



The Upper Midwest Agricultural Safety and Health (UMASH) Center

Summary Annual Report

2024-2025

NIOSH Center for Agricultural Safety and Health
1U54OH010170

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October 23, 2025

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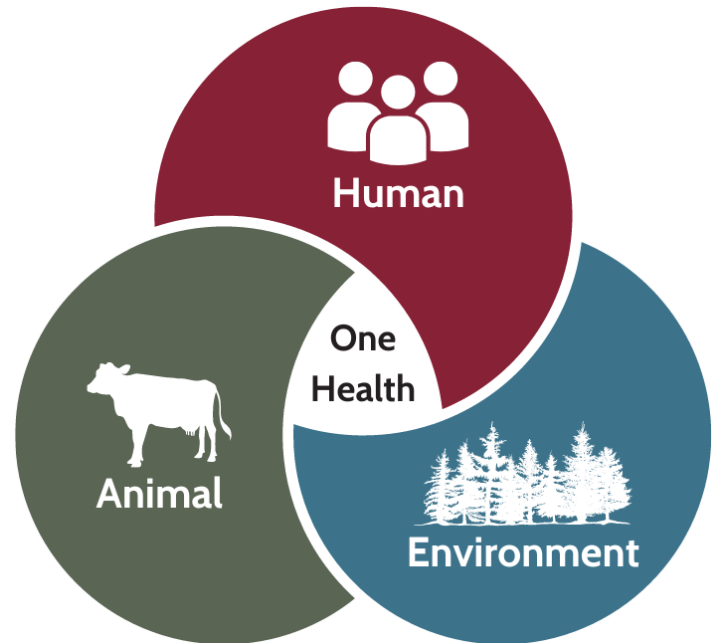
Section I: Center Overview

Introduction

For 14 years, the Upper Midwest Agricultural Safety and Health (UMASH) Center has been supporting agricultural workers, producers, and farm families through research, innovative community and pilot projects, and intentional outreach across the Upper Midwest. This annual report highlights the third year of our 2022-2027 grant cycle, showcasing progress across various sectors of the Center. Our work and projects cover a range of agricultural safety and health issues, including farmer mental health, training for rural firefighters and emergency medical personnel, and investigating airborne viruses and bacteria in animal agriculture and the swine worker microbiome.

This year was not without challenges, but UMASH's collaborative One Health approach and strong partnerships ensured continued progress. The stories, numbers, and updates shared in this report reflect a Center that remains resilient, relevant, and committed to building a safer, healthier future for agriculture. We are grateful for secured funding through September 2026, enabling continued progress on project aims and strategic transition planning to ensure sustainable structures for the future. Please read on to explore the highlights, projects, and people shaping UMASH's impact.

Thank you to all who support us in our mission to achieve our vision: *Healthy and safe people in all agricultural communities.*



About the Center

UMASH is a Center for Agricultural Safety and Health funded by the National Institute for Occupational Safety and Health (NIOSH). The Center is a collaboration of the **University of Minnesota School of Public Health** and **College of Veterinary Medicine**, the **National Farm Medicine Center of the Marshfield Clinic**, the **Migrant Clinicians Network**, and the **Minnesota Department of Health**. UMASH emphasizes the One Health approach, which engages multiple disciplines to understand the **interdependence between animal, human, and environmental health**. The Center's current 2022-2027 grant cycle includes four funded, multi-year research projects supporting agricultural worker health and safety:

1. Identifying Individual And Contextual Determinants Underpinning Farmer Help-Seeking Behaviors And Their Role In Shaping Mental Health Outcomes
2. Factors Influencing Transmission Of Airborne Viruses And Bacteria In Animal Agriculture
3. The Influence Of On-Farm Exposures And Biosecurity Practices On The Skin And Nasal Microbiomes Of U.S. Swine Workers
4. Rural Firefighters Delivering Ag Safety And Health (RF-DASH) - Next Steps

The Center's multifaceted approach also includes robust outreach initiatives to exchange information with partners and communities, an Emerging Issues Program to respond to evolving challenges in agricultural safety, a Pilot Project Program fostering innovative solutions and emerging researchers, and a comprehensive evaluation program assessing the Center's performance, impact, and opportunities.

