Midwest Rural Agricultural Safety and Health Conference
November 16-17

by Gayle Olson, MS, CHES, I-CASH Assistant to the Director

After two years of virtual conferences, the 2022 Midwest Rural Agricultural Safety and Health (MRASH) Conference is aiming to find the best of both the virtual and 3-D worlds with a hybrid conference. Those who can attend in person are invited to the Hotel at Kirkwood Center in Cedar Rapids on November 16-17, 2022; those who aren’t able to attend in person can join virtually via Zoom. Visit the conference website after September 15th for details and registration information. Students, farmers and frontline health workers will be able to attend at a generous discount, thanks to the conference sponsors.

The keynote session to start the conference on November 16th focuses on the theme Re-imagining a Safe and Healthy Future for Agriculture. Many changes occurred during the pandemic, some due to COVID and others brought to light during two years of disruption. Supply chains, market outlets, worker shortages, climate, economics – it’s difficult to find an area that didn’t change. What are the trends in our agriculture and food system that will continue in the future? What are the implications of these changes to the health and safety of those who live and work on our farms? These are the questions that will be addressed in our keynote session by both speakers and attendees. The second morning will feature sessions on a wide variety of research and outreach topics, including stress, ATV safety and hearing conservation.

Several new features have been added this year. A pre-conference Respirator Fit Testing train-the-trainer workshop will be held on November 15th at the Hotel at Kirkwood Center. With the conference located on the campus of Kirkwood Community College, there will also be opportunities to tour their agriculture, health and industrial tech programs, and talk with their students during the conference. The traditional poster reception has undergone a re-imagining as well, and will serve as a Taster Session for a wide range of projects in a variety of forms – posters, flashtalks, photo essays, short demonstrations and more. Abstracts for the session will be accepted until October 15th. Networking and music will continue to be an important part of this evening.

Students have always been one of our key audiences. This year, in addition to our networking luncheon, students will be able to sign up for a mentor. The mentor/mentee pairs will start the conference by meeting over breakfast and talking through their goals for the next two days.

The MRASH Conference offers so many ways to participate: in person or online, as an attendee or presenter or sponsor. For more details, please check the MRASH conference website after September 15. If you have questions, please email gayle-olson@uiowa.edu.
Every time September rolls around, I wonder “How did I get all this done last year?” I can’t be the only one. Everyone is trying to get settled back into a school year, harvest season is fast upon us, and I simply cannot process and distribute the bounty finally yielding in the garden (but I dare not let it go to waste, as it will be sorely missed come January).

Here at the Great Plains Center for Agricultural Health, September marks the end of our project year. This September, we wrap up six years’ worth of studies and outreach and start preparing summaries of what we accomplished. Keeping track of year-to-year accomplishments, much like writing a Christmas newsletter, lets us reflect on the year just passing. But reflecting on longer blocks of time, like this 6-year close out, gives us an opportunity to reflect on how far we have progressed.

I would like to reflect on the team that makes this center function. First, I congratulate our research project teams for their outstanding work. This Alive and Well issue provides updates from our project investigators, who looked at improving air quality in swine buildings, examined driving behaviors of cars around ag vehicles on roadways, and examined injury data to improve our understanding of where to focus efforts to protect farmers from injuries and illness.

I also want to shout out to our amazing outreach and administrative staff who work to develop and share prevention messages and tools to farmers and their advocates. You are familiar with Kay Mohling, who compiles this newsletter every quarter (thanks Kay for making me look good!). Jenn Patterson works our social media accounts and coordinates communications, including press releases, web updates, and email lists to partners around our nine-state region and beyond. Marsha Cheyney has been the face of GPCAH, attending farm shows, developing and testing new outreach ideas, and bringing your stories and concerns back from the field so we can develop new tools to help protect farmers and their families.

Diane Rohlman is our face of Education, coordinating our annual Iowa Agricultural Safety and Health Core Course each summer as well as helping others adopt and teach content customized to producers in other regions of the country – and beyond! If you haven’t visited our revamped Education web page, know that we have direct links to 10 online, interactive training modules that the outreach team has been developing throughout this 6-year project period. We set these up so registration and classes are free, and anyone can earn certificates of completion. See if they are useful for your organization or educational program.

