



Ag Innovation News

TODAY'S INSIGHTS • OPPORTUNITIES • IDEAS

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EXECUTIVE DIRECTOR'S COLUMN

“We have unparalleled agricultural champions, a deep bench of collaborators and visionaries, and the know-how to both set and execute our strategic direction.”

Another growing season will soon be in the rearview mirror. Undoubtedly, this season brought challenges, but each season also brings learnings that can be applied to 2027 and beyond. Taking time to reflect and look ahead can be difficult amid the fall season's rush, but it is also a critical step in re-evaluating an organization's strategic direction.

At AURI, we successfully executed upon our strategic priorities over the past year, began exploring new ones, advanced our bread-and-butter programs, and continued investing in forward-looking opportunities that we believe will benefit Minnesota agriculture.

Our last 3-year strategic plan wrapped up on June 30 and set a strong base for future opportunities. The plan established a focus on our people and culture; set priorities based on our execution strengths and expected growth rates across value-added agriculture sectors; improved measurement of our impacts across programs; created multiple new brand advancements; strengthened engagement with several new entities; and enabled key organizational changes to increase future performance. As I write this, we are finalizing the strategic priorities that will guide us through 2030 and position us to deliver even greater value to Minnesota agriculture in the years ahead.

Over the past year, we've continued our collaboration with soybean growers. Together, we've explored new uses for soybean meal and oil, such as biobased fertilizer applications and asphalt rejuvenates, through both product development and increased market awareness of existing commercial products. Our food scientists continue to support many food businesses across the state in getting products into retail or food service channels, such as school lunch programs. These efforts help transform the crops we raise locally into ingredients for consumable goods. Our work in the biogas and anaerobic digestion area continues to see new on-the-ground developments. We continue to find ways to use agricultural waste streams and valorize them into various products, such as biogas, a renewable energy product, and digestate for fertilizer or livestock bedding applications.

We've partnered with the MBOLD coalition to develop feed ingredient markets for winter camelina meal and industrial hemp seed meal. Both crops show promise for traditional protein markets, renewable energy applications, and, in the case of industrial hemp, fiber products. These market opportunities, combined with environmental benefits, make a strong case for continuing applied research to demonstrate how winter camelina and industrial hemp can complement Minnesota's agricultural production.

I am excited about the future of innovation for Minnesota agriculture and expanding upon our past successes. There will be obstacles along the way. But we have unparalleled agricultural champions, a deep bench of collaborators and visionaries, and the know-how to both set and execute our strategic direction to 'change the field' today and in the years ahead for the benefit of Minnesota agriculture.



Shannon M. Schlecht
Executive Director



Board Spotlight

BRIAN HANSEN

This issue of *Ag Innovation News* highlights AURI's first-term Board Director Brian Hansen. Brian is General Manager of the Food Innovation business at Scoular, where he leads strategy and growth for the company's food ingredients business. Brian oversees teams responsible for developing and commercializing new ingredient solutions, maintaining close alignment with customer needs, market trends, and the practical realities of scaling innovation in the food industry.

Why did you want to join AURI's board of directors?

What interested me about AURI is the connection between agriculture, innovation, and actually getting ideas into the market. I have spent much of my career working in that space. There are a lot of good ideas and technologies out there, but the real challenge is figuring out how to turn those ideas into something customers want, and that can be commercially successful. I felt my experience in food ingredients and commercialization could bring a useful perspective to the board.

What do you think is the biggest challenge facing farmers today?

I think one of the biggest challenges is the volatility and the uncertainty farmers have to manage. Commodity prices, input costs, weather, trade, and consumer expectations can all change quickly. I think we also need to continue finding ways to create more value from what farmers produce. The more opportunities we can create beyond simply selling a commodity, the stronger agriculture can be in the long term.

How can Minnesota best support its agricultural industry?

Minnesota already has a lot going for it. We have strong agricultural production, great universities and research organizations, innovative companies, and a strong food industry. I think the opportunity is to keep bringing those pieces together. We need to support research, but we also need to help move good ideas out of research and into the market. That is where organizations like AURI can have a real impact.

What role can private companies like Scoular play in supporting AURI's mission?

Companies like Scoular can help bring a market perspective to innovation. We spend a lot of time with customers, suppliers, and food companies, so

we have a good understanding of what customers are looking for and where opportunities may exist for new ingredients or technologies. Private companies can also assist with supply chain, technical expertise, and commercialization, ultimately helping an idea get into the hands of a customer.

What are your goals as a new board member?

