

Agricultural Safety and Health Core Course

by Kay Mohling, MA, Agricultural Safety and Health Course Coordinator

The GPCAH Agricultural Safety and Health Core Course is underway, with registrants from 7 states. The hybrid course brings together participants with a wide range of health and safety expertise, including physicians, nurses, EMS personnel, pharmacists, and extension, livestock, and public health specialists. Course topics include agricultural injury, behavioral health, emergency preparedness, ergonomics, livestock handling, medication-related agricultural injury, musculoskeletal disorders, pesticides, prevention of illness and injury, telehealth, transportation hazards, and use and selection of personal protective equipment.

On Friday, June 2nd the class traveled to Iowa State University (ISU) in Ames, IA. Students started the day with a presentation by Carolyn Sheridan, Ag Health and Safety Alliance, on the use and selection of personal protective equipment (PPE). Following the presentation, and with the free PPE kit provided by Ag Health and Safety Alliance, the class visited the ISU Teaching farms and were able to see farm machinery, experience working beef, dairy, poultry, and swine facilities, and even climb into an empty grain bin. A special thanks to Skyler Rinker and Ben Drescher at ISU for arranging the tours and spending the day with the class to answer questions and describe the activities at the farms.

During lunch at the Hansen Agriculture Student Learning Center, GPCAH staff were on hand providing students with PPE and hearing protection fit testing and demonstrated gas monitors. Gas monitors

are recommended for use during manure handling operations as they provide warning alarms when dangerous hydrogen sulfide gases are released. Students visited the FarmSafe podcast table and shared stories about safe pesticide handling. The Farmer/Rancher Registry was also introduced to students who were interested in signing up as potential research volunteers for future health and safety studies.

The virtual format of the course continues on Fridays through June. Students will receive information and resources from



Students try on the PPE provided by Carolyn Sheridan, Ag Health and Safety Alliance.



Dr. Skyler Rinker (at left) explains the grain drying process to Ag Course students at the Ag450 Farm.

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Director's Message

by Renée Anthony PhD, CIH, CSP

Summer is going full steam ahead, and so is the Great Plains Center for Agricultural Health. Our research teams are making progress on [studies](#) that are developing and testing technology to assist with understanding risks on the job, developing and testing community campaigns with partners around the region, and collecting feedback and analyzing data from farm studies. Our outreach team continues to interview experts around the country to help us all understand best practices to ensure farm safety, sharing lessons in the [FarmSafe podcast](#), the Core Course, and other educational outlets. The team is also finalizing their travel schedule for [summer outreach events](#).



Renée Anthony PhD,
CIH, CSP

GPCAH is also kicking off a new project: the Farmer/Rancher Registry. We have received approval to coordinate a database of farmers in our region who are interested in being contacted to learn about new studies that are focused on health and safety on the farm. Throughout the Midwest, our partners know that it takes a long time to find farmers who are interested in participating in studies that help us help farmers. But, when we do meet with farmers to test new tools or better understand exposures, our farmers extend gratitude and offer that we let them know about any future opportunities. We now have formalized a process to let us do just that! See story on [page 9](#).

Anyone who works in agriculture is eligible to volunteer to be in the Registry. This includes: farm owners/operators, ranchers, farm family members working (paid or unpaid) on the farm, hired farmhands, or contract farmers or anyone who works providing services to farm operation, including pesticide applicators, contract planters/harvesters, and renters to farmers tending their acreage. For each volunteer, we will ask about you (name, address, farming status), your farm (what you produce and rough indication of acreage), and input on what topics interest you most. The list of topics is provided in the [table](#) at the end of this article.