Thanks for your interest in what we do and following us in the Alive and Well newsletter and on social media. I look forward to a new phase of research and outreach projects starting in October and to sharing highlights of these activities going forward.

Dr. Renée Anthony directs the GPCAH, housed in the Department of Occupational and Environmental Health of the College of Public Health. She can be reached at 319/335-4429 (renee-anthony@uiowa.edu).
Dementia and Farm Safety
by Kanika Arora, PhD, Associate Professor, Health Management and Policy

Over 66,000 older Iowans are impacted by Alzheimer’s disease (AD), the most common type of dementia. Additionally, over 73,000 Iowans provide unpaid informal care for people with Alzheimer’s or other forms of dementia.

Though dementia mostly affects older adults, it is not a normal part of aging. It is a progressive brain disease with gradually worsening symptoms, including problems with memory, compromised reasoning and judgment, impaired gait, difficulties with spatial and temperature perception, language deficits, and unpredictable behavior (such as wandering, anxiety, and aggression). Dementia ranges in severity from the mildest stage, when it is just beginning to affect a person’s functioning, to the most severe stage, when the person must depend completely on others for help with basic activities of daily living.

Recent work has shown that relative to other occupations, older adults with longest-held jobs in agricultural occupations experience greater odds of developing dementia. Safety is a major concern for older adults working and living on the farmstead. Dementia-related problems with memory, judgment, and mood may compound safety concerns in already hazardous farm environments, placing farm families at an even greater risk for incidents and injuries.

If you or your loved one recently received an AD/dementia diagnosis, here are some tips for staying productive and safe on the farm:

- As an employer, it is important to communicate with employees and family members who assist with the business.
- Take safety measures by installing safety rails where possible. Lock specific doors to prevent access to hazardous areas.
- Use simple safety signs like “STOP,” “HOT” or “WATCH YOUR STEP” as attention reminders.
- Be alert for signs of wandering, as six out of ten persons with AD will wander.
- Be cautious of introducing new equipment, as changes to controls can be confusing and may risk injury.
- Discuss the need to safely store firearms among family members and develop an action plan.

If you suspect your spouse, parent or loved one has dementia, it is a good idea to see a doctor. Treatment during earlier stages may improve your loved one’s health and potentially delay further cognitive decline.

If you are a farm family touched by AD/dementia and are interested in injury prevention for these vulnerable farmers, please contact Dr. Kanika Arora, (319) 384-3817, kanika-arora@uiowa.edu.
Instrumented Farm Vehicle Study
by Cara Hamann, PhD, Assistant Professor, Epidemiology

Our research has studied vehicle interactions with farm equipment on public roads that contribute to rear-end collisions and dangerous passing maneuvers. During Phase 1, the team designed the SaferTrek device that was mounted on the rear of farm equipment and collected GPS and video data. This device collected data across one planting and three harvest seasons, deploying the unit on 400 farm vehicles and implements, capturing information across 3,167 days. This data collection effort resulted in over 7,000 videos containing more than 2000 on-road vehicle interactions. These data are currently being annotated to determine when a following-vehicle begins to enter the oncoming lane to overtake the farm equipment, as well as passing zones, oncoming traffic, environmental conditions, and intersections. This helps us understand the behaviors of drivers operating vehicles around farm vehicles on the roadway to better understand risks and prevention messages.

During Phase 2, the team developed and deployed community safety messaging titled We’re on this Road Together. A process evaluation was conducted with a community advisory board established to guide the development and dissemination of the We’re on this Road Together campaign. Results demonstrated the vital role community engagement played in informing the campaign messaging and coordination of logistics of campaign implementation. From surveys in these communities before and after the campaign, we found that perceptions of local passing norms were highly associated with self-reported passing behavior, which suggests that efforts to change local norms may also have positive impacts on individual driver behavior. Roadway data from Phase 1 and intercept survey data will be used to evaluate the impact of the community campaign developed in Phase 2, these analyses and results are forthcoming.