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Workers**

Section II: UMASH Research Projects

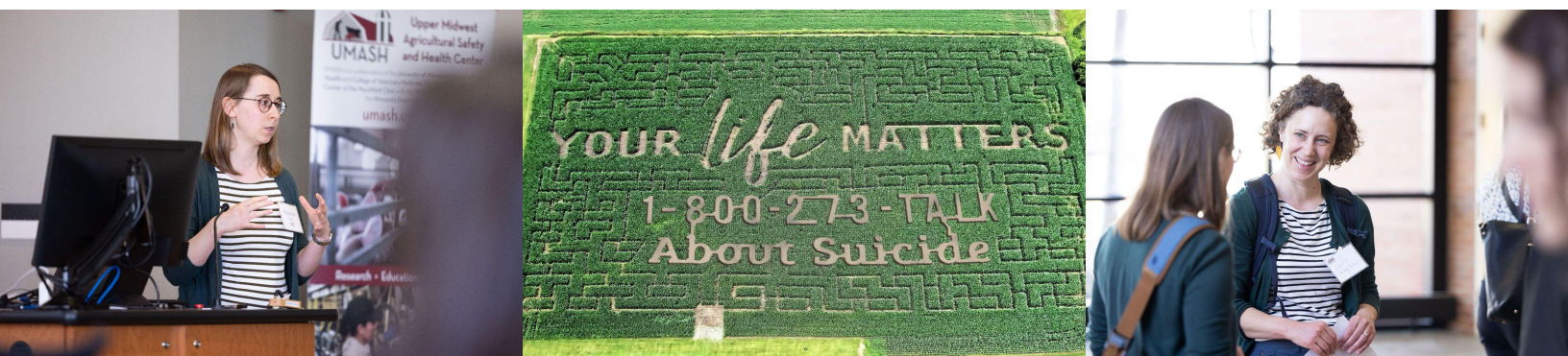
Identifying Individual and Contextual Determinants Underpinning Farmer Help-Seeking Behaviors and Their Role in Shaping Mental Health Outcomes

Farmers and ranchers face higher levels of stress, anxiety, depression, and even suicide than people in most other jobs. Many groups, from farmers themselves to policymakers and health organizations, have called this situation a crisis that needs urgent attention. Yet, we still know little about how farmers seek help or which mental health programs actually work for them. This research project is working to fill that gap by studying what influences farmers' decisions to ask for help, how they actually do so, and what supports make a difference for mental health. The team is also adapting a health services model to better fit the realities of Midwestern farmers.

This year, the project team released six county reports in Minnesota, South Dakota, and Wisconsin showing the link between farm, economic, and health conditions. They've completed **64 interviews with key informants** and **53 with farmers**, generating insights for multiple research papers. The team has also laid the groundwork to deliver a major farmer survey, to be tested in late 2025 and rolled out in early 2026, with a goal of 2,000 participants. Preliminary takeaways from this study so far include:

- From 2019 to 2022, the number of groups offering mental health programs for farmers quadrupled, and the number of programs and resources more than tripled, though most focused only on stress identification and management, not deeper issues like access to care or financial strain.
- Farmers were often willing to seek help, especially financial assistance, but struggled to actually receive support.
- Programs may benefit from focusing less on convincing farmers to seek help and more on making help available and accessible. Additionally, linking financial support directly to mental health resources could make a big difference.

In the coming year, the research team is focusing on publishing their findings, finalizing and piloting the farmer survey, and continuing to share results with farming communities, health providers, and policymakers to ensure solutions are practical and impactful. Despite funding challenges and recruitment hurdles, farmers and stakeholders have responded positively to this project, and momentum is strong to improve both understanding and real-world support for farmers' mental health across the Midwest.