My first goal is to learn. There is a lot of experience on the AURI board and within the organization, and I want to understand where I can be most helpful. Over time, I hope to bring a strong commercial perspective to the board, especially in understanding markets, identifying where there is real customer demand, and helping good ideas move from concept to commercialization.

Which ag-related issues are most important to you?

Value-added agriculture and food innovation are probably the areas I am most passionate about. I am interested in how we can create new uses and markets for agricultural products and increase value throughout the supply chain. If we can develop something that is good for the farmer, solves a problem for a customer, and creates a sustainable business opportunity, that is where I think innovation becomes really meaningful.

What is something people would be surprised to learn about you?

Music is a big part of my life outside of work. I sing, play acoustic guitar, and perform live when I have the opportunity. I also really enjoy being outdoors, especially fishing and hunting with my German shorthaired pointers.



CREATING A REGIONAL HUB FOR ANAEROBIC DIGESTION IN THE UPPER MIDWEST

Photo: Swinergy's first commercial facility

Minnesota has the agricultural resources, energy demand, and technical expertise to become a national leader in anaerobic digestion. The Agricultural Utilization Research Institute (AURI) is helping build the connections and capabilities needed to turn that potential into a growing industry.

The United States is making significant progress in capturing biogas from agricultural operations, but much of the opportunity remains untapped.

According to the American Biogas Council's 2026 annual report, U.S. agricultural operations are producing 166 percent more biogas than they were five years ago. Yet the organization estimates that the country has the potential to support more than 11,200 on-farm biogas facilities, including as many as 1,405 in Minnesota alone. This estimate does not include possibilities for agriculture-adjacent biogas plants at food, biofuel, wastewater treatment, and other facilities that handle or produce organic waste.

Today, Minnesota has 49 facilities that produce and capture biogas, including 26 water resource recovery facilities, 4 landfills, 17 on-farm facilities, and 2 food waste systems.

For AURI, that gap represents both an opportunity and a challenge: How can Minnesota translate its abundant biomass feedstocks into renewable energy and recover the plant nutrients locked in the waste, while creating economic value for farmers, businesses, and communities?

For the last five years, AURI has worked to help answer that question through applied research, business development, technical advising, partnerships, and knowledge sharing. In 2026, that work expanded through new industry partnerships, investments in research capabilities, and links with biogas leaders both nationally and internationally.

Together, those efforts are helping establish what AURI Business Development Director of Biomass Feedstock Brad Matuska describes as a potential regional hub for anaerobic digestion in the Upper Midwest.

FROM SWINE MANURE TO RENEWABLE NATURAL GAS

One of the clearest examples of this work is AURI's partnership with Swinergy, a Minneapolis-based clean technology startup founded in 2022. The company converts swine manure into renewable natural gas (RNG) and sustainable fertilizer.

In August 2026, Swinergy hosted a ribbon-cutting event for its first project at a farm near Ellendale, Minnesota. The project represents the first commercial application in the Upper Midwest of the company's patented technology to produce RNG from manure collected from a swine pit-barn operation. Swinergy already has more than a dozen farms interested in deploying the technology. That technology not only facilitates biogas production but also impacts how manure is managed, resulting in a more sustainable operation.

“On many larger swine farms, manure is stored in deep pits beneath the barns and may only be removed once or twice a year,” Matuska explains. “As the manure sits, biological decomposition occurs, and methane is released before it can be captured and used. Swinergy developed a system that allows producers to remove manure more frequently, recover more of that methane through anaerobic digestion, and then store the resulting digestate until it is land-applied as fertilizer. It requires a change in how manure is handled on swine farms. But now that the model is being demonstrated, learnings can be adapted to different farm configurations and regions across the state.”

Swinergy’s first commercial project is the result of years of technical development, which included collaboration with AURI. As a young company with only a handful of employees, Swinergy initially lacked access to the sophisticated laboratory equipment needed to determine feedstock properties and validate its applications.

That is where AURI became an important partner.

“We needed someone we could send feedstock samples to characterize for us and help develop the process,” said Swinergy founder and CEO Eugene Alvey. “That is where AURI stepped in. We could use that output to validate how we performed. It was an invaluable resource to know that lab results from AURI for this specific need to advance this foundational aspect of the business were available without having to build out our capabilities at a cost of tens of thousands of dollars.”

The relationship illustrates one way AURI can help emerging technologies move from the laboratory to commercial use: by providing access to technical resources that might otherwise be out of reach for an early-stage company.

The country has the potential to support more than 11,200 on-farm biogas facilities, including as many as 1,405 in Minnesota alone.

.....