Dr. Cara Hamann can be reached at cara-hamann@uiowa.edu

Indoor Air Quality Improvements Targeting Dust, Gases, and Pathogens in Pork Production
by Matthew Nonnenmann, PhD, Associate Professor, Occupational and Environmental Health

Our team has spent the past six years developing, deploying and evaluating a trailer-based recirculating ventilation system (tRVS) to improve the air quality in swine barns. This new system uses ultraviolet light and filtration to reduce dust and bioaerosols in commercial swine barns. This custom-built system was based on results from previous studies, but adding new biological treatment that farmers indicated would be critical to widespread adoption of the ventilation system, particularly if it can improve both worker and animal health in the swine industry.

While the tRVS has been advanced to include disinfection technology, the next phase of studies requires a transformative advancement to reduce cost and the footprint of the control technology. The new project will design and evaluate a miniaturized recirculating ventilation system (mRVS) for in-room dust control and target specific human and pig pathogens (e.g., influenza virus). Through partnerships with producers, future work will incorporate input from a swine industry stakeholder advisory group. Contact the GPCAH if you are a hog producer who wants to be involved in focus group activities designing and implementing these new systems.
Farm Safety App

We reported in previous Alive and Well issues that we were training researchers on how to use our web-based Hazard Assessment Checklist app (detailed here). The content of the Hazard Assessment Checklist was developed with input from several experts within the fields of occupational safety, industrial hygiene, occupational medicine, ergonomics, and injury prevention. The checklist prompts users to rate observations of hazards associated with self-propelled vehicles, powered portable implements, fixed machinery and equipment, building structures, and fall risks. The research team is processing field data gathered from the checklist questions to relate observable hazards to injuries on the farm (analysis coming soon). With feedback from training participants, Carri Casteel and team has updated some of the app’s “help” features.

We are seeking resources to add additional features to the app, namely (1) expanding hazards included in the checklist and (2) compiling user-friendly reporting options. Those who completed our training indicated additional content such as addressing hazards related to animal production (e.g., manure handling, zoonotic diseases), chemical safety (pesticide use, ammonia application), and noise would improve the usefulness of the tool, and adding these as “observations” could be helpful.

The app was designed to be administered by agricultural safety researchers, but it has the potential to be translated for a wider audience, including insurance company representatives, extension office staff, and farmers who want to identify and eliminate physical hazards on the farm. Initial training identified the benefit of including output messages to use in reports (by extension agents asked to help with on-farm safety) and to help farmers prioritize improvements after completing the app. This requires customization and input from relevant users, including farmers and ranchers, agribusiness personnel, and others to improve safety and health on the farm.

Contact the GPCAH if you want to be involved in further developing this app.

Safety Workshop to Focus on Youth Working in Agriculture

Protect the future of agriculture by attending the Child Agricultural Safety and Health Workshop devoted to safeguarding youth who work on farms and ranches. The virtual workshop will be held on September 28 from 11:00 am to 3:30 pm (CDT). Hosted by the Great Plains Center for Agricultural Health, AgriSafe Network, and the National Children’s Center for Rural and Agricultural Health and Safety, the workshop is free but registration is required and attendance will be limited to the first 50 registrants. Register at http://www.marshfieldresearch.org/cash-workshop.

Leading experts will use hands-on and small group activities to discuss benefits and risks to youth working in agriculture, illness and injury prevention strategies, youth mental health, and parent/supervisor information and training. Participants can apply the new knowledge in designing safety strategies for their farms and organizations. The workshop is ideal for farmers, parents, supervisors, agribusiness, farm organizations, insurance professionals, bankers and lenders, healthcare providers, Extension, FFA advisors, public health officials, and media.
Stress and mental health challenges cause all sorts of physical and emotional problems that can lead to more injuries and deaths on the farm. May was Mental Health Awareness month, and we updated our website with more resources to help farm workers find help when they need it and to train people who work with farmers how they can help too. Find video, training materials, and other resources at [https://gpcah.public-health.uiowa.edu/mentalhealth/](https://gpcah.public-health.uiowa.edu/mentalhealth/).