Factors Influencing Transmission of Airborne Viruses And Bacteria In Animal Agriculture

People who work in animal agriculture can be exposed to viruses and bacteria that animals release into the air. To protect workers, we need to know not just if harmful pathogens are present, but also how concentrated they are, how big the particles are, and what conditions increase the risk. This project uses a new air-sampling device to measure viruses and bacteria in swine, poultry, and dairy facilities, while also studying environmental and housing factors that affect exposure. The ultimate goal is to develop practical recommendations to lower the risk of diseases spreading between animals and people.

This year, the project team made strong progress in sampling swine facilities, identifying influenza A virus (IAV), *Staphylococcus aureus* (SA), and methicillin-resistant *S. aureus* (MRSA) in air and surface samples, beginning analyses to link pathogen concentrations to facility conditions. The team also measured gases (like CO₂ and ammonia), ventilation types, pig density, and animal age to better understand what factors influence airborne pathogen levels. Mechanical-only ventilation, for example, seems to lead to higher CO₂ buildup.

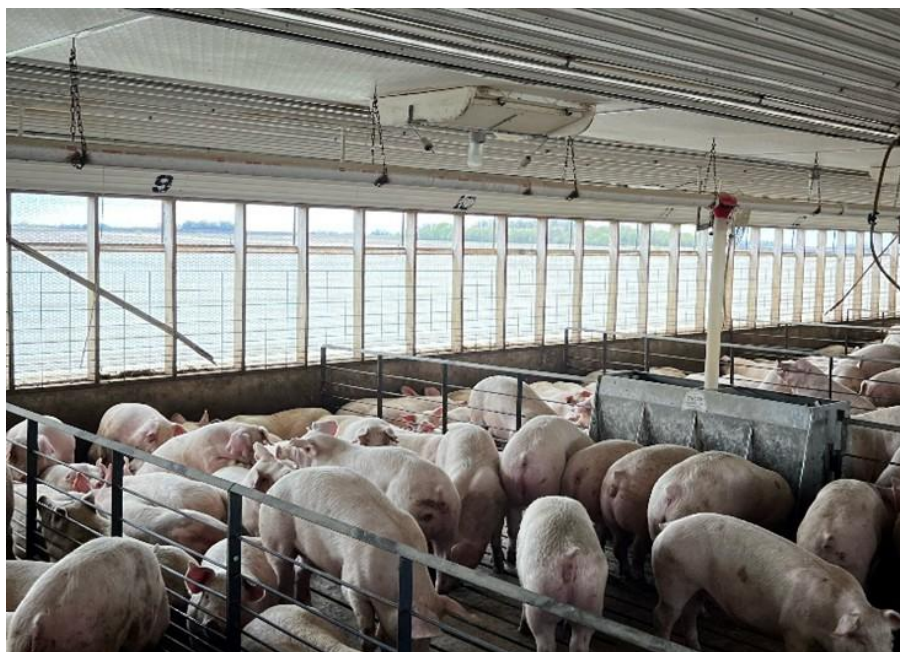
The project has also continued testing and verification of the Bioaerosol Cascade Virtual Impactor (BCVI), a new tool for accurately measuring airborne pathogens, developed with previous UMASH funding. PhD students and a postdoc collaborated and were trained in hands-on sampling, virology, and ventilation studies, while working closely with veterinarians, producers, and USDA partners.

Preliminary takeaways from this study so far include:

- Influenza A virus (IAV), *Staphylococcus aureus* (SA), and drug-resistant MRSA have been identified in both air and surface samples inside swine facilities, showing that workers may face inhalation risks.
- Results indicated that the virus-laden particles that may be inhaled in these settings have the potential to reach deep regions of the respiratory tract, highlighting the need for control measures and potentially respiratory protection to keep workers safe.
- Pathogen levels likely vary by season, facility type, and management practices. Investigation of these factors can support future safety efforts.
- Certain facility conditions, like ventilation and animal density, likely play a major role in worker exposure to these pathogens.

