxigenicity of aromatics in gasoline

**Project lead:** Shujun Liu and Leena Hilakivi-Clarke, The Hormel Institute, University of Minnesota/Steffen Mueller, Energy Resources Center, University of Illinois Chicago

**Project overview:** This research is exploring how the aromatic

compounds added to fuel to boost octane, such as xylene and toluene, affect chemicals in the body that control gene expression. It will specifically study DNA and gene expression changes in animals and cell cultures that are exposed to aromatics found in gasoline.

**Why it matters:** If aromatics affect gene expression in a way that increases cancer risk, substituting ethanol as an octane booster would improve human health. It could also provide a boost to rural communities.

# Production stewardship

## Helping farmers address water-quality issues

**Project lead:** Warren Formo, Minnesota Agricultural Water Resource Center (MAWRC)

**Project overview:** This grant provides funding to MAWRC, a research and education organization dedicated to increasing awareness of water-related issues within the agricultural community. MAWRC also conducts outreach to inform the non-farming public about conservation efforts by Minnesota corn farmers. Additionally, the MAWRC-operated Discovery Farms program collects field-scale water-quality data from farms across the state, providing information that contributes to better farm management.

**Why it matters:** Increasing farmers' knowledge of water-related issues can help improve profitability and sustainability.



**Why it matters:** Understanding how conservation practices affect nitrate leaching when implemented on a broader scale could help farmers determine when to implement the practices on their cropland.

#### **Evaluating the prevalence of corn pests, diseases in Minnesota**

**Project lead:** Anthony Hanson, University of Minnesota

**Project overview:** This research aims to continue efforts to identify where corn insect pests and diseases are prevalent in Minnesota. It includes expanding trap networks and on-farm surveys of insects and diseases.

**Why it matters:** Getting a broader look at the status of various corn pests across the state could help farmers when making pest-control decisions.

#### **\*Mitigating nitrogen losses during spring freeze/thaw**

**Project lead:** Tim Griffis, University of Minnesota

**Project overview:** This project is exploring how freeze-thaw cycles, the frequency of which are increasing, affect nitrogen losses on cropland. In a controlled growing environment, researchers are studying how a winter rye cover crop affects the frequency of freeze-thaw cycles and nitrogen losses caused by such cycles. Additionally, they are studying how enhanced efficiency fertilizers affect reactive nitrogen losses.

**Why it matters:** Research shows that 35% of annual nitrous oxide emissions occur during the spring freeze-thaw period. By gaining a better understanding of effective strategies to reduce nitrogen losses during this period, corn farming could be made more efficient and sustainable.

#### **\*Determining how nitrogen, irrigation rates affect leaching, yield**

**Project lead:** Vasudha Sharma, University of Minnesota

**Project overview:** This project is studying how irrigating and applying nitrogen fertilizer at variable rates in different parts of a field, depending on soil-data measurements, compares to irrigating and applying nitrogen fertilizer at uniform rates. It's being conducted in the Central Sands Region of Minnesota, where irrigation helps ensure the productivity of row-crop agriculture due to the low water-holding capacity of soils there.

Researchers will measure how variable-rate application compares to uniform application in terms of nitrate leaching, plant growth, grain yield and other factors.

**Why it matters:** Having data to show the effectiveness of variable-rate irrigation and nitrogen application could help farmers in central Minnesota as they continue to become more efficient and sustainable.

#### **\*Studying nutrient management in northwestern Minnesota**

**Project lead:** Lindsay Pease, University of Minnesota

**Project overview:** This research will measure how monoammonium phosphate and diammonium phosphate fertilizers applied in northwestern Minnesota affect yield, nutrient losses, and soil nitrogen, phosphorus and carbon availability during a two-year corn-soybean rotation. It will also evaluate how application of these fertilizers affects the aforementioned factors when applied annually versus once in the two-year cycle.

**Why it matters:** A better understanding of how phosphate-fertilizer applications affect economic and environmental factors could help increase nutrient-use efficiency in northwestern Minnesota, where nutrient-management research has been limited to date.



#### **\*Assessing how corn responds to nitrogen at different potassium-fertilization rates**

**Project lead:** Dan Kaiser, University of Minnesota

**Project overview:** This project will evaluate how different rates of nitrogen- and potassium-fertilizer application affect fixed nitrogen and potassium in soil.