—AMERICAN BIOGAS COUNCIL

Swinergy’s technology also demonstrates that anaerobic digestion can process more than one type of feedstock. Although its first commercial use focuses on swine manure, the process can also be adapted for other organic materials, including food and industrial waste.

Alvey points to ethanol production as one potential application. Ethanol plants could use the same method to convert low-value side streams of the corn-ethanol process into biogas. The biogas could be used to meet the ethanol plant’s energy demand, lowering the ethanol’s carbon intensity. In turn, ethanol could become more valuable in critical emerging markets such as sustainable aviation fuel (SAF) and marine transportation.

**BUILDING CONNECTIONS
ACROSS THE AGRICULTURAL
ECONOMY**

AURI’s role with Swinergy has extended beyond technical assistance.

As the relationship developed, AURI’s network and reputation as a trusted resource helped the company establish ties with agricultural organizations, potential customers, and other partners. In 2025, AURI also featured Swinergy at its booth at Farmfest, giving the startup an opportunity to reach an audience it would have been difficult to reach on its own.

“We were there for two days, and in that time, we had the Governor of Minnesota, both U.S. Senators, and two U.S. Congressmen stop by and see our model to learn more about us,” Alvey notes.

For a small company working to commercialize new technology, those interactions and access to market resources are as important as technical resources.

“Now, as we are looking into new models, there is so much overlap with AURI,” Alvey says. “AURI can play a very effective matchmaking role and bring someone’s problem together with someone’s solution. As a small, Minnesota-based startup working to increase the utilization of ag products to further develop renewable energy from biogas, we really hit the trifecta.”

Matuska sees the Swinergy project as an example of what can happen when technical innovation is paired with business development and industry support.

“This is an amazing success story,” Matuska reflects, noting that the project required solutions to significant financial, logistical, and technical challenges. “The success of this project will serve as an example to farmers and entrepreneurs of what is possible to achieve through anaerobic digestion. The project also demonstrates the financial and community benefits to these partnerships.”

**LEARNING FROM A GLOBAL
BIOGAS LEADER**

While Minnesota is developing its own biogas industry, AURI is also looking beyond the state—and beyond the United States—for lessons that could help accelerate that growth.

In March 2026, Jimmy Gosse, AURI’s senior scientist of biobased & renewable energy, participated in a “Biogas Fact-Finding Trip to Denmark” sponsored by Denmark’s Ministry of Foreign Affairs.

The North American delegation toured biogas facilities, exchanged technical knowledge, and met with scientists and industry peers. The trip provided an opportunity to examine how Denmark has integrated agriculture, business, government, climate policy, energy, utilities, and research into a coordinated biogas ecosystem.

The Danish Energy Agency reported that in 2023, the share of RNG in Denmark’s gas system reached nearly 40%. Denmark is expected to be at 100% renewable electricity by 2030 and 100% renewable energy by 2050, providing a useful example for countries and regions looking to expand renewable gas production.

Gosse said Denmark has developed an ecosystem that rewards innovation while aligning stakeholders around shared goals. The experience will help strengthen collaboration between entities in the United States and Denmark working in the biogas sector.

The trip was led by Jeppe Juul Petersen, special attaché, food & ag, at the Consulate General of Denmark, and Thomas Sand Nielsen, associate commercial advisor, at the Consulate General of Denmark. Nielsen attended AURI’s Minnesota Renewable Energy Roundtable in 2025 and left the event excited about developments in Minnesota. He has continued his relationship with AURI following the event.

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“Our two hosts were exceptional,” Gosse underscores. “Their attention to detail and ability to move us through complex tours and points of interest with a packed schedule was amazing.”

A highlight was a tour of the Måbjerg Biogas facility in West Jutland, one of the world’s largest large-scale biogas and bioenergy plants. The delegation learned about the facility’s history, evolution, and expansion plans, as well as how the surrounding community approaches climate and energy issues.

The connections made through the trip have already generated opportunities for collaboration. The lessons from the fact-finding mission, which was attended, among others, by representatives of Iowa Soy and the Pennsylvania State University (Penn State), led to AURI’s participation in an Iowa Agriculture Water Alliance meeting and to an invitation to present the findings of AURI’s publication, *The Biogas Opportunity for Minnesota Farmers: A Business Guide for On-farm Anaerobic Digestion*, at a national conference at Penn State. The relationships illustrate the value of bringing together people and organizations working on similar challenges across different regions.

INVESTING IN BETTER SCIENCE AND BETTER DECISIONS

AURI is also expanding the scientific infrastructure needed to support the industry.