In the coming year, the team plans to complete swine facility sampling and expand into poultry and dairy if possible. They will analyze how facility and environmental factors affect pathogen levels and work to publish findings in the literature. The team also plans to complete performance testing of the BCVI sampler and prepare for field deployment. They will also share their findings with producers and veterinarians to strengthen on-farm safety practices.

Despite challenges with site recruitment and funding uncertainty, the project has already provided key evidence that animal agriculture workers face measurable risks from airborne pathogens. Identifying the conditions that drive those risks will be critical for developing strategies to keep workers safe.



The Influence of On-Farm Exposures and Biosecurity Practices on the Skin and Nasal Microbiomes of U.S. Swine Workers



The human microbiome is the collection of bacteria, viruses, and fungi that live on and inside our bodies. The microbiome plays a key role in health. People's workplaces, including farms, can influence their microbiomes. For example, swine workers have been shown to have different nasal and oral microbiomes than people who don't work with livestock, but we don't yet know if these changes are helpful, harmful, or neutral. This project studies how conditions on swine farms affect the microbiomes of workers, with the goal of developing practical strategies to protect and improve their health. Researchers suspect that a worker's microbiome may be shaped by the specific job tasks they perform on the farm.

This year, the project enrolled **49 swine workers across 7 farrow-to-finish farms** in Minnesota, Iowa, and South Dakota, collecting nearly **600 samples** from people, animals, and the farm environment. Samples from workers' noses, hands, and skin to see how biosecurity practices affect microbial exposure. The team validated innovative sampling tools, including dual air samplers and surface gauze collection, to better capture microbes from farm settings. The team have also partnered with Aerocollect to compare their air sampling device with the device initially proposed to be used in the project (NIOSH BC251 sampler). The project team is also compiling additional microbiome public datasets to compare the swine worker microbiomes with broader populations. Recruiting farms was difficult due to concerns about resources, biosecurity, and privacy. Funding uncertainty forced strategic reductions in some areas of the project. Despite this, the team reached over 60% of its enrollment target and confirmed reliable new sampling approaches.

Next year, the team will focus on completing DNA sequencing and analysis and writing several research papers on farm and worker microbiomes. The team plans to share findings through outreach to farms, assuming the final year of funding is secured.

By linking farm conditions and job roles to changes in workers' microbiomes, this project is providing new insights into how farm environments affect health. The results could guide evidence-based practices that improve worker safety and wellbeing while also building scientific capacity through student training and industry partnerships.



Rural Firefighters Delivering Agricultural Safety and Health (RF-DASH) - Next Steps

Farm operators often trust local firefighters and emergency medical personnel more than anyone else when it comes to safety advice. The RF-DASH program builds on that trust, training firefighters to serve as health and safety consultants for farms. The goal is simple and effective: reduce hazards and improve safety on farms by connecting farmers with skilled, trusted advisors already rooted in their communities.

This year, the project team **interviewed 20 trainers** across the U.S. and Canada, launched a monthly Community of Practice, and hired the program's first full-time Lead Trainer, who is delivering training nationwide. They also released bilingual safety posters, 911 tips, and emergency preparedness guides. Further, they expanded the RF-DASH website and developed new tools, including an Activity Log for trainers, an upgraded FarmMAPPER platform (launching in 2025), and an online training course (coming October 2025). Much of this year was focused on sustainability planning, shifting to strategic collaborations and growth, including working with state fire associations and building international partnerships, including early work in Sweden. The team also presented at major farm safety and firefighter conferences, ran training events in North Dakota, Minnesota, Maine, and Texas, and established collaborations with trauma care researchers, extension services, and producer groups.

Preliminary takeaways from this project so far include:

- Firefighters are eager to deliver farm safety programs, but volunteer staffing shortages and heavy workloads limit how many farms can be enrolled in research.
- Trainers value the Community of Practice as a hub for peer learning and feedback.
- Farmers and firefighters alike have shown strong demand for practical resources like bilingual safety posters and 911 preparedness tools.

In the next year, the project team will launch the RF-DASH online course and FarmMAPPER 3.0 with new mapping features and complete farmer and trainer interviews to refine the program. They will also work to publish multiple research papers on program implementation and trainer experiences, in addition to continuing to expand training and reach nationwide.