**Why it matters:** The project could help increase the understanding of whether fixation of nitrogen and potassium in the soil impacts corn-fertilizer requirements. ■

## **Innovation Grants**

Since 2016, Minnesota Corn has offered Innovation Grants to farmers and researchers. These grants support projects aimed at developing new uses for corn; exploring farming practices that enhance air and water quality; studying ideas that might make corn farming more profitable and efficient, and more.



In 2022, Minnesota Corn is funding 11 Innovation Grant projects. Four are new, and seven have been funded previously. Find results of previous projects at [mncorn.org/research](https://mncorn.org/research).

\*Indicates newly funded project

#### **\*Helping students understand how nitrogen rates affect corn yields, canopy growth**

**Project lead:** Adam Alford, Southwest Minnesota State University (SMSU)

**Project overview:** This project will include growing corn using six different nitrogen-fertilizer-application rates on a plot donated to SMSU. Students will use the plot as an educational tool to learn about the various aspects of corn growth and development. Additionally, a field day will be held to summarize the results of the experiment for local farmers.

**Why it matters:** Helping students gain a better understanding of farming practices will help ensure the next generation of farmers has the tools it needs to be successful.

#### **Determining how a microbial product affects nitrogen levels in corn**

**Project lead:** Allan Dose, corn farmer, Sibley County

**Project overview:** This research will explore whether application of Pivot Bio PROVEN® 40, a microbial product that converts atmospheric nitrogen into ammonia, increases corn nitrogen levels.

**Why it matters:** Microbial products that increase nitrogen levels could help farmers reduce nitrogen-fertilizer-application rates, saving money and potentially reducing nitrogen losses.

Continued on following page

### Comparing the effects of commercial fertilizer vs beef manure

*Project lead:* Blair Hoseth, farmer, Mahnomen County

*Project overview:* The project will compare corn yields when a commercial fertilizer is applied versus when beef manure is applied.

*Why it matters:* The project could help farmers make improved nutrient-management decisions, boosting their efficiency and profitability.



### Improving soil microbial mineralization using a “Living Carbon” soil amendment

*Project lead:* Gary Prescher, farmer, Faribault County

*Project overview:* This project is studying whether the application of a “Living Carbon” composted manure on corn and soybean fields affects soil-fertility metrics and yield.

*Why it matters:* A better grasp of how “Living Carbon” products affect crop production could help farmers when deciding whether to apply such products.

### \*Evaluating variable-rate sulfur application

*Project lead:* Kirk Stueve, farmer, Traverse County

*Project overview:* This study will evaluate how different rates of sulfur-fertilizer application affect factors such as sulfur availability, organic matter and other related soil properties.

*Why it matters:* Better guidelines for precision sulfur management could help corn farmers ensure they’re making the best possible decisions when using sulfur fertilizers.

### Evaluating a Pivot Bio microbial product in corn production

*Project lead:* Les Anderson, farmer, Goodhue County

*Project overview:* This project will evaluate whether Pivot Bio PROVEN® 40 can replace some of the synthetic nitrogen used in corn production.

*Why it matters:* By replacing synthetic nitrogen with a microbial product, farmers could reduce expenses and, potentially, nitrogen losses.

### Evaluating corn-stover-derived nanocellulose as a fertilizer control-release agent

*Project lead:* Lingling Liu, Iowa State University

*Project overview:* This study will evaluate whether corn-stover-derived nanocellulose is effective as a coating for controlled-release fertilizers.

*Why it matters:* The project could result in a new value-added market for corn farmers.



### Studying the impact of cover crops on cropland

*Project lead:* Mikayla Tabert, farmer, Red Lake County

*Project overview:* This project continues efforts to quantify the impacts on soil health and economic factors when cover crops are integrated into a crop rotation.

*Why it matters:* By quantifying the effects of cover crops on cropland, more farmers could be encouraged to use them.

### \*Developing a field-scale carbon filter for tile drainage

*Project lead:* Nazli Yilmaz Wodzinski, Minnesota State University, Mankato

*Project overview:* This project will aim to design a filter that can parse nutrients out of tile drainage before they drain off the farm.

*Why it matters:* The filter could reduce nutrient losses, improving water quality.