“We are right in the middle of a perfect convergence. We have the feedstock here, and we have the market created by the demand for biogas in RNG and electricity.”

— BRAD MATUSKA

AURI’s Business Development Director of Biomass Feedstock



Photo: Swinergy’s first commercial facility

In May 2026, AURI and the Swedish company BPC Instruments announced a strategic partnership to improve the quality, comparability, and decision relevance of anaerobic digestion experimentation in the United States.

BPC Instruments is a global provider of analytical instruments used in biogas, biodegradability, animal nutrition, and wastewater studies. BPC and AURI will collaborate on applied research and professional services, education and workforce capacity building, and training on BPC instruments.

The work will take place at AURI’s Bioindustrial Innovation Center in Waseca, Minnesota, with an emphasis on rigorous anaerobic digestion testing methodologies and sound interpretation of results.

That capability is increasingly important as developers, farmers, and investors consider new feedstocks and new business models. Reliable data can help determine whether a potential project is technically feasible, how a feedstock performs under different conditions, and where a project’s economic opportunities and limitations may lie.

AURI also expanded its anaerobic digestion capabilities at its Waseca facility in 2026. The organization operates an anaerobic digester that clients can use to evaluate different feedstocks, and recent upgrades will enable more sophisticated testing, including custom tests using new approaches and strategies.

Most agricultural biogas production today occurs on dairy farms. The expanded capabilities at AURI’s Waseca facility create additional opportunities to better evaluate swine and poultry manure, as well as food waste and other feedstocks like crop residuals and others.

That diversity matters if Minnesota is going to move from a relatively small number of biogas facilities toward the much larger potential identified by the American Biogas Council. Exploring co-digestion of a mix of feedstocks could be the unlock for more farmers to participate in this value-added area.

CREATING AN ECOSYSTEM FOR GROWTH

The opportunity for anaerobic digestion in Minnesota is ultimately about more than individual digesters or technologies.

It involves farmers with feedstocks and waste streams, technology developers, researchers, utilities, energy markets, policymakers, investors, and communities. It also requires reliable scientific data, sound business models, and mechanisms to connect people with problems to those with solutions.

Minnesota has many of the pieces already in place.

“We are right in the middle of a perfect convergence,” Matuska explains. “We have the feedstock here, and we have the market created by the demand for biogas in RNG and electricity. We could see a significant number of new facilities come online in the near future. Our role at AURI to continue this expansion is critical,” Matuska says.

AURI will provide technical expertise, data, and economic and business analysis while leveraging its network to bridge stakeholders across the agricultural and energy sectors.

The challenge is to link all the pieces in a way that allows the industry to grow responsibly.



WINTER CAMELINA: TAKING A CUE FROM CANOLA

MBOLD, an initiative of the GREATER MSP Partnership, recently released two reports as part of its Protein Catalyst initiative: one on **canola** and the other on **winter camelina**. These reports are the latest in a series of publications aimed at identifying emerging and alternative crops that can be scaled for use in animal feed and sustainably meet future protein demand. A report on industrial hemp meal was also recently released and will be highlighted in a future *Ag Innovation News*.

By 2050, the demand for protein is projected to increase by 50%. Thanks to MBOLD and many collaborating organizations, Minnesota is well-positioned to capitalize on the expected growth.

“The MBOLD coalition brings together well-known and successful food and agriculture companies we have here in Minnesota and leverages that expertise and market know-how to start addressing the challenges facing food and agriculture globally,” says B.J. Haun, MBOLD’s director of agricultural resiliency.

Canola is an established crop that provides a constructive framework for emerging oilseed crops to scale acreage and market acceptance. Winter camelina, a new oilseed that has similarities to canola, has attracted strong interest from value chain partners seeking to expand production and market opportunities.

The crops highlighted in these reports provide growers with greater diversity not only in terms of planting options but also in the products they can sell. When oilseeds like canola and winter camelina undergo the crushing process, both oil and protein meal are produced.

“The animal feed market is a great outlet for the protein meal because it yields a high value return for that product,” explains Alexandra Ostlund, business

development director of novel supply chains at the Agricultural Utilization Research Institute (AURI).

AURI is a member of the MBOLD coalition and plays a leading role in conducting and managing research on new animal feed ingredients of interest to the coalition.

In effect, the latest Protein Catalyst publications complement each other. The canola case study illustrates a recent success story, while the winter camelina report explores the potential and challenges that lie ahead to scale a new feed ingredient.

THE ROADMAP: CANOLA

During the second half of the 20th century, a group of Canadian researchers was determined to develop a rapeseed cultivar for producing edible oil and meal for animal feed. Back then, rapeseed oil was primarily used as an industrial lubricant; its high erucic acid content made it unsafe for human consumption, and its glucosinolate levels made the meal problematic for livestock consumption.

