

Episode Title: Introducing FarmSafe and the Great Plains Center for Agricultural Health

Summary: Welcome to the FarmSafe podcast. Farming is a dangerous job and there are a variety of hazards involved. In this introductory episode, GPCAH researchers and partners talk about their work to help keep farmers safe and healthy.

You will first hear from this season's host, Kate Crawford, PhD. In order of appearance, we talked with Ralph Altmaier, MS, Kayla Faust, PhD, our center director Renée T. Anthony, PhD, Matthew Nonnenman, PhD (University of Nebraska), Kanika Arora, PhD, Nate Fethke, PhD, Jenna Gibbs, PhD, Diane Rohlman, PhD, and Brandi Janssen, PhD.

Expert (In order of appearance): Ralph Altmaier, Kayla Faust, our center director Renee Anthony, Matthew Nonnenman, Kanika Arora, Nate Fethke, Jenna Gibbs, Diane Rohlman, and Brandi Janssen

Episode Quotes:

"Agriculture includes farmers, their families, their communities, and all the industries that make up the food, fiber, and fuel supply chains. Actually, it impacts everybody because we all like to eat. However, many people working in agriculture get sick, injured, or die on the job.

*So, when we think about agricultural safety and health, we need to think about the role that all these people can play in preventing injury and illness. **That's our approach in the Outreach Core of the Great Plains Center for Agricultural Health at the University of Iowa.**"*

– Diane Rohlman, GPCAH

"When you're raised in a family farm and sitting around the holidays, you can't help but be talking farm. Over those years, you know, start hearing a lot of those not-so-great stories about what happened on the farm and all of a sudden, you know, a cousin doesn't show up at Christmas that year and it just really starts to hit home how dangerous the farming industry is. But when you absolutely love it, you're not going to leave it either. So, I guess that kind of just drove me to want to make it safer."

– Kayla Faust

Transcript

00:07 K Crawford

Welcome to the *FarmSafe* Podcast brought to you by the Great Plains Center for Agricultural Health. In the blink of an eye, an injury can change your life and your farm forever. During each episode, we share first-hand stories and real-life tips for making safer and healthier decisions while on the farm.

00:33 K Crawford

To introduce the Great Plains Center and the *FarmSafe* Podcast today, we asked partners, researchers, and staff from the center to share with us some of their stories about the kind of work they do making work on the farm safer, and how they became interested in this field in the first place. Ralph and Kayla shared stories about growing up on the farm and realizing at a young age what a dangerous profession farming can be.

00:57 Ralph

When I was a kid, my father would take me to lots of farm meetings. And I, as I got a little older, I began to realize that if there was more than a dozen farmers there, there was at least one that was missing a hand or an arm— every time! I eventually asked him about it, and he said, "oh, corn pickers are nasty— they got a lot of people." Made me very aware of safety— I needed to pay attention.

01:21 K Faust

I was born and raised in Iowa, in a farming family and was always involved in FFA, 4H, and you know when you're raised in a family farm and sitting around the holidays, you can't help but be talking farm. Over those years, you know, start hearing a lot of those not-so-great stories about what happened on the farm and all of a sudden, you know, a cousin doesn't show up at Christmas that year and it just really starts to hit home how dangerous the farming industry is. But when you absolutely love it, you're not going to leave it either. So, I guess that kind of just drove me to want to make it safer.

01:56 K Crawford

Next, we hear from Dr. Renee Anthony, the director of the Great Plains Center. I asked Dr. Anthony to share a little about the center's history and mission.