By combining the trust farmers place in rural fire/EMS with structured safety training, RF-DASH is creating a sustainable and community-engaged approach to bring life-saving health and safety expertise directly to farms. With new trainers, tools, and partnerships, the program is well-positioned to keep growing, making farms safer for farmers, families, and emergency responders.



Rural Firefighters Delivering Agriculture Safety and Health

Section III: Other Program & Activity Highlights

Pilot Project Program

UMASH is committed to improving health and safety in agriculture through innovation and collaboration. A key part of this effort is the Pilot Project Program, which funds new research ideas that can lead to prevention strategies and practical tools for farmers, workers, and their families. Led by former UMASH Director Dr. Bruce Alexander, the program encourages partnerships among researchers, professionals, and communities to address pressing agricultural health issues. In 2024, two pilot projects were funded:

- **Diseases of Despair in Farm Families:** Dr. Jeffrey VanWormer (Marshfield Clinic) studied alcohol abuse, substance use, and suicide-related diagnoses among Wisconsin families. Results showed farm residents had lower odds of these challenges than non-farm residents, with the highest rates in rural non-farm households and the lowest in dairy farm families. The team is preparing publications and exploring partnerships with national networks to replicate findings on a larger scale, examining regional differences and informing future interventions.
- **Pathogenic *E. coli* in Agricultural Areas:** William Finical, MPH, and Dr. Gillian Tarr (University of Minnesota) examined the spread of STEC O26, a harmful type of *E. coli*, across the Upper Midwest (MN, WI, IA, SD, ND). They found higher infection risks in areas with more agricultural workers and identified regional clustering of a specific strain (ST 29). These findings point to the need for more targeted research on these farmworker exposure and risks. Additional data, including climate data, will be incorporated to improve data completeness, and this project will continue as part of a dissertation.

Together, these projects highlight the importance of investing in early-stage, high-impact research. By addressing both mental health and infectious disease risks, UMASH's pilot program not only advances science but also builds skills for the next generation of researchers and strengthens collaboration across institutions and communities.



Outreach and Community Engagement

The UMASH outreach team includes staff at the University of Minnesota (UMN) School of Public Health, the National Farm Medicine Center (NFMC) in Marshfield, WI, and the Minnesota Department of Health (MDH). Our collective purpose is to promote agricultural safety and health in our five-state area (Minnesota, Wisconsin, Iowa, North Dakota, and South Dakota). We achieve this by working closely with the other National Institute for Occupational Safety and Health (NIOSH) funded U.S. Agricultural Health and Safety Centers, agriculture partners, researchers, educators, and organizations through farm shows, meetings, conferences, and other partner and community events. UMASH regularly engages with our partners and audiences through online, email, print, and in-person outreach activities, sharing new resources, research findings, and more. The UMASH website provides comprehensive information on health and safety topics while showcasing our outreach activities. Over the past two years, our team has been diligently preparing for a major website update to make resources more accessible and improve user navigation. This work is ongoing, with the launch of the new UMASH website planned for spring 2026.

This year, UMASH traveled across the Upper Midwest and beyond to share expertise, provide resources, and strengthen partnerships that promote health and safety in agriculture. From farm shows and youth conventions to professional conferences and webinars, UMASH translated research into practical strategies for farmers, workers, students, and first responders.

UMASH teams participated in roundtable discussions with pork producers and engaged rural firefighters, farmers, and health professionals sharing knowledge and skills to prevent and respond to tractor rollovers, animal rescues, grain bin and confined space injuries. Nearly 1,000 students at the National FFA Convention participated in “Farm Safety Jeopardy,” and college students learned to use storytelling (Telling the Story Project) to promote agricultural safety. A poster describing the process won first-place recognition at an international conference. Presentations at the Leman Swine Conference, APHA Annual Meeting, One Health Symposium, and Conference of Research Workers in Animal Disease shared findings on airborne virus transmission, One Health approaches, and farm safety practices. UMASH provided bilingual resources on H5N1 avian influenza, led webinars on farmworker housing and emergency preparedness, and collaborated with Extension and public health partners to raise awareness about heat stress, zoonotic diseases, and rural health access.