Once we have enrolled at least 100 registry volunteers, we will promote the registry to those who are looking to work with farmers/ranchers to answer important questions that can improve the health and safety on their operations. We will only consider studies that are relevant to health and safety on the farm, that have been approved for recruitment with human subjects, *and* have a topic that we anticipate being well-tolerated by our registry. Then, if at least 20 registry volunteers meet both the “inclusion” criteria from our registry (age, farming production, etc.) *and* meet the topic of interest that a volunteer indicated, we will forward information to a registry volunteer about the study that may interest that volunteer. Whether the registry volunteer acts on this information is up to them, but we are available to answer questions and help put them in touch with the investigator. Rest assured, *at no time will we give out our registry volunteers’ information to anyone—you should only be contacted by the GPCAH staff.*

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Farm Families Alive & Well
Published 4/yr
Kay Mohling, Ed.
319/335-4219
kay-mohling@uiowa.edu

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gpcah.org



Recent “Safety Watch” article offers advice for proper ATV handling on roadways

by Mandy Archer, BA, GPCAH Outreach Specialist

“All-terrain vehicle” is a misnomer. ATVs are designed, manufactured, and sold for off-road use only, according to the Specialty Vehicle Institute of America. In fact, if you operate an Off-Road Vehicle (ORVs, also known as ATVs and utility task vehicles), you should know that ORV crash rates have increased by 58% in Iowa counties since 2021 when 99 ordinances were passed allowing ORVs on public roadways. ATV crashes result in nearly 700 deaths and 130,000 ER visits per year throughout the country, 60% occur on public roadways, and two-thirds of these fatalities are from single-vehicle crashes.

Read the full *Iowa Farmer Today: Safety Watch* article, [“Precautionary advice for ATV handling on roadways,”](#) published on May 12, to learn more and get safety tips. If you are interested in learning more about ATV safety, check out our ATV-related episodes on the FarmSafe Podcast: [ATVs on Roadways](#), [ATVs and Young Riders](#), [ATVs on the Farm](#), and [ATV Safety Features](#).

Director’s Message continued from page 2

We hope that this provides a resource for our region’s farmers to learn about studies that help them improve the health and safety on their farm. We also hope that this will build a community of partners interested in learning about new technology and tools, which can speed up the process of getting solutions into the hands of farmers.

We will be promoting this registry throughout the summer, so if you go to any farm shows that are on our calendar, come on up and ask us about it. More information is at <https://gpcah.public-health.uiowa.edu/farmer-rancher-registry/>

Registry Topics of Interest Selection List (including other and all)	
General Safety: <ul style="list-style-type: none"> • Child/youth safety on the farm • Fall prevention • Safe animal handling • Farm structures/buildings • Animal handling structures • Farm safety checklists 	Health Topics: <ul style="list-style-type: none"> • Chemical safety and health • Musculoskeletal hazards • Air quality on the farm and respiratory health • Noise exposures and hearing loss • Zoonotic disease • Personal protective equipment • Heat/cold hazards • Skin cancer • Mental health, including work stress • Cognitive decline/aging on the farm
Equipment Safety: <ul style="list-style-type: none"> • Machine • Tractor • ATV • Roadway • Confined space 	

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).

Come visit GPCAH at our outreach events this summer

by Jenn Patterson, MLitt, GPCAH Center Coordinator



GPCAH is connecting with agricultural communities, producers, educators, healthcare professionals, and farm safety advocates through several events this summer and we want you to join us. We will share research findings, provide up-to-date safety training and resources, and engage in discussion to learn about our regions' current needs and challenges affecting health and safety on the farm.

At all events, we will encourage attendees to share their safety success stories with our FarmSafe podcast listeners, so stop by to say hi and let us know how you are approaching health and safety hazards on the farm. We will also promote a new Farmer/Rancher Registry to allow us to reach back out to farmers about new health and safety information.

International Society for Agricultural Safety and Health (ISASH) June 18-21, 2023 Tampa Bay, FL

[ISASH](#) is dedicated to the professional development of ag safety and health professionals and provides national and international leadership in preventing injuries and illnesses within the ag community. The GPCAH outreach team will be on hand to share information about the [FarmSafe Podcast](#) and promote a special episode dedicated to the memory of our friend and colleague, Dr. Paul Gunderson. Jenn Patterson will also roll out the promotion of our new [Farmer/Rancher Registry](#), a centralized database that connects agricultural workers with Ag Safety and Health researchers conducting studies that may improve health and safety on the farm.