02:05 R Anthony

I'm Renee Anthony, Director of the Great Plains Center for Agricultural Health, located at the University of Iowa. Our center was founded in 1990, and we are the oldest of 10 regional agricultural safety and health centers that are currently funded by the National Institute for Occupational Safety and Health, or NIOSH. Our center serves 9 Midwestern states, and our goal is to prevent agricultural injury and illness among agricultural communities. We accomplish this mission to advance knowledge through scientific research and by providing education, outreach and intervention programs. Our recent research focus has included improving air quality in livestock buildings, developing interventions to prevent crashes with farm equipment on rural roadways, improving our understanding of the relationship between farming tasks and musculoskeletal injuries such as back pain and shoulder pain, and finally to understand regional risk factors associated with injuries to farmers and farm workers throughout the region so that we can identify and reduce the burden of injury and illness to farmers.

03:07 K Crawford

To find out more about the research the center is doing, I asked some of the Great Plains researchers to tell us more about their interests and work.

03:16 M Nonnenmann

My name is Matt Nonnenmann, and I'm an industrial hygienist and my experience started in agricultural safety and health when I worked in a lab as a student and I learned that corn dust caused lung inflammation, which was surprising to me because I had worked in agriculture over the summer and my family farmed and I hadn't heard that. I mean you hear about asbestos and, you know, silica, but I hadn't heard about corn dust and that surprised me and intrigued me. So, I started learning more about the field of agricultural safety and health.

My research area that I'm really interested in is characterizing bioaerosols which, you know, can include fungi, bacteria, and viruses, and how to control exposure— so either through engineering systems or personal protective equipment. And then kind of integrating that with the One Health Model, so improving the health of people working in animal production environments as well as improving the health of the animals. Can we find ways to reduce influenza transmission in swine production? And that includes people to pigs and pigs to people. And this applies to chicken production as well and you know any other production where influenza is problematic.

We also focus on dust and controlling dust. There's some evidence to suggest that exposure results in lung inflammation and perhaps disease, and so I think the challenge is how to do we help producers respond and make sure everyone is safe and healthy and has access to the equipment they need so they can reduce the exposure during those higher exposure events.

05:11 K Arora

Hello, my name is Kanika Arora, and I'm a faculty member in the University of Iowa's department of Health Management and Policy. I was trained as an applied gerontologist, and I'm interested in studying public health consequences of population aging. One particular area of interest relates to understanding whether and how environmental and other factors, accumulated over the life span, influence an individual's risk of developing dementia. In a recent study, my colleagues and I found significantly higher prevalence of dementia among older adults reporting the longest held job in the agricultural sector with stronger estimates among those with extensive job tenure. These findings have important safety implications because farmers continue to work in hazardous

environments until an advanced age. Based on these findings, I'm currently working with colleagues in Illinois to develop training materials for farm families dealing with dementia. The goal of this work is to facilitate farmers to remain productive on the farm for as long as possible while also maintaining safety given memory loss, language problems, and other unpredictable behaviors that come with dementia.

06:16 N Fethke

I'm Nate Fethke, faculty in the University of Iowa's Department of Occupational and Environmental Health. My background is biomedical engineering, and more specifically in the areas of biomechanics and musculoskeletal health. For nearly twenty years, I've been a certified professional ergonomist, and while a lot of people have heard the term "ergonomics," it's important to keep in mind that ergonomics, at its core, is about optimizing how humans interact with work systems. One of my particular areas of expertise is in the development and use of sensor systems to measure the physical interactions between people and their work environments. For example, by measuring postures, movement characteristics, muscle activity, and vibration during work, and then figuring out if those measurements tell us something about risk for common musculoskeletal problems like back pain, tendonitis, and carpal tunnel syndrome. Agriculture is a fascinating and exciting industry in which to apply these skills because every farmer is different, and every farm is different. And so, understanding how each farmer interacts with her or his equipment is an important step toward keeping farmers safe, healthy, and productive.

I've also been involved in a number of studies focused on ergonomics in large herd dairy operations which look quite a bit different from what many think of as a traditional family farm. These studies have evaluated the effects of different parlor and milking equipment designs, again with the goal of optimizing dairy worker interactions with the work environment.

