

Study Shows Working in Agriculture Poses Higher Risk of Developing Dementia

by Kanika Arora, PhD, Assistant Professor and Jenn Patterson, MLitt, GPCAH Communications Coordinator

This first-of-its-kind study in the U.S. asks: Are agricultural workers at greater risk than non-agricultural workers of developing dementia? The answer, according to University of Iowa researchers is: "Yes."

University of Iowa researchers mined data from the [Health and Retirement Study \(1998-2014\)](#), a longitudinal panel study that surveyed a representative sample of approximately 20,000 individuals over age 50 in the U.S. This new analysis explored whether rates of dementia and cognitive decline were different in older adults who had worked long-term in agriculture. Investigators found that those who identified as having long-term occupations in the agriculture, fishing and forestry sectors had **46%** greater odds of having dementia than those who did not. This finding was stronger among younger seniors, those who reported being fully retired, and those who had worked over 10 years at their longest-held job.



The results of this study – recently published in the peer-reviewed *Journal of Gerontology: Social Sciences* (DOI: [10.1093/geronb/gbab005](https://doi.org/10.1093/geronb/gbab005)) – can help researchers develop effective interventions to protect older farmers. “This study is both timely and relevant because farmers routinely work beyond standard retirement age, making them vulnerable to occupational injury. Additionally, a dementia diagnosis among farmers may be missed or delayed for a variety of reasons, causing even greater safety concerns,” said Kanika Arora, PhD, Assistant Professor in the University of Iowa College of Public Health.

While researchers could not attribute the association to hearing impairment or depression – factors independently associated with both agriculture and dementia – the effect of pesticide exposure among agricultural workers may warrant further study.

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“This is consistent with previous studies showing adverse associations between neurotoxicant exposure and these specific measures of cognitive performance,” Arora said. This study indicates that agricultural workers have lower resistance against the effects of dementia compared to people in professional or technical jobs. “While the onset of the disease may be postponed due to higher resistance to damage to the brain among professional and technical workers, the rate of decline may be faster due to greater accumulation of brain pathology,” said Arora.

This study was supported by the [Great Plains Center for Agricultural Health](#) at the University of Iowa (funded by the US CDC, U54 OH 007548). For more information about how farmers get hurt and how to prevent these injuries, visit gpcah.org and select “resources” from the menu options.

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Director's Message

by Renée Anthony PhD, CIH, CSP

The Great Plains Center for Agricultural Health (GPCAH) has committed efforts over decades to investigate hazards and work with farmers, equipment manufacturers, and others to not just identify risks, but to prevent injuries and illnesses. As we enter Spring and prepare equipment for the 2021 planting season, now is a good time to begin preparing to protect our health and safety on the farm. Our resources for [farmers](#), [health care providers](#), and [ag educators](#) are all curated on the [GPCAH website](#) for your use and sharing. Topics and resources have been compiled based on input over time, and we continue to ask for input to help us focus on hazards important to farmers.



Renée Anthony PhD,
CIH, CSP

Over the years, we have asked for your input to help direct our efforts so we continue answering questions about health and safety that are important and relevant to our Midwest farmers. Previously, we have asked farmers where they turn to for [trusted resources](#) on illness and injury prevention (answer: your health care provider and print media were top sources). In 2018, we surveyed farmers to prioritize their [concerns](#) on the farm, which we have reported [previously](#) in *Alive and Well*. Prior to the floods of 2019 and the current COVID-19 pandemic, Midwest farmers' top concerns included consistent concerns about equipment hazards. But farmers also identified new priority concerns involving chemical safety (pesticide drift associated with dicamba was likely a driver for the elevation of this concern) and chronic health outcomes, including hearing loss, cancer, and respiratory health. This same survey explored stressors among farm owners/operators, and financial and climate/weather dominated responses, but family and workload/farm management concerns were also important to those who responded.

In 2021, we anticipate that Midwest farmers' concerns and stressors have changed. To address these new concerns, we continue to solicit input from farmers, farmworkers and their advocates to stay on top of these changing perceptions. In this month's newsletter, we provide you with updates to some new initiatives that you can give voice to.

Kate Crawford, a GPCAH postdoctoral research scholar, is leading a team to develop a podcast series to improve our communication of risks and best practices for safe work on the farm. While our advisors indicate "you can reach farmers by podcast," we want to know if you are *really* interested and, if so, what topics do you want to learn about? We've added a [survey](#) and a corresponding web page for you to visit to lend your voice to this exciting endeavor.

To continue addressing farmer concerns about mental health, Rima Afifi's team is examining the impact of COVID-19 stresses and coping strategies among our region's farmers ([see page 3](#)). This is your chance to give us your thoughts in a [formal survey](#), and we hope you share the link with farmers in your network to help make everyone's voice heard.