Minnesota FarmFest 2023 August 1-3 Redwood County, MN

Agriculture ranks among the most hazardous industries, according to the National Institute for Occupational Safety and Health. Farmers, farm workers, and farm families are at high risk for fatal and nonfatal injuries. However, deaths from asphyxiation, falls, aspiration, infection, explosion, and toxic gas can be prevented. Relatively inexpensive and easy-to-use direct-reading gas monitors can alert farmers to life-threatening concentrations of gases on the farm.



Marsha Cheyney, GPCAH Outreach Specialist, will be at [Minnesota FarmFest](#) with gas monitors to demonstrate how to use and wear when handling manure and other manure gas generating tasks. Marsha will show attendees how to ensure the monitors work, how to respond when the alarm goes off, and what the numbers mean. Stop by and bring your own monitor if you want to do a quick bump test. Learn more about planning ahead to avoid gas-related incidents [here](#).

National Association of County Agricultural Agents (NACAA) August 13-17, 2023 Des Moines, IA

We are attending the [NACAA](#) meeting to meet with professional extension agents to share educational materials. We will offer educational posters, information about educational programs, including our free online training modules, and promote interactive materials that can be incorporated into discussions. We want to talk to attendees about their personal training preferences, so stop by and let us know what works best for you.

GPCAH outreach events continued on page 8

Midwest Rural Agricultural Safety and Health Conference (MRASH) November 8-9, 2023

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

The Midwest Rural Agricultural Safety and Health Conference will “Celebrate Youth on the Farm” on November 8-9, 2023, in historic Dubuque. Dubuque is where Iowa, Illinois and Wisconsin come together and is easily accessible by major highways or by air. MRASH 2023 will be an in-person conference.



We recognize that youth are one of our most important assets in agriculture and will be investigating many aspects of their involvement on our farms. How do we keep them safe? What is developmentally appropriate at various ages? How do we prepare for changing youth employment policies? We will also celebrate 25 years of I-CASH’s Ag Youth Grants by sharing examples of how youth leadership has contributed to safety and health in agriculture. Our keynote session will focus on youth issues during the first morning of the conference. Both students and professionals are invited to participate in our ever popular student networking lunch.

We want to feature your work! Breakout sessions in the afternoon of November 8, as well as posters and displays in the evening, will feature a wide variety of projects submitted by YOU! We are currently accepting abstracts on our [conference website](#). Please consider which of your projects you would like to submit. *Presentation and roundtable abstracts are due August 1. Poster and display abstracts are due October 1.* We encourage creative ways to communicate your information in ways that engage the audience. We ask posters to follow #betterposter guidelines.

The second day of the conference will include a variety of panels, discussions, tours and workshops, with some focusing on youth issues and including youth as speakers. A workshop on Emergency Preparedness will be offered by the Great Plains Center for Agricultural Health. We plan to include options to visit the Mississippi River Museum and see resources available from the National Education Center for Agricultural Safety (NECAS).

More program details will be posted to the [MRASH conference website](#) in July and registration will begin in early September. If you have questions or comments about the conference or would like to be a sponsor or exhibitor, please contact Gayle Olson at gayle-olson@uiowa.edu.

Dubuque bills itself as “Where Iowa Started” and we will be in downtown Dubuque where much of the action is! Whether you are interested in history, nature, entertainment or good food, you can find it in Dubuque. We look forward to seeing you there!

Ag Safety and Health Course continued from page 1

regional partners, including Ag Health and Safety Alliance; Center for Food Security and Public Health at Iowa State University, College of Veterinary Medicine; National Educational Center for Agricultural Safety; National Institute for Occupational Safety and Health; National Pork Board; University of Iowa Carver College of Medicine, College of Nursing, and College of Public Health; and University of Missouri-Kansas City School of Pharmacy.

We appreciate the partnerships and continued support of these organizations that allow us to deliver the course each year to health and safety professionals, as well as students interested in rural and agricultural health and safety.

If you missed the course this year, many of the resources are available at no cost on the [GPCAH website](#).