07:41 K Crawford

The goal of this research is to improve health and safety on the farm, and a big part of that is communicating these findings to people who will benefit from it— like farmers and agricultural community members. Jenna Gibbs, who works for the Ag Safety and Health Alliance explains more about the importance of making sure research findings get back out into the community.

08:03 J Gibbs

Well, I grew up in Missouri, Stockton, Missouri which it has a ton of cattle production and row crop production, so I've been around agriculture my whole life, and I got really interested in pesticide safety, so I became an industrial hygienist, just because I think pesticide science and the science around row crops is really interesting. As an industrial hygienist, I was creating a lot of science, but I felt like I could do more to get it out into the community. So, I think now scientific translation is really important to me and I like working for the Ag Health and Safety Alliance because we can look at the data and then we can take it out into the world and use it to educate people, to change people's minds to impact their behavior. And so, I think I like working for an outreach organization because you feel like you're making that difference, and you feel like you're giving people the knowledge to— to save their lives actually so it, it feels very rewarding.

09:06 K Crawford

The Great Plains Center also provides outreach to a variety of organizations to increase the awareness of hazards and to increase awareness of best practices to prevent injuries. I asked Dr. Diane Rohlman and Dr. Brandi Janssen to elaborate on the kind of outreach work they do for the center and why it's so important.

09:24 D Rohlman

Agriculture includes farmers, their families, their communities, and all the industries that make up the food, fiber, and fuel supply chains. Actually, it impacts everybody because we all like to eat. However, many people working in agriculture get sick, injured, or die on the job.

So, when we think about agricultural safety and health, we need to think about the role that all these people can play in preventing injury and illness. That's our approach in the Outreach Core of the Great Plains Center for Agricultural Health at the University of Iowa.

09:55 D Rohlman

I am Diane Rohlman and one of my jobs is teaching farmers, safety managers, healthcare providers, veterinarians, pharmacists, and others about preventing workplace injuries in agriculture. In the Agricultural Safety and Health Core Course, we talk about hazards on the farm and the role each person can play in making farms safer. Teaching this course is one of my favorite things to do. For one week in June, we bring together people from all backgrounds to talk about agricultural safety. There's a lot of conversation and shared experiences and I learn a lot.

10:27 B Janssen

I'm Brandi Janssen and one of my jobs in the Outreach Core is to think about how to get new stakeholders involved in agricultural safety and health. And I'm especially interested in working with the agricultural media and other non-traditional partners, like bankers or farm service organizations, to help them see their roles in protecting farmers and farm workers. So, one way we reach farmers is through news stories, like our regular Safety Watch column in Iowa Farmer Today that goes out across the Midwest. And this allows us to interview farmers and share their experiences with a broader audience, which helps people across our region understand important issues in agricultural safety and health.

And both of these activities, both the course and our news materials and our other outreach always use the best science from our center, translating research into practical information that can be used on the farm.

11:16 R Anthony

Our vision is to have safe and healthy agricultural communities, which we hope to achieve through research and prevention efforts. In fact, this *FarmSafe* podcast series is one of many ways we hope to reach farmers and their advocates throughout our region to shine a light on both the dangers of farming and on practices that have been adopted by farming operations that have helped protect an essential workforce—our farmers.

Visit us on the *FarmSafe* podcast to join in on the conversation about keeping safe on the farm.

11:47 K Crawford

Join us next time when we start our ATV Safety Series. We'll be talking to Dr. Chuck Jennissen about ATVs on roadways.

11:55 K Crawford

We want to hear from you. Share your stories about health and safety issues on the farm, about injuries that made you change the way you work, or about the ways you keep yourself and others safe on your farm. Also, let us know if there are any topics that you want to hear about on the air. You can visit our website, gpcah.org or email us.

Original music for the FarmSafe podcast was written and performed by Ben Schmidt.

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Episode Resources

- [Agriculture Health and Safety: The Core Course](#)
- [SafetyWatch](#)

Photo