### \*Studying a nitrogen-fixing microbe in corn production

*Project lead:* Paulo Pagliari, University of Minnesota

*Project overview:* This project will evaluate whether the nitrogen-fixing bacteria *Azospirillum brasilense* can positively impact corn production.

*Why it matters:* The project could help Minnesota grain growers minimize reliance on chemical fertilizer inputs.

### Determining how tillage practices, cover crops affect production in clay-loam soil

*Project lead:* Vance Johnson, farmer, Wilkin County

*Project overview:* This project will evaluate how no-till, strip-till and conventional tillage and cover crops affect soil properties and economic returns.

*Why it matters:* Additional data on the effects of these practices could help farmers in areas with clay-loam soil decide whether to adopt them. ▀





# Research Q&A

**A**s leader of the Minnesota Corn Discovery & Development (D&D) Team, Rice farmer Jocelyn Schlichting played an important role in the selection of the research projects Minnesota Corn is funding in 2022. Similarly, as the staff liaison for the D&D Team, Minnesota Corn Research Director Maciej Kazula also played an important role in the project-selection process.



Jocelyn Schlichting

Below is a brief Q&A with Schlichting and Kazula about the 2022 projects.

## What are a few highlights of the 2022 projects?

*Schlichting:* Almost all of the Innovation Grants are focused on nitrogen-use efficiency. I think that's going to be especially relevant to people, with fertilizer prices going up so much.

*Kazula:* In my opinion, all of the new projects that we accepted are very innovative and things that we haven't done much of in the past.

Dan Kaiser's project, for example, is looking at interaction between potassium and nitrogen, which is something we have minimal knowledge of here in Minnesota. Tim Griffis is touching on climate change and nitrous oxide emissions, something that might really impact farming. Lindsay Pease is exploring nutrient stewardship in northwestern Minnesota. That's something we know about in southern parts of Minnesota but less so up North, because it's a different environment.

## What would you want people to know about the project-selection process?

*Schlichting:* When we're reviewing these projects, the question of 'what's the deliverable to the farm?' is always top of mind.

Nobody ever loses sight that this is check-off money from the broader Minnesota corn community, and we take that responsibility really seriously when we're allocating the funds.

Some of the primary research projects that we fund are pretty big picture, and you're maybe not going to feel it as literally on your farm. But the innovation grants, specifically, we really analyze to make sure there is an actionable, deliverable component right on the farm.

We reanalyze these ongoing projects every year, and if somebody's not doing the deliverable component properly, then they fall off our funding list. It's absolutely front of mind for everybody on the D&D Team to make sure that the projects we're supporting are relevant and actionable at the farm.

*Kazula:* Minnesota Corn has a long history of investing in quality research. We spend more than \$2 million annually. It's a very rigorous process, very selective. The projects that we actually fund, they have to, by default, improve the quality of life of farmers and lead to an improved impact on the environment. We have a great established relationship with the University of Minnesota, and we have a very dense research portfolio in 2022. All the projects share the same goals: to increase the livelihoods of corn farmers and lessen the impact on the environment.

## Is there anything else you'd want farmers to know?

*Schlichting:* If somebody has a research idea that they don't think is getting the attention it deserves, or a problem specific to their region, they should submit it to Maciej. If they have an idea for an Innovation Grant and just don't know if it fits in the grant or not, contact us and find out. We'd love more research ideas and more guidance on what's relevant. ■



Maciej Kazula

## MN Corn-supported research to identify oil content

The world doesn't typically see corn as an oil seed, but the embryo of the corn kernel probably contains a variety of oil molecules. Dr. Candice Hirsch at the University of Minnesota wants to find out exactly how much of which types of oils can be found in the various breeding lines used by farmers to raise corn in the Midwest. She has been collecting a great variety of seeds over a period of years, and is perfectly placed to do this kind of quality assessment.

"We have some metrics of total oils that have been measured in various studies," Hirsch said. "These have linked back to the size of the embryo within the kernel."

Oil is one of the lesser constituents of the kernel, by volume, making up 4% to 5% of the seed, on average. But depending on the germ plasm, oil content can range from 1% up to 20%. Food-grade corn oil has been marketable for some time, but this survey of the oil profile of corn is the first step toward developing new uses.



The project will use near-infrared reflectance (NIR) spectroscopy to analyze the types of oil contained in a corn kernel.