Call for pilot grant applications

by Jenn Patterson, MLitt, GPCAH Center Coordinator

GPCAH funds pilot projects (up to \$30,000 per project) intended to promote innovative outreach and research efforts to prevent agricultural injury and illness. Projects must target agricultural injury and illness prevention to help improve safety and health among agricultural communities in our Midwest region. The money can cover staff salaries, supplies, equipment, materials, and other expenses.

The pilot program supports both community-based organizations (staff who are creating new ag safety and health knowledge and/or assessing and promoting best safety and health practices) and academic researchers, especially new investigators and trainees.

Potential topics include:

- Injury prevention
- Mental health & wellness
- Chemical safety
- Machine safety
- Prevention of slips, trips, and falls
- Any topic of relevance to the GPCAH mission -- to prevent agricultural injury and illness and improve safety and health among agricultural communities.

Applications are due July 3.

Visit <https://gpcah.public-health.uiowa.edu/gpcah-pilot-grant-program/> to learn more and read the RFP.

Listen to a special FarmSafe Podcast to hear from past pilot award recipients about their experiences [here](#).



The poster features the Great Plains Center for Agricultural Health logo at the top left. The main title is 'CALL FOR PILOT GRANT APPLICATIONS' in large green letters. Below it, the text reads 'Promoting innovative outreach & research to prevent agricultural injury and illness.' A list of potential topics includes: Prevention of slips, trips, & falls; Chemical safety; and Machine safety. A QR code is located in the bottom right corner, and a URL 'bit.ly/2023pg' is at the bottom left. The background image shows a person in work clothes climbing a ladder.

2023 Pilot Grant Recipient

Abstract author Ting Xia, PhD, Department of Mechanical Engineering at Northern Illinois University

Abstract

Slips, trips, and falls (STFs) are major risks for fatal and non-fatal injuries in the agricultural sectors where unsafe floor conditions are common. Additionally, weight-carrying has been identified as a main risk factor for STF. We will validate an innovative, kinematics-based risk of falls (RoF) assessment method using weight-carrying tasks on simulated unsafe floor conditions. Additionally, occupational exoskeletons have been developed to increase productivity and reduce work-related musculoskeletal disorders, particularly related to weight carrying. However, few studies investigated OccExo use under unsafe floor conditions. Therefore, OccExo use will be utilized as a testing case to further validate the proposed methodology. Once validated, this innovative methodology can serve as a testing platform for several applications including but not limited to the understanding of RoF in varying worker populations and personal protection equipment testing, which ultimately helps to reduce STF-related injuries and fatalities in the agricultural sectors. Check [GPCAH.org](https://gpcah.org) updates.



Ting Xia, PhD

I-CASH Youth Grants awarded

by Tabitha Kuehn, BS, I-CASH Outreach Coordinator

Each year I-CASH provides funds for small grants to Iowa youth groups who help educate their community members and improve safety on farms in their area. This year ten projects were funded.

AC/GC FFA

The AC/GC FFA Chapter will be developing a school garden to provide locally grown produce for the AC/GC School District. Students will plant, harvest, and deliver the food they grow to the school nutritional staff. Students will also learn about food safety and agricultural safety as they navigate growing their own food.

Central Community FFA

Central Community FFA will bring awareness to farmers about protecting themselves from ultraviolet rays and thank farmers for their efforts in food and animal production. Central Community FFA plans to distribute UV protection materials such as sunglasses, SPF lip balm, sunscreen, hats, and more to farmers in the field and at local co-ops.

Clarke County ISU Extension and Outreach

Clarke County ISU Extension and Outreach will develop an educational program for students and farmers about chemical and medication safety. 4-H youth will gather chemical look-a-like and safety resources, and use these to educate their fellow classmates and local farmers. They will also put together to-go bags for local farmers that include resources, PPE, and chemical storage signs.

Floyd County ISU Extension and Outreach & Charles City FFA

Floyd County Extension and Charles City FFA will work together to deliver safety and mental health resources and appreciation to local farmers in the form of resource filled 5-gallon buckets. The mental health and safety resources will be delivered during harvest season and will include first aid kits, snacks, educational mental health information, hats, gloves, and more.