Over decades, scientists labored to develop new varieties with lower levels of both. Eventually, they succeeded. The Rapeseed Association of Canada registered the canola trademark in 1978, distinguishing these new varieties and removing the two major roadblocks in its path to greater marketability.

Market acceptance, however, was farther down the road. To get there, the Rapeseed Association of Canada created a multidisciplinary research committee focused on gaining market access, funded through a voluntary levy paid by rapeseed crushers and exporters, supplemented by federal government support. Additionally, the industry banded together to form the Canola Council of Canada, an association

that included members from across the supply chain who provided additional funding. This coalition aligned stakeholder interests and research priorities to ensure that the latter remained focused on market development.

Moreover, the effort included engagement with animal nutritionists at universities to conduct feeding trials, publish peer-reviewed studies, participate in symposia, and undertake extension activities to provide the feed industry with trusted information on the benefits of canola meal.

Through these combined efforts, a product that was once of limited commercial interest is now second only to soybean meal as the world’s most widely consumed oilseed meal in animal feed.

THE JOURNEY BEGINS: WINTER CAMELINA

Winter camelina caught the interest of the Protein Catalyst initiative for several reasons. First, the winter camelina plant is hardy enough to withstand the harsh conditions of Minnesota’s winter season. Second, because it is planted in the off-season, it provides the benefits of a cover crop, such as maintaining soil nutrients and preventing soil erosion and nitrate leaching. And thirdly, it offers farmers the opportunity to harvest an additional cash crop.

“Efforts are focused on illustrating how winter camelina can be a complement versus a competitor to the traditional corn-soy rotation common in the Midwest,” says Ostlund.

University of Minnesota research has shown that a dual-cropping system, such as double- or relay-cropping winter camelina with soybeans, can increase

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MARITIME BIOFUELS

The Next Big Thing for Agriculture



The emerging maritime biofuel market is the “biggest, ready-now” opportunity for U.S. farmers, according to Sanchit Mulmuley, Head of Renewable Natural Gas (RNG) for Roeslein Renewables.

The maritime sector could become the first global transportation industry to be subject to a regulatory framework that combines mandatory limits on greenhouse gas (GHG) intensity with sector-wide emissions pricing. MARPOL, the International Convention for the Prevention of Pollution from Ships, focuses on air pollution and GHG emissions from ships. Specifically, Annex VI of MARPOL addresses air pollution from ocean-going ships. In December 2026, pending confirmation, parties to MARPOL Annex VI are expected to reconsider adoption of the International Maritime Organization (IMO) Net-Zero Framework. The framework would progressively tighten the allowable lifecycle GHG intensity for marine fuels and require ships that exceed those limits to acquire compliance units, including through payments into an IMO Net-Zero Fund.

The Agricultural Utilization Research Institute (AURI) hosted a webinar last June, moderated by Brad Matuska, AURI's business development director of biomass feedstocks, that examined the promise of this emerging opportunity.

“To put things in perspective,” Matuska remarked, “maritime shipping uses an estimated 87 billion gallons of fuel per year.” This total is similar to the global aviation industry volume.

DRIVING AGRICULTURE'S FUTURE

The webinar (now posted on AURI's YouTube channel and titled “Why Minnesota's Agricultural Industry Has a Stake in Maritime Decarbonization Through Renewable Fuels”) addressed why the state's agriculture sector should care about maritime shipping and why it is uniquely positioned to lead as a biofuels supplier.

Matuska explained that not only is the maritime shipping sector already using some Minnesota-produced biofuels, but it also moves those grains and other agricultural goods around the world via the Great Lakes and the Mississippi River.

“With its strong biofuel production capacity, feedstock capability, abundant biomass resources, existing infrastructure, and direct access to major waterways, Minnesota can link inland fuel production to export demand from international buyers. For this reason, Minnesota is uniquely positioned to lead,” he said.

The webinar focused on three different types of biofuels: ethanol, biodiesel, and biogas.

Brian Werner, executive director of the Minnesota Bio-Fuels Association, kicked off the panel discussion by highlighting the potential benefits of maritime decarbonization for ethanol producers. In the U.S., ethanol production has been trending upward due to depressed corn prices and

higher fuel costs. The challenge, he said, is finding a market for the increased volume. In this respect, the maritime biofuel market represents the biggest opportunity. The shipping industry is starting to adopt ethanol, and demand for the biofuel is expected to reach 6.4 billion gallons by 2030.