"NIR shines a full-spectrum light onto a sample, and then we look at what wavelengths reflect back," Hirsch said. "Some chemical bonds will absorb some light spectra, and some will reflect it back. Then we use those absorbance and reflectance values with wet chemistry, and we can make predictive equations that say, 'If we see that absorbance-reflectance profile again across a range of spectra, we predict the sample will have this particular composition.'"



Dr. Candice Hirsch

Eurofins, a leading food-testing laboratory, will do much of the chemistry work. Learn more about this project at [mncorn.org/research](https://mncorn.org/research). ■

# Chemistry from corn

Minnesota Corn-funded Center for Sustainable Polymers develops next generation of corn-based polymers

Corn feeds, powers and even clothes people. Since 2009, the University of Minnesota-based Center for Sustainable Polymers (CSP) has investigated how chemistry can turn renewable feedstocks, such as corn, into plastic and other useful materials.



Given the potential environmental and economic benefits of corn-derived products, Minnesota Corn has invested in CSP research since 2014. In 2022, Minnesota Corn has allocated over \$480,000 for seven CSP research projects. All are scheduled to run through early 2024.

As Minnesota Corn enters its fourth year of supporting the current slate of CSP research projects, grower-leaders say they're looking forward to seeing the results.

"It's super exciting to get in another space with the Center for Sustainable Polymers. We are finding out the different ways that corn can be used, and each new research project leads to new ideas," Minnesota Corn Research & Promotion Council Chair Brandon Fast said. "It's exciting to see how we as corn farmers can help the environment and, at the same time, help to have a bigger corn grind, which improves the economics of farming."



Marc Hillmyer

## Why corn?

Polymers, which are long chains of identical molecules, are the main components of clothing, food packaging, paper and many other products. Some, such as cotton and wool, are derived from natural sources. Many others, such as plastic and nylon, are synthetic and typically derived from petroleum sources.

Using corn instead of petroleum to make synthetic polymers can remake the lifecycle of plastics in

very beneficial ways. For example, many corn-based polymers can be manufactured to be compostable. Rather than generating vast rafts of plastic bottles that swirl in the currents of the Pacific Ocean, bioplastic can be gathered and delivered to industrial facilities. The facilities compost the bioplastic using heat and pressure under humid, hot conditions, breaking it down into water, carbon dioxide and biomass.

Scientists have come to a consensus that the future health of the planet depends on becoming carbon neutral. For that reason, reducing petroleum use tops the agenda.

"We want renewable carbon, bio-based carbon, and it's up to us to figure out how to convert those molecules in interesting, convenient and efficient ways," said Marc Hillmyer, director of CSP, and the principal investigator of the Minnesota Corn-supported projects.

In 2022, the Minnesota Corn-funded CSP research projects break down into several broad categories: improving existing corn-derived polymers like PLA plastic, developing new corn-derived polymers and laying the groundwork for future renewable polymers. Below is a brief overview of the research projects in each category.

## Improving PLA plastic

Since the beginning, one focus of CSP has been to improve a very useful plastic called polylactic acid, also known as polylactide or PLA. The plastic is produced through a process of fermenting corn sugar. NatureWorks, a company formed by Cargill, has manufactured a corn-based plastic called Ingeo™ PLA for the past two decades.

Three CSP research projects focus on making PLA tougher and more impact resistant, without interfering with its compostability. That makes the plastic useful in a broader array of applications. Films for food packaging and heavy-duty packaging that can protect products like consumer electronics are among the many markets for a tougher PLA.

"PLA is a wonderful polymer," Hillmyer said. "It's got this nice lifecycle; it's from corn, and it's industrially compostable. It comes from the earth and goes back to the earth. That's decidedly different than non-degradable, petroleum-based products like polystyrene."

.....  
"It's exciting to see how we as corn farmers can help the environment and at the same time, help to have a bigger corn grind, which improves the economics of farming."  
.....

Minnesota Corn Research & Promotion Council Chair  
Brandon Fast

## Exploring new corn-derived polymers

Another useful part of the corn kernel is oil. CSP scientists are investigating the use of new catalytic chemistries to convert corn oils into new polymeric products.