**Posters to Download: New Falls Protection Posters**

Falls are a major reason that farmers show up in the emergency room. The GPCAH outreach team shared posters and handouts on do's and don'ts at the Minnesota Farmfest. Visit our [website](https://gpcah.public-health.uiowa.edu/) for printable versions of these and other posters and have conversations about safety on the farm.
The Great Plains Center for Agricultural Health is announcing an additional call for proposals for pilot projects (up to $30,000 per project, and a project duration of 12 to 18 months, starting early 2023). Applications will be due December 1, 2022. Projects must focus on the prevention of injuries and illnesses resulting from work in agriculture. Priority topics for proposals include those addressing slips, trips, and falls; chemical safety; and work factors contributing to stress and other mental health outcomes. We will consider proposals focused on other ag-related safety and health hazards. The pilot program supports both community-based organizations and academic researchers, especially new investigators and trainees. Learn more and how to apply at https://bit.ly/Pilots2022

A special thanks to Heather Fowler from the National Pork Board for arranging a virtual farm tour for the class, also featured in the Iowa Pork Producer magazine. The tour provided students with an opportunity to see inside a swine finishing barn and talk with the producer. Presentations and resources were also provided by Ag Health and Safety Alliance; Center for Food Security and Public Health at Iowa State University College of Veterinary Medicine; Klingner Cattle; National Educational Center for Agricultural Safety; National Institute for Occupational Safety and Health; University of Iowa Carver College of Medicine, College of Nursing, and College of Public Health; and University of Missouri-Kansas City School of Pharmacy.

If you missed the course this year, many of the resources are available at no cost on the GPCAH website. Plans are underway for a hybrid course in 2023; course details will be posted on the GPCAH website when available.
AgriSafe will be hosting two free webinars each day of National Farm Safety and Health Week, September 18-24, 2022. Based on the daily themes of tractor and roadway safety, overall worker health, children and youth, confined spaces, and women’s health, AgriSafe has partnered with experts from across the country to provide the latest research and education.

Diane Rohlman, GPCAHO Outreach Director, will lead the webinar Protecting and Promoting the Health of Young Agricultural Workers: The Role of Employers and Supervisors on Wednesday, September 21st at noon. Additional resources for protecting young agricultural workers are available here.

Daily webinar topics:
- Monday, September 19 - Tractor Safety & Rural Roadway Safety
- Tuesday, September 20 - Overall Farmer Health
- Wednesday, September 21 - Safety & Health for Youth in Agriculture
- Thursday, September 22 - Confined Spaces
- Friday, September 23 - Safety & Health for Women in Agriculture

Click here for webinar information and registration.
This spring, the GPCAH Outreach Core developed a new hands-on tool to guide future translation activities to address needs of our partners who work with farmers and agricultural workers. This “Shopping for Safety” tool leads educators/outreach providers through a structured system to identify what materials they need and think through formats most useful for their organization. We piloted this tool at the ISASH conference in June, and it was a hit!

The instructions for #ShoppingForSafety are simple, but not necessarily quick and easy.

1. Choose an audience to “shop” for. At ISASH we suggested four audiences, but participants were free to write-in whatever they wished.

2. Then, using the menu of “Resource Options,” select up to five formats of resources you want to reach your target audience, then place those disks in the basket.

3. Next, for each chosen “Resource”:
   a. Add a timer button to indicate how long each activity should take
   b. Identify up to three health and safety topics, and put their buttons on each Resource Option disk.

4. Finally, post an image of the shopping basket on social media (with hashtags) to enter a drawing for an Amazon gift card.

Participants indicated this process was a beneficial way to think about resource needs, and they said it was fun to do. Only five disks will fit in the basket and only three topics are allowed per resource disk – so our participants had to prioritize their wants and needs to complete the shopping task. It also created a space for thought (and sometimes lively discussion) about realistic expectations of time available vs. how much time they thought should be spent on a given activity or topic.