“In 2025, the U.S. produced about 16.5 billion gallons of ethanol. If we capture even 5% of the 87-billion-gallon global maritime market, ethanol demand would increase by 4.3 billion gallons, representing about a quarter of total U.S. ethanol production. That would equate to 1.5 billion bushels of corn,” Werner observed.

An S&P Global report warns that, as yields continue to improve, corn production is currently outpacing demand. Left unaddressed, this imbalance could result in a significant reduction in cultivated land and/or continued declines in crop prices, exposing both producers and consumers to market volatility and reduced margins. Increased biofuel demand, the report concludes, could serve as a catalyst for transforming U.S. agriculture, reviving rural economies, and providing global food and energy security.

sector’s initial demand for low-emissions fuels, creating a significant new market opportunity for agricultural residues, manure-based biogas, and other feedstocks.

Matt Herman, chief officer, demand and advocacy for the Iowa Soybean Association, rounded out the panel. Speaking specifically about biodiesel, he noted that because these fuels can be blended with traditional fuels, the need for supply chain investment is relatively small. Regarding feedstock, he explained that the maritime sector could use certain energy-dense oilseeds that may be problematic for the transportation supply chain, thereby diversifying the crop options available to farmers.

On policy, he emphasized two priorities: the importance of obtaining Renewable Identification Numbers (RINs) for biofuels to make them eligible to participate in this market, and the need to closely monitor how carbon intensity scores will be determined.

“There are going to be growing pains,” he acknowledged. “We are going to have to work through them in a coordinated fashion.”

by Minnesota farmers can be utilized,” notes Matuska. “The use of biofuels in the international maritime space is a significant market opportunity. If properly developed, it could be a benefit to agricultural producers across Minnesota, the Upper Midwest, and the country.”

Stay tuned for the details of the 2026 Roundtable on AURI’s “Events” website page.



“If we capture even 5% of the 87-billion-gallon global maritime market, ethanol demand would increase by 4.3 billion gallons, representing about a quarter of total U.S. ethanol production. That would equate to **1.5 billion bushels of corn.**”

— BRIAN WERNER, *Executive Director of the Minnesota Bio-Fuels Association*

In closing, Werner added that increased ethanol production would not only help meet biofuel demand but also increase the volume of coproducts that result from the ethanol production process. Coproducts such as protein, fiber, and corn oil could be reintegrated into the food and feed systems.

Mulmuley of Roeslein Renewables next explained how increased foreign competition at competitive prices has cost the U.S. a significant share of the global commodities trade, making it vital for U.S. agriculture to find new markets.

Considering that maritime biofuel demand could account for 30% of all global liquid renewables demand in the next 5-7 years, “this could be a \$10-15 billion market for U.S. agriculture,” Mulmuley said. While multiple fuel pathways are being explored, recent studies indicate that bio-liquefied natural gas (bio-LNG) made from biogas may offer one of the most practical near-term solutions for maritime decarbonization. Global biomethane production could potentially meet a substantial portion of the shipping

MOVING FORWARD

To Herman’s final point, AURI is dedicating its next Minnesota Renewable Energy Roundtable to further exploring the opportunity represented by the decarbonization of the maritime shipping sector. This annual event brings together more than 200 researchers and educators, business and industry leaders, and government and NGO representatives.

The 2026 Roundtable, to be held this December 16 in Minneapolis, will move beyond raising awareness to identifying practical, infrastructure-grounded avenues to participation in the emerging maritime biofuel markets. The featured panel discussions will examine how different biofuels, including ethanol, biodiesel, and bio-LNG, can be used and transported, and identify the challenges to advance this market opportunity, including logistical chokepoints and bottlenecks that require attention.

“We have to start talking about specific pathways of how biofuels produced



CAROLYN OLSON

Reflects on Service to AURI Board of Directors

Carolyn Olson's nine years of service on the Agricultural Utilization Research Institute's (AURI) Board of Directors will end in January 2027. Representing the Minnesota Farm Bureau Federation, Olson has brought decades of farming experience, agricultural leadership, and a strong interest in innovation to the board.

Olson has been farming for nearly 38 years, beginning when she married her husband, Jonathan, and joined him on the farm. Though she grew up in the Twin Cities metro area, agriculture was already familiar to her through summers spent on her grandparents' farm and time with cousins who farmed.

"I have worked on the farm since we got home from our honeymoon and have loved it," Olson notes. "I love the lifestyle, but also just love what we do."