Sioux Central FFA

Sioux Central FFA will speak with farmers at grain terminal locations about respiratory health and hearing. During their annual Feed the Farmers Day, students will visit with farmers at grain terminals and listen to farmer experiences and share resources to help them make safe choices.

South Hardin FFA

South Hardin FFA students will distribute 5-gallon buckets containing safety items to farmers and discuss the importance of safety while operating large equipment, staying alert and focused while machinery is moving, and provide resources to producers.

South Winneshiek FFA

South Winneshiek FFA will assemble “Be a Warrior, Take a Break” snack bags that encourage farmers to take a break during harvest season. The bags will be distributed at local co-ops, and students will promote this activity on social media, the school website, and local media.

Southwest Valley FFA

Southwest Valley FFA’s project will work to address roadway safety. To reduce roadway incidents, they will purchase reflective stickers that go on the back and sides of equipment and purchase SMV



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FarmSafe Podcast: Upcoming Episodes

by Mandy Archer, BA, GPCAH Outreach Specialist

We are currently in the second season of the FarmSafe Podcast and will be entering our third season this Fall. Since last August, we have promoted events, highlighted women in agriculture (4 episodes), focused on mental health, mud safety, and safe animal handling (3 episodes), and offered pilot grant inspiration by sharing stories about past recipients and their projects.



FarmSafe is a podcast for farmers and their advocates, and we speak with ag workers and public health experts to share real-life tips for making safer and healthier decisions on the farm. Looking ahead, we will talk with Dr. Aaron Yoder about rural emergency preparedness, Dr. Tom Peters about using drones for pesticide application, and more. These episodes are part of the Technology on the Farm series. We will release a memorial episode with special memories dedicated to our friend and colleague, Dr. Paul Gunderson, on June 14. Paul, an essential member of the GPCAH external advisory board, passed away last December at age 82.

We would like to thank our Season 2 guests so far, Carrie Klumb (an infectious disease epidemiologist from the Minnesota Department of Health), Dr. Athena Ramos (University of Nebraska Medical Center, specializes in research related to Latino and Hispanic farmworkers), Dr. Fred Whitford (Purdue University Extension), Lesley Kelly (Co-founder of the Do More Agriculture Foundation, and High Heels and Canola Fields blogger), Sabrina Keiper (Amana Forestry), Karen Thornton (Farmer, Linn County Health Department), Dr. Carly Nichols (University of Iowa researcher focused on stress in wom-en in agriculture), and Shelby and Susan Wright (Agricultural Sales).

Catch up on the FarmSafe episodes at [FarmSafe Podcast](#).

GPCAH Outreach events continued from page 4

Farm Progress Show August 29, 2023 Decatur, IL

We are excited to go to Illinois this year for the [Farm Progress Show](#), the nation's largest farm event. We will be in the Safety and Health tent and are ready to meet thousands of producers and organizations that push the boundaries of innovation in agriculture.

At this show, we will bring equipment to help individual farmers assess whether the hearing protection they have selected and use provides good protection. We will conduct hearing protection fit checks, which take about 5 minutes to see if your plugs are reducing sound that gets delivered to your eardrum. This test simply requires inserting hearing protection or putting on specially fitted earmuffs with small microphones and a short burst of sound to measure sound levels inside and outside of your ear. We know that farmers are at risk permanent hearing loss from hazardous levels of noise –from livestock, grain dryers, tractors, and other agricultural equipment. These tests measure the amount of noise reduction provided by different types of hearing protection to help workers better understand the level of protection achieved by wearing properly fitted protection. They will also have recommendations for how to limit daily noise exposure duration and identify common “high noise” areas and equipment. Learn more about preventing hearing loss [here](#).



If you have questions or topics that you would like to talk with our outreach team about, please contact us at cph-greatplainscenter@uiowa.edu.