Across all activities, the Center worked with farmers, producers, Extension services, and agricultural organizations to foster partnerships, share best practices, and support safer, healthier communities.



Featured Outreach Resources

Incorporating Farm Safety into Annual Planning

UMASH creates and shares monthly printable and digital [Farm Safety Calendars](#) that feature timely themes, valuable resources, and farm safety events and campaigns. These calendars aim to keep farm health and safety on the mind throughout the year by addressing seasonal safety topics and offering practical tools. They help users stay informed and easily incorporate safety practices into their daily routines and annual planning.

HPAI Toolkit

UMASH has prepared an [updated toolkit](#) to help farmers prevent the spread of HPAI and H5N1 on their farms. It includes biosecurity protocols, guidance on recognizing avian influenza symptoms in livestock, and links to additional resources.



Telling the Story Project: Eric's Story

[Telling the Story Project](#), a collaboration between UMASH, the National Children's Center for Rural and Agricultural Health and Safety, Central States Center for Agricultural Safety and Health (CS-CASH), and the National Farm Medicine Center turns farmers' first-hand stories about close calls and fatalities into teachable moments. Featuring a veterinarian's survival of a near-fatal cattle chute injury, [Eric's story](#), released this year, raises awareness of the everyday hazards on farms.

UMASH also leverages digital venues to grow our reach and engage agricultural communities and those serving them. This year, UMASH had over 20,000 users on our website with 45,000 page views. On social media we reached over 13,000 users on Facebook, and Twitter/X, 1,800 on Instagram and 1,500 on Linked-In, our newest platform. Our 2,300 email subscribers regularly provide feedback to our team with suggestions and positive feedback. The UMASH YouTube channel has received 13,200 views, 346 hours of watch time, and welcomed over 48 new subscribers this year.

- [UMASH website](#)
- [UMASH YouTube](#)
- [US Ag Centers YouTube](#)
- [UMASH Facebook](#)
- [UMASH Twitter \(X\)](#)
- [UMASH Instagram](#)
- [UMASH LinkedIn](#)
- [Weekly emails](#)
- [UMASH Mash-Up](#) (quarterly newsletter)

Through strategic communication, outreach, and education, UMASH is helping farmers, workers, and rural communities adopt safer practices, respond to emerging health threats, and build stronger connections across the agricultural landscape.

Public Safety Announcement Contest

This is the 5th year of UMASH's collaboration with University of Minnesota students in Agricultural Education, Communication, and Marketing. This unique collaboration between UMASH and Dr. Troy McKay's Advanced Video Production for Agriculture, Food, and the Environment course gives students a platform to turn real-world agricultural safety issues into powerful visual messages. Each winner received a gift card and were featured on UMASH channels in recognition for their contributions. Guided by UMASH's expertise and Dr. McKay's mentorship, students channeled their creativity and put their media skills to the test to advocate for a safer and healthier future for agriculture. Two student videos were selected as winners in this year's PSA contest:

[Rural Roadway Safety](#) by Selena Corona: Selena chose the topic of rural roadway safety due to her personal experiences growing up in a rural area.

“Coming from a rural area myself, I've seen the situations and reasons why educating others about the importance of rural roadway safety is dire. Those stories inspired me to use my skills to share about this very important topic. I'm so grateful for the work UMASH is doing to help keep more people happy, healthy, and alive by promoting these safety materials!”

[Mental Health: Stop Racing Thoughts](#) by Lindsey Miller: Lindsey was introduced to UMASH through this project and saw it as a meaningful fit with her current work as Communications Program Assistant for the University of Minnesota Extension.

“Before this, I wasn't aware of UMASH. But the collaboration between Extension and UMASH felt natural, like an important bridge for bringing mental health resources to the farming community.”

Producing short, impactful public service announcements (PSAs), students gain experience and help to raise farm safety awareness within and beyond agricultural communities.