Olson and her husband farmed conventionally for their first decade before exploring organic production in the 1990s. In 1998, they began transitioning their first field to organic production. Today, their operation includes approximately 1,100 acres of certified organic cropland, where they grow corn, soybeans, wheat, and other small grains, as well as occasional alfalfa. They also raise seed, continuing a tradition in her husband's family that dates back to the 1930s.

Her leadership journey began through the Minnesota Farm Bureau Federation. Olson has served in positions ranging from county board director and president to district director representing 12 counties in southwest Minnesota and, most recently, vice president of the organization. Through Farm Bureau, she was eventually encouraged to represent the organization on AURI's board.

The opportunity immediately appealed to her. "Out of the box thinking, small organization, but with big potential,"

Olson explains of what attracted her to AURI. She was especially interested in the wide variety of projects the organization supports, from food products to biobased innovations.

Some of Olson's favorite memories have come from seeing and experiencing those projects firsthand. She particularly remembers trying Amazing Chickpea® chocolate spread, which she appreciated as an alternative to Nutella® for people who cannot eat hazelnuts. Another lasting impression came when she received a small bag of Kernza® flour to test at home. An avid baker, Olson made two batches of vanilla bean scones, one using wheat flour and another incorporating Kernza flour, and brought them to a Minnesota Farm Bureau board meeting for a taste test. "They loved the opportunity to participate in the testing," Olson says.

During her time on the board, Olson witnessed AURI become a more collaborative organization. She recalls a time when different areas of expertise operated more independently; strategic planning has helped bring staff and programs together.

"Now everybody works together, and the workflow, to me, is much better, and it makes a lot more sense," Olson observes. "I think we're really opening ourselves up for a lot of good innovation from a good, well-rounded staff, because everybody is collaborating."

Olson has also watched AURI diversify its funding through grants and partnerships and improve the onboarding process for new board members. As secretary-treasurer, she has paid particular attention to AURI's finances, governance, and long-term strength.

When asked what she is most proud of personally, Olson hopes she has helped strengthen board culture, encouraged governance training, and fostered an environment where members can contribute openly.

As AURI looks toward future board members, Olson believes a strong board depends on having people with different personalities, backgrounds, and experiences. She acknowledges that farmers can sometimes feel intimidated by the professional and educational qualifications of others around the table, but believes those credentials are not what ultimately determine whether someone will be a strong contributor. Instead, she looks for someone willing to work with others, speak up, build trust, and openly share the knowledge and experiences they bring to the board. "It takes all kinds of personalities, and it takes all kinds of backgrounds to make a successful board," Olson notes.

As her term comes to an end, Olson hopes AURI continues receiving the support needed to pursue new opportunities while remaining focused on Minnesota agriculture. She wants the organization to keep thinking outside the box, supporting farmers and finding new uses and markets for Minnesota agricultural commodities.

She is also proud of AURI's growing visibility. "We've gone from being the best-kept secret in Minnesota to being a lot more visible," Olson says. "And it's something that I'm proud of — to have been on the board when that has happened."

AURI Executive Director Shannon Schlecht reflects: "As a board director, Carolyn has been committed to AURI's mission from day one. She has regularly represented us at events, spoken on panels to share a farmer or innovation perspective, informed strategic direction, and raised awareness of AURI's role in Minnesota's agriculture industry and across her network. I'm constantly amazed by the number of hats she wears and the leadership roles she actively and enthusiastically commits to. She brings insights and a connective mindset, weaving together various touchpoints to further the organizations she engages with and to support Minnesota agriculture. Carolyn consistently shared diverse, practical perspectives and kept AURI's mission and Minnesota agriculture in mind when contributing to our programs, ultimately ensuring their impact. Thank you, Carolyn, for nine years of dedicated service and leadership to AURI and for advancing innovative, impactful opportunities that benefit Minnesota agriculture!"

CHEERS TO LOON LIQUORS

One January evening in 2011, Mark Schiller raised a glass of a homemade White Russian to his lips and tasted opportunity. The cocktail, and the coffee liqueur in it, were the creation of his Northfield High School friend, Simeon Rossi.

Recognizing Rossi's talent for mixology, Schiller proposed they go into business together. That same year, they quit their day jobs and established southern Minnesota's first legal distillery in a hundred years.

Today, Loon Liquors has more than 20 employees and is eyeing Midwest and national distribution in the next year.

HERE'S TO ORGANIC SPIRITS

From day one, the distillery remained true to its mission: crafting spirits using locally sourced organic ingredients in a sustainable, environmentally friendly way. The use of organic ingredients not only aligns with the company's commitment to sustainability but also delivers a more flavorful product, Schiller notes.