CSP is also exploring how the lignin found in the leafy parts and stalks of the corn plant might be used to create a bio-based nylon-like material. Nylon is in a category of polymers known as polyamides, which have a variety of uses in clothing and textile manufacturing. Here, too, a leading question would be whether bio-based polyamides could be made in such a way as to be both useful and biodegradable.

## Laying the groundwork for future renewable polymers

Another molecule of interest to scientists at CSP is called furan. CSP researchers plan on looking into an array of processes to see what new and valuable uses can be found for corn-based furans.

CSP is also working with chemicals known as weak solid acids, and, in particular, zeolites. These chemicals typically have been used to manipulate petroleum-based molecules, which don't have a lot of oxygen in them, according to Hillmyer. Bio-based molecules, on the other hand, contain abundant oxygen atoms.

Solid-acid catalysis is one of the chemistries practiced on an industrial scale in the petroleum-refining industry. Discovering how weak solid acids transform oxygenated bio-based molecules could render very valuable replacements, or new uses entirely, depending on what this basic scientific research reveals.

In addition to discovering new polymers, CSP also focuses on developing the next generation of talented scientists who will join the sustainable materials field and carry it on into the future. With support from Minnesota Corn, CSP offers a summer program called the Green and Sustainable Chemistry High School Teachers Workshop. To date, more than 70 teachers have come to the CSP labs and worked with CSP scientists to gain experiences and obtain course materials and lessons they can offer their students. Thousands of high school students have been introduced to 'green chemistry' this way.

To learn more about the Center for Sustainable Polymers and its research, visit [csp.umn.edu](https://csp.umn.edu). ■



# MN Corn announces 2022 sponsorships

Minnesota Corn is excited to announce that it is sponsoring over 40 events, organizations and educational programs in 2022.

Each year, as part of its mission to engage younger generations, develop future leaders and build connections with the non-farming public, Minnesota Corn offers sponsorships to the agricultural community. The sponsorship request-for-proposals process is overseen by the Grower Services Focus Team, which is comprised of board members from the Minnesota Corn Growers Association (MCGA) and Minnesota Corn Research & Promotion Council (MCR&PC).



Grower-leaders say they're grateful to the many deserving agricultural organizations, educational programs and events that submitted sponsorship proposals for 2022. We look forward to seeing the positive effects the selected programs have on Minnesota youth and the broader community.

Notable initiatives to receive funding this year include:

- Minnesota Agriculture in the Classroom, a public-private partnership that provides free curriculum, educational resources, grants, outreach and professional development opportunities to increase ag literacy through K-12 education
- Minnesota Agriculture & Rural Leadership, a program that helps farmers and rural professionals develop leadership skills through a series of seminars around the state
- Farmamerica, the Waseca-based agricultural interpretive center. The funding will go toward Farmamerica's capital campaign

- A biotechnology workshop that will be held by Nourish the Future, a national agricultural-education initiative
- University of Minnesota's Extension 4-H Agronomy program
- Minnesota FFA Foundation
- "Farm Crawl," an interactive mobile map of the University of Minnesota Landscape Arboretum

To learn more about Minnesota Corn-sponsored programs and organizations, visit [mncorn.org/outreach](https://mncorn.org/outreach).



Nourish the Future workshops are among the initiatives Minnesota Corn is sponsoring in 2022.

## CommonGround kicks off spring events

Spring has sprung, and CommonGround Minnesota's events for the year have begun.

Every March we celebrate women and their contributions to history, culture and society as Women's History Month is recognized nationwide. In honor of the occasion, CommonGround Minnesota celebrated the contributions of women in agriculture and food with a small group of special guests on March 24.

The event, Women's HERstory Month: Celebrating Women in Food + Agriculture, was an intimate dinner for local media, bloggers, and social media influencers hosted at The Lynhall in Minneapolis. The goal was to connect guests with volunteer farmers for conversations about food and agriculture.

With fewer consumers having a connection to the farm, CommonGround Minnesota sees the value and opportunity to build connections and share information about modern agriculture. Volunteers spent the entirety of the event, from happy hour to dinner, starting and continuing

those conversations. Attendees left with a wealth of knowledge and information about a variety of topics. With approximately 30 guests in total, the small setting allowed for many one-on-one conversations, and guests came prepared with questions about food and farming.