We plan to deploy this again at upcoming conferences: 2022 National FFA Convention, 2022 MRASH Conference, and 2023 NACAA Annual Meeting, so if you are at these events, come visit us and give it a try. We will share what we learn in future Alive and Well issues.
As a student, participating at the Minnesota Farmfest show provided three days of opportunities to apply concepts learned in the classroom to the real world. Hands-on experience through outreach and assisting with farm safety demonstrations created a tangible outlet to use the skills I’ve developed in graduate school. As a student from Iowa, working at the Minnesota show allowed me to learn about other rural states’ health and safety concerns. I think this provided relevant insight into how farming communities’ concerns can vary from state to state, reinforcing the idea that public health is not a ‘one size fits all’ area of study. Additionally, I was able to build relationships and network with occupational safety and health specialists. I was able to generate numerous ideas for potential dissertation projects in a variety of agricultural settings with the professional community that Farmfest attracted. I personally left Farmfest feeling inspired and confident that I am pursuing a doctoral degree in a field of study I am passionate about, and I greatly appreciated the opportunity to learn more about farming communities.

- Anna Proctor

I was a part of the Great Plains Center for Agricultural Health team that attended the 2022 Minnesota Farmfest. It was my first time attending, but hopefully will not be the last. Throughout my time there, I was fortunate to meet many people within agriculture – including those working in agriculture safety. Our outreach goal was to promote fall prevention techniques on the farm. This goal gave us the chance to discuss with farmers, their families, and farm workers best practices to use. This also provided time to discuss the biggest hazards or concerns they have on their farm. Minnesota Farmfest hosted several guest speakers, one being Michelle Miller of TheFarmBabe. After her speech, we were able to get one-on-one time with Michelle and she even recorded some for our podcast, FarmSafe. I was also able to get many recordings for the podcast from MN State Troopers, MN DOT engineers, as well as farmers who had/almost had incidents in their personal life. Overall, I felt like the trip handed me an opportunity to grow and learn as well as connect with professionals in agriculture.

- Matison Bentley

I had a wonderful experience attending the Minnesota Farmfest! In addition to the fun exhibits and vendors, it was an overall great experience to provide outreach/education on falls prevention with Marsha and the GPCA. I appreciated the opportunity to talk with farmers, their families, and others who came through the health and safety pavilion. It was also interesting to participate in the GPCA outreach effort and see what other outreach tools other centers/exhibitors were using to get their message across. I also developed professional relationships with coordinators from other outreach centers who were at the event. I enjoyed learning about their experiences in agricultural health and safety. I hope to take what I learned and apply it to my thesis work as I work to do some outreach regarding respirator fit testing within the farming community.

- Emma Smaellie
NEWS AND UPDATES

The US Agricultural Centers are promoting the 2022 National Farm Safety and Health Week through social media. This social media kit has been developed to promote US Ag Center safety resources that fit with the daily themes of National Farm Safety and Health Week. Download the toolkit here.

The Midwest Rural Agricultural Safety and Health (MRASH) Conference is accepting abstracts for Taster Sessions (posters, flash talks and other short takes) until October 15th. This year presenters are encouraged to think outside the box and highlight your project so it summarizes essential points and encourages conversation in an informal 3-5 minute “morsel” about a bigger project. It may not be a poster, it may involve art, music, a demonstration, or a lesson. Abstracts can be submitted on the MRASH website.

The Great Plains Center for Agricultural Health provides information on a variety of safety and health topics that can be used by operators, managers, families, employees, and others interested in agricultural health and safety. Find information on agricultural injury facts and trends, the FarmSafe Podcast, Outreach Toolkits, and access posters and other items that can be printed and posted. Learn about all of our outreach materials on the Safety and Health Resources page.

Upcoming Events

September 13-15
Husker Harvest Days
Grand Island, NE

September 18-24
National Farm Safety and Health Week

September 28
Child Agricultural Safety and Health Workshop
Virtual Event

October 2-7
World Dairy Expo
Madison, WI

October 3-6
Canadian Agricultural Safety Association (CASA) Annual Conference
Hamilton, Ontario, Canada

October 7-9
Ozark Fall Farmfest
Springfield, MO

October 26-29
National FFA Convention & Expo
Indianapolis, IN

November 6-9
American Public Health Association Meeting and Expo
Boston, MA

November 16-17
Midwest Rural Agricultural Safety and Health Conference (MRASH)
Hybrid Event / Cedar Rapids, IA

November 17
National Rural Health Day

December 2-3
Women, Food and Agriculture Network Conference
Virtual Event