"When a crop is grown organically, it grows in a tougher environment," Schiller explains. "It is under greater stress, and that produces a more intense flavor."

Loon Liquors brand spirits include whiskey, gin, liqueurs, aquavit, rum, and vodka. More recently, the distillery began selling bottled cocktail blends, including Old Fashioneds and Cosmopolitans.

Before this latest line of products could be launched, however, Schiller and Rossi had a problem: the color of their cocktail blends faded the longer the bottles stayed on the shelf. AURI helped resolve this issue by identifying natural ingredients that stabilized the color of the blends.

As the company's distribution expanded, the distillery needed to increase its production volume. To that end, Loon Liquors relocated its distillery and cocktail room. Today, in addition to drinks, they also serve organic pizza. And just as its spirits are made onsite, so too is the organic flour used for the pizza dough. In fact, from the cocktail room, both the still and flour mill are visible behind a glass wall.

"Everything is transparent, and we offer tours of the entire operation for those interested in learning more about the different spirits and how they are made," says Schiller.



Photo: Loon Liquors founders Simeon Rossi (left) and Mark Schiller (right)

WHAT'S NEXT FOR LOON LIQUORS

Loon Liquors has two new products currently under development. The first is the organic flour used to make the pizza. Because Rossi only needs to run the mill a few hours a week to meet his needs, the idea is to offer organic wheat and barley flour to the public and other clients, possibly via a bakery, to use the mill's full capacity. Here again, AURI is helping Loon Liquors identify markets and tap into industry expertise in larger-scale flour production, commercialization, and packaging.

The second project involves crafting a new addition to its spirits line: peated whiskey.

"In Scotland," Schiller elaborates, "peat is used to smoke the malted barley, and after it is mashed, distilled, and barreled, that smoky flavor comes through."

The use of organic ingredients not only aligns with the company's commitment to sustainability but also delivers a more flavorful product.

Loon Liquors began experimenting with this idea about five years ago and created peated whiskey made from Minnesota barley, smoked with Minnesota peat, and barreled in Minnesota barrels.

"We are launching our peated whiskey product right now, just by the glass, at our spot," says Schiller.

But the plans for peated Minnesota whiskey do not end there. Loon Liquors has teamed up with Carleton College to scientifically demonstrate that different types of peat produce distinct smoke molecules that result in unique flavors.

Minnesota, Schiller notes, has twice as much peat as Scotland. This research, therefore, could open up a whole new flavor palette for Rossi's creative imagination to take flight.

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WINTER CAMELINA: TAKING A CUE FROM CANOLA

oil output per acre by 50% compared to standard single-crop systems. Exploring winter camelina through this systems approach illustrates both its cumulative environmental value as a cover crop and the increased economic outputs from additional oil and meal.

On the other hand, as an emerging crop, winter camelina meal research is still needed to improve its value against the industry standard of soybean meal in the feed market. Winter camelina meal contains antinutritional factors, such as glucosinolates, and has a less complete amino acid profile compared to soybean meal. As a feed ingredient, winter camelina's nutritional profile is most similar to canola.

Additionally, Ostlund notes, "It will be necessary to address supply chain gaps and bottlenecks to increase the inclusion rate in livestock feeds and expand the types of livestock that it can be fed to."

Presently, the Association of American Feed Control Officials' (AAFCO) camelina

meal definition is for no more than 10% inclusion in the diet and limits its use to broiler chickens, feedlot cattle, and laying hens.

The MBOLD camelina report concludes with a set of recommendations, including calls for additional feeding and safety trials, further pricing analysis, more research into minimizing or eliminating antinutritional factors, and a deeper examination of how other market opportunities, such as biofuel demand, could boost the availability of winter camelina meal for use in animal diets.

DESTINATION: A MILLION ACRES

It is estimated that Minnesota farmers seeded about 5,000 acres to winter camelina last year. MBOLD, along with its partners, aims to expand the planted area to a million acres.

"We want to double the acreage every year if we can," says Haun.

At that rate, winter camelina would hit the million-acre milestone in a decade.

"These reports are not merely white papers," emphasizes Haun. "They tell us what needs to be done, and how we are going to go do it. We are all going

to have to roll up our sleeves and tackle some of these challenges. Whether it is MBOLD or industry members or university researchers, everyone has their lane to make this happen."

For Ostlund, that call for a coordinated, all-hands-on-deck push is the biggest lesson to be drawn from the canola case study.

"What made canola successful," she sums up, "was the coalition building — the collaborative spirit that rallied public, private, and academic institutions around a common mission and zeroed in on what needed to be done."

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