"I learned you can check exactly where/which farm your meat comes from while at the grocery, because most have QR codes now," said Falen Bonsett, a morning show host for the Twin Cities-based radio station KDWB. "This was a great event where I learned a lot and met so many amazing people."



At the conclusion of dinner, a question-and-answer panel was led by the farmer volunteers. Katie Brenny, Rachel Gray, and Barb Liebenstein spoke about their lives on the farm, sustainability, and upcoming and current technology in agriculture.

"It was a special evening of conversation," blogger Lisa Baker (@twincitiesfrugalmom) said. "I got to chat directly with women farmers in Minnesota and learn so many interesting things about their work and families. These women farmers were such an inspiration."

After a successful event, CommonGround Minnesota is now preparing for additional events later this spring, including the Women Run the Cities race on May 21.

To learn more about CommonGround Minnesota, visit [commongroundminnesota.com](https://commongroundminnesota.com).



CommonGround Minnesota volunteers (from left to right) Barb Liebenstein, Katie Brenny and Rachel Gray participate in a panel discussion during a March 24 event.

# county highlights.....

**C**ounty corn organizations fuel the grassroots advocacy efforts of the Minnesota Corn Growers Association (MCGA), while helping to promote the importance of corn farming in Minnesota. Throughout the year, county organizations host events that raise awareness of agriculture in their local communities, engage area youth with educational and scholarship opportunities, meet local legislators to discuss issues important to corn farming, and much more.

To shine a light on these initiatives throughout the year, MCGA is highlighting the counties' many successes.

.....

## County corn board members receive planting snacks

With spring planting underway, MCGA's district field managers have been busy providing planting snacks to board members of the state's 52 county corn organizations. MCGA hopes that all Minnesota corn growers have been having a safe planting season!



Martin County farmer Chris Kahler holds up a bag of planting snacks.

.....

## Clay/Wilkin, Rothsay FFA hold call night

The Clay/Wilkin County Corn & Soybean Growers Association recently partnered with Rothsay FFA on a membership call night. Participants reached out to lapsed members and enjoyed food and camaraderie. MCGA and county corn organizations are proud to partner with FFA groups around the state on programs and events throughout the year.



Members of the Clay/Wilkin County Corn & Soybean Growers Association with students from the Rothsay FFA.

## Annual meetings continue into spring

Throughout the spring, many of MCGA's 52 affiliated county organizations continued to hold annual meetings to set priorities and elect leaders for 2022. Thanks to the grower-leaders who are volunteering their time this year to participate in grassroots efforts to ensure the prosperity of Minnesota's corn farmers.



Motivational speaker John Kriesel addresses the Dodge County Corn & Soybean Growers Association's annual meeting.



MCGA Chairman of the Board Tim Waibel is interviewed by Lynn Ketelsen during the Nicollet/Sibley County Corn & Soybean Growers Association annual meeting.



MCGA President Bryan Biegler participates in a role-playing exercise with Roxi Beck during the Murray County Corn & Soybean Growers Association annual meeting.



Officers from the Minnewaska FFA chapter attend the Pope County Corn & Soybean Growers Annual Meeting.



# MCR&PC election results announced

Minnesota's corn farmers have elected a newcomer and two incumbents to the three Minnesota Corn Research & Promotion Council (MCR&PC) seats up for election in 2022.

First-time candidate Jordan Goblish was elected in District 7, which covers southwestern Minnesota. Goblish farms corn and soybeans in Vesta in Redwood County. "I'm very excited to join the Minnesota Corn Research & Promotion Council and look forward to working on behalf of the state's corn farmers," he said.

Meanwhile, Chad Willis was re-elected to represent Districts 3, 5 and 6, which include most of central Minnesota, and Gary Prescher was re-elected in District 8, which covers south-central Minnesota. Willis, an MCR&PC member since 2007, farms near

Willmar with his wife, Krista. In 2021-22, he has been serving as chairman of the U.S. Grains Council. Prescher, who farms in Delavan, has been serving as MCR&PC treasurer in 2021-22. He said he appreciates the opportunity to serve as a representative of the corn growers in south-central Minnesota. He also thanks the Minnesota Corn staff, fellow board members and everyone who has supported him in his journey with the council.

The 11-member MCR&PC manages the Minnesota corn check-off. Each year, the council invests check-off funds in efforts to promote opportunities for corn farmers while building connections with the non-farming public.