Enroll in the new GPCAH Farmer/Rancher Registry and learn about opportunities to participate in studies that may improve health and safety on the farm

by Jenn Patterson, MLitt, GPCAH Center Coordinator

Anyone involved in agricultural production can sign up for the Farmer/Rancher Registry, a centralized database for Ag Safety and Health that matches researchers with interested individuals for studies aimed at protecting the health and safety of agricultural workers. Some studies may be as simple as filling out a survey or participating in a focus group, or they can be more involved, like participating in a field study or trying out a new device. Some of the study topics are included in the graphic at right.

The Registry will expedite the research process by making the volunteer enrollment process timelier and more efficient. GPCAH investigators have found that once a volunteer is done with one study, they are often interested in participating in future research opportunities. The Registry allows these individuals to sign up once to learn about different studies that may interest them as they become available.

We will be meeting people in person to sign them up, but anyone who farms or ranches can sign up on line or mail in the enrollment form. We will ask about you and your farming history, your agricultural operations, and what topics you are interested in. We will contact you only by the preferred method you provide. Once we enroll enough farmers/ranchers, we will contact you to share information about studies that you might want to know about. You are free to contact these investigators – or not. It's always your choice to participate in future studies. You can always opt-out of the registry at any time.

Learn more and sign up [here](#). If you have any questions at all, please contact Jennifer-j-patterson@uiowa.



I-CASH Youth Grants continued from page 7

(Slow Moving Vehicle) signs to distribute to local farmers. Students will also help apply the reflective stickers, SMVs and promote the availability of these materials and services through social media and local media.

Washington County 4-H and ISU Extension and Outreach

Washington County 4-H and ISU Extension and Outreach will continue their popular “Stay Safe, Take a Break” program, where students meet farmers in the field during harvest and remind them to take a break and provide them with a resource bag. This year “Stay Safe, Take a Break” will focus on fire safety and distribute fire extinguishers to the farmers they interact with. Youth members will also create a display about the “Stay Safe, Take a Break” project for the county fair.

Wayne County FFA

The Wayne County FFA Chapters will work together to cook, assemble, and distribute over 400 meals to Wayne County farmers and their crews during harvest season. This year, they will distribute fire extinguishers along side the meals and speak with farmers about fire and equipment safety.

For information on the I-CASH Youth Grant program visit www.I-CASH.org

NEWS AND UPDATES

The Midwest Rural Agricultural Safety and Health (MRASH)

Conference will be held

November 8 - 9 in Dubuque,

IA. Abstracts are now being accepted on topics related to agricultural health and safety research, surveillance, education, outreach, and intervention. Abstracts focusing on emerging issues and evidence-based practices or related to youth are highly encouraged.



Submit
an Abstract



- Presentation and roundtable abstracts will be accepted through **August 1, 2023**.
- Poster and display abstracts will be accepted through **October 1, 2023**.

An important part of the MRASH Conference is you! Submit your abstract on the [MRASH website](#).

National Farm Safety & Health Week - September 17-23

Each year since 1944, the third week of September has been recognized as National Farm Safety & Health Week. The 2023 theme is "No One Can Take Your Place." Each day of the week will have its own focus, daily themes are listed below.



- Monday, September 18, 2023 - Equipment and Rural Roadway Safety
- Tuesday, September 19, 2023 - Health and Wellness
- Wednesday, September 20, 2023 - Priority Populations
- Thursday, September 21, 2023 - Confined Spaces
- Friday, September 22, 2023 - Brain Health

Visit www.necasag.org for more information.

Upcoming Events

June 18-21

International Society for Agricultural Safety and Health (ISASH) Conference

Tampa, FL

July 9-12

ASABE Annual International Meeting

Omaha, NE

July 18-21

Agricultural Health and Safety Course for Medical and Safety Professionals

Omaha, NE

August 1-3

Minnesota Farmfest

Redwood County, MN

August 3

Iowa Women in Agriculture Annual Conference

Ankeny, IA

August 12-17

National Association of County Ag Agents Annual Meeting

Des Moines, IA

August 29-31

Farm Progress Show

Decatur, IL

September 12-14

Husker Harvest Days

Grand Island, NE

September 17-23

National Farm Safety and Health Week

November 8-9

Midwest Rural Agricultural Safety and Health Conference (MRASH)

Dubuque, IA



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