UMASH Wellness Pavilion: Minnesota Farmfest

For the seventh year, on August 5-7, 2025, UMASH hosted the UMASH Wellness Pavilion at Minnesota Farmfest, the largest farm show in Minnesota. Hosted on the Gilfillan Estate in Redwood County, Minnesota, this event attracts thousands of farmers, workers, families, state and local officials, and community members from across the region. The UMASH Wellness Pavilion provides valuable safety, health, and injury prevention resources for farmers, farmworkers, and families with hands-on activities, blood pressure



screenings, live farm safety and rescue demonstrations, and a Family Wellness Area to encourage learning and conversation about Living Healthy, Farming Safely.

Over the three-day event, UMASH and more than 20 national, regional, and local partners connected with attendees over 5,000 times. Wellness Pavilion exhibitors distributed more than 1,500 safety and health resources and over 4,200 giveaways to Farmfest attendees, extending the reach of farm safety and wellness beyond the pavilion. Many visitors shared personal stories of near misses or farm accidents and expressed appreciation for the resources and practical safety information.

Visitors of all ages joined UMASH outreach staff, including volunteer veterinary public health residents from the University of Minnesota, for interactive learning, spinning the Farm Safety Wheel to test their knowledge and win safety and health giveaways. In collaboration with sponsors, partners, and subject-matter experts, UMASH also presented safety and rescue demonstrations, including tractor rollover prevention and the importance of Roll Over Protective Structures (ROPS). CentraCare further supported the pavilion by providing free blood pressure screenings.



A highlight of the pavilion this year was the family Wellness Area that featured fun, safe family activities, including water, youth farm safety activity books, a lactation room provided by the City of Marshall and a safety zone space presented by the Central States Center, and Progressive Agriculture Safety Days. Farm families from across the region participated in hands-on activities to learn about sun safety, hearing protection, ATV/UTV safety and grain bin safety while earning sporty bucket hats and PAF backpacks. One partner even overheard a group of kids call the pavilion the “most fun” place at Farmfest!

Emerging Issues Program

The UMASH Emerging Issues Program aims to identify and respond to emerging or re-emerging issues that may impact the health and well-being of the agricultural workforce and their families. To support these activities, the UMASH network and advisory board are key in identifying emerging issues across the region and providing suggestions to address the topic(s). Read on for highlights of this year’s emerging issues, topics, and activities.

Zoonotic Influenza Threats

Outbreaks of highly pathogenic avian influenza (H5N1) and other zoonotic influenza strains are an increasing concern for agriculture, animal health, and public health worldwide. Recent detections in U.S. dairy cattle, poultry flocks in the Upper Midwest, and even human cases highlight the complexity of these evolving threats. Protecting farmers, workers, and rural communities requires flexible approaches to address gaps in knowledge about transmission, biosecurity, and worker safety.

UMASH has responded by:

- **Developing practical resources:** UMASH partnered with collaborator Migrant Clinicians Network to produce bilingual educational tools, including posters and videos, for farmers, farmworkers, and clinicians on preventing influenza spread.
- **Providing expert guidance:** UMASH leadership and researchers regularly advise agricultural organizations, public health agencies, government groups, and the media, ensuring timely, evidence-based information reaches diverse audiences.
- **Supporting communities directly:** UMASH has updated and shared widely an online avian influenza toolkit. With NIOSH support, UMASH has also been working to support regional dairy workers and producers by conducting a survey for MN and WI dairy producers on perceived risks and support, creating outreach materials with Extension, and facilitating the *Seguridad* dairy worker training program. This is currently in process with anticipated results later this year.

Emerging influenza strains at the animal–human interface pose risks that go beyond the farm gate. By leveraging partnerships and expertise, UMASH is helping strengthen preparedness and protect the health of both agricultural workers and their communities.



Aging on the Farm

As farmers and rural residents grow older, many want to remain in their homes and communities, a concept known as aging in place. This has clear benefits, including independence, dignity, and connection to family and community. But farming presents unique risks, such as heavy equipment, uneven terrain, and chemical hazards, while rural communities often face limited healthcare access and isolation.