To learn more, visit [mncorn.org](https://mncorn.org).

## MN Corn website updated

To ensure that corn farmers and all Minnesotans have the most current information on Minnesota Corn's research, promotion and outreach initiatives, our website, [mncorn.org](https://mncorn.org), has been updated.

This spring, Minnesota Corn's outreach webpage ([mncorn.org/outreach](https://mncorn.org/outreach)) and research webpage ([mncorn.org/research](https://mncorn.org/research)) were updated to reflect the latest investments by the state's corn farmers.

The newly updated outreach page highlights our education and leadership investments, consumer outreach efforts and ways growers can stay connected. The research page includes details on all of Minnesota Corn's 2022-23 research investments.

Meanwhile, a new 'utilization' page ([mncorn.org/utilization](https://mncorn.org/utilization)) was added to highlight the many ways Minnesota's corn farmers are helping to grow markets for their crop. This utilization page spotlights efforts to grow demand for ethanol-blended fuels, boost corn exports and create new uses for corn.

In addition to updating the website, Minnesota Corn has continued to produce a biweekly podcast highlighting our many corn check-off investments. The podcast can be accessed at [info.mncorn.org/podcast](https://info.mncorn.org/podcast).



Minnesota Corn also keeps corn farmers and all Minnesotans up to date on the latest agriculture news on its blog ([mncorn.org/blog](https://mncorn.org/blog)) and through its weekly 'Leader Update' e-newsletter. Visit [mncorn.org/LeaderUpdate](https://mncorn.org/LeaderUpdate) to sign up. In addition, the Minnesota Corn Twitter (@mncorn), Facebook (@MinnesotaCorn) and Instagram (@MinnesotaCorn) accounts provide updates on the latest MCGA events and programs.

thanks to our allied partners



## MCGA Board Members

### President

Bryan Biegler of Lake Wilson  
507-920-8186

### First Vice President

Richard Syverson of Clontarf  
320-760-6719

### Treasurer

Dana Allen-Tully of Eyota  
507-951-5597

### Secretary

Jim Kanten of Milan  
320-297-0375

### Past President/ Chairman of the Board

Tim Waibel of Courtland  
507-359-1219

Wesley Beck of St. James  
507-630-1471

Angela Guentzel of Kasota  
507-317-4372

Tom Haag of Eden Valley\*  
320-453-7760

Paul Henning of Okabena  
507-370-1688

Blair Hoseth of Mahanomen  
701-261-3574

Brad Neumann of Wabasso  
507-822-6951

Jocelyn Schlichting of Rice  
320-333-4291

John Swanson of Mentor  
612-419-9235

Rob Tate of Cannon Falls  
507-218-0308

Brian Thalmann of Plato\*  
320-238-2481

David (D.J.) Vanklombenburg of Montevideo  
320-212-2748

Todd Wentzel of Murdock  
320-760-1347

Harold Wolle Jr. of Madelia\*  
507-236-2181

\*NCGA Board member

## MCR&PC Board Members Chair

Brandon Fast of Mountain Lake  
507-220-8275

### Vice Chair

Doug Albin of Clarkfield  
320-383-2338

### Treasurer

Gary Prescher of Delavan  
507-525-7671

### Secretary

Duane Epland of Twin Lakes  
641-590-0928

George Goblish of Vesta  
507-762-3449

John Mages of Belgrade  
320-248-1908

Rodney Moe of Waltham  
952-237-9808

James O'Connor of Blooming Prairie  
507-456-5330

David Vipond of Mahanomen  
218-556-9780

Chad Willis of Willmar  
320-235-4452

Scott Winslow of Fountain  
507-951-0363

Ex-Officio Thom Petersen  
Minnesota Dept. of Ag  
651-201-6219

may 2022

NON-PROFIT  
ORGANIZATION  
U.S. POSTAGE  
**PAID**  
TWIN CITIES, MN  
PERMIT #93723

  
cornstalk

## calendar of events

may  
**30** MCGA offices closed for  
Memorial Day

june  
**22** MCGA/MCR&PC Joint Board Meeting,  
Burnsville

july  
**4-5** MCGA offices closed for  
4th of July

august  
**2-4** Farmfest,  
Redwood Falls, MN