UMASH's [October 2023 virtual forum](#) convened farmers, aging experts, ag health and safety professionals, occupational therapists, social workers, veterinarians, and other stakeholders to identify solutions for healthy and safe aging in agriculture. Building on the momentum from this forum, UMASH funded three community-based projects to continue collaborating on solutions for healthy and safe aging in agriculture. The following provides a description of these projects and their impact:

- **Raising awareness on farms:** UMN & NDSU Extension collaborated to reach nearly 1,900 farmers through pesticide training, farm shows, and fairs with new resources on fall prevention and safe aging. After training, 88% of participants said they were more likely to adopt safety practices.
- **Improving dementia awareness and safe driving:** Big Stone County Memory Loss Connection and Second Wind Virtual Dementia Tour trained 110 professionals on dementia care and launched a local driving assessment program for older adults, including cars, tractors, and combines, so families can receive local driving assessments and make safer decisions.
- **Expanding preventative health screenings:** Hormel Institute brought blood pressure, cholesterol, and diabetes screenings directly to Mower County residents at markets, senior centers, and workplaces. Residents gained knowledge on accessing local screenings and financial support. Caregivers connected with health services for family members' transitions to assisted living. Residents also used repeated event visits to manage health conditions they could not otherwise afford to monitor. Several community members received life-saving follow-up care thanks to these efforts.



UMASH funding catalyzed these community-based solutions, translating research and expertise into real-world impact. Through the Emerging Issues Program, UMASH is collaborating to strengthen rural capacity to support healthy aging, enhancing safety on farms, and addressing critical gaps in healthcare access.

Evaluation Program

Each year, UMASH uses a comprehensive monitoring and evaluation system to track how well its programs are delivered and how effectively they promote the health and safety of agricultural workers and their families. This system helps the Center learn from experience, improve programs, and share knowledge across teams and partners. Over the past two years, the evaluation team has focused on understanding the UMASH network and finding ways to expand and strengthen partnerships with farmers, workers, researchers, and community organizations across the Upper Midwest. In light of staff changes and funding uncertainties, the team has also prioritized strategic planning for smooth transitions and supporting UMASH's research and outreach efforts. Looking ahead, UMASH will continue to focus on its unique strengths, including programs for aging farmers, One Health approaches, and community-centered solutions such as RF-DASH. The Center will also explore new funding opportunities and partnerships to sustain and grow its impact. Strategic planning and implementation of an adaptive action plan will guide UMASH in maintaining resilience, improving collaboration, and expanding its reach in the coming year.

Other Center Activities

Minnesota Farm Safety Working Group

UMASH participates in the Minnesota-based farm safety working group with state agencies, professional farm organizations, Extension, agribusiness, and others. This initiative led the MN State Legislature to fund the Minnesota Rollover Protection System (ROPS) Rebate Program. The group meets quarterly to address current issues and explore collaboration opportunities. This group's work has been crucial in securing ongoing legislative funding for a safety equipment cost-share program, which funds the cost of roll bars for machinery and safety equipment for grain bins and silos.

U.S. Agricultural Safety and Health Center Collaborations

UMASH collaborates with the other twelve [NIOSH-funded Ag Centers](#) throughout the year and participates in bi-monthly calls with the Evaluation, Outreach, and Coordinators (ECO) group to discuss, plan, and implement multi-center collaborations on evaluation and outreach initiatives. UMASH has led collaborative Ag Center participation in two major national campaigns: Ag Safety Awareness Program ([ASAP](#)) Week (March) and National Farm Safety and Health ([NFSHW](#)) Week (September). We continue to collaborate and partner with other US Ag Centers and participate in the ECO group to plan, implement, and assess collective outreach initiatives, including the [US Ag Center YouTube](#), which has over 4,000 subscribers and features 176 education and training videos (34 from UMASH) on a wide range of agricultural safety and health topics (many in Spanish and other languages).