With all of these activities, our investigators and outreach team continue to collaborate with the Centers for Disease Control and Prevention, US Ag Safety Centers in other states, and regional advocates to provide verified COVID-19 updates to the region. New information on messaging for COVID-19 vaccination and planning for farm operations are being developed. We update our COVID-19 [information page](#) frequently, whenever new guidance and resources become available.

If you have questions on health and safety concerns on the farm, please participate in ongoing surveys and, as always, send us an email at cph-greatplainscenter@uiowa.edu for ways we can help.

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Farm Families Alive & Well
Published 4/yr
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319/335-4219
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Center for Agricultural Health



Questions about COVID-19 and Vaccines? UI Health Care's COVID-19 Toolkit Provides Answers

by Jenn Patterson, MLitt

What do vaccines do, how do they do it, and how do the authorized vaccines prevent COVID-19? How and when can I get a vaccine? What are the side effects? Does it work on kids? Will I gain immunity after one or both of the injections?

In this time of global uncertainty, questions like these need timely and informed answers. The Great Plains Center for Agricultural Health has been active in developing, updating, and disseminating [COVID-19 guidance](#) for farmers starting last April. We also link to regional health departments and updated CDC guidance on this page.

As vaccines become available, we want to point out additional resources that may prove useful to your farming operations and families. UI Health Care provides important updates on [vaccines, availability and safety](#) as part of their COVID-19 toolkit. The toolkit is an online collection of health and safety resources dedicated to stopping the spread and keeping you safe and healthy.

The toolkit offers an easy-to-understand and comprehensive look at updated information on the COVID-19 coronavirus through short videos, posters, directions, FAQs, and safety how-tos. It also provides links to important resources for pediatric and adult patients, and caretakers about living with cancer, kidney disease, HIV, organ transplants, and other diseases. There is even a section dedicated to how you can do your part to fight the pandemic by donating items, money or blood; thanking health care workers on social media; and, following county, state, and national guidelines. Many of the toolkit materials are available in both English and Spanish. Those of us involved with *Alive and Well* highly encourage you to visit the [toolkit](#) site to remain updated and informed about the ongoing pandemic.

Research Study: COVID-19 Related Stress, Coping and Wellbeing among Farmers

We want to hear about your experience! The financial and social effects of the COVID-19 pandemic have increased the already high levels of stress experienced by farmers. A University of Iowa College of Public Health survey aims to learn about the impacts of COVID-19 on farmers. Farmers are the backbone of the country. If you are interested in sharing your experience, please click on this link <http://bit.ly/farmersandcovid19>

What Do You Want to Know About Making Your Workday on the Farm Safer and Healthier?

by Kate Crawford, PhD, MS; Renée Anthony, PhD, CIH, CSP; and Jenn Patterson, MLitt

Farmers know it only takes one incident to cause a farm injury that can change your life. Sharing stories of incidents and close calls can bring light to the on-farm risks and lead to discussions about effective ways to prevent debilitating injuries and illnesses. The GPCAH staff are developing *FarmSafe*, a new podcast dedicated to sharing stories and tips to make your workday on the farm safer and healthier.

As we prepare stories to release later this spring, we want to know what topics you want included in the discussion. Since you are reading *Alive & Well*, you have some thoughts on the issue. We are asking all subscribers to fill out the short (1-3 minute) survey using the link below and let us know what is important to you. **Are you interested in listening to podcasts? What topics are important to you?** We want to make sure to include topics and stories to share how you keep yourself and others safe on your farm, and if you are willing to share personal stories about injuries or events in your farming community that changed the way you approach farming safely. The survey asks what questions you have about safety and health so we can bring in experts, manufacturers, or other resources to help answer those questions in an audio format.

Click on this link to let us know what you think: https://uiowa.qualtrics.com/jfe/form/SV_b2zK5n1ImzNj4dU
We look forward to your voice helping guide other farmers to safe 2021 planting and harvest.



The 20th Midwest Rural Agricultural Safety and Health Conference (MRASH)

will be held in 2021. We've had 18 face-to-face conferences in locations around Iowa and one successful virtual conference. Given the roll-out of COVID-19 vaccinations, emerging variants, and travel and budget restrictions, the MRASH Planning Team needs your input to plan the format and schedule of this year's conference, to be held during the week of November 8-12, 2021. Please complete [the survey](#) before **March 12** to answer a few short questions, so we can know your current thoughts about what will best work for you.



SAVE THE DATE

Agricultural Safety and Health: The Core Course

Virtual Course June 14-18, 2021

The course provides the information and skills needed to enable safety and health professionals to anticipate, recognize, and prevent occupational illness and injury among members of the agricultural community.



<https://gpcah.public-health.uiowa.edu/education>

NEWS AND UPDATES

Iowa State University is offering a free four-module program to prepare employees, supervisors, and owners of manufacturing and construction companies for planning, preparing, and responding to COVID-19 in the workplace. The one-hour webinars will be offered every Wednesday at 8:00 am to 9:00 am, from January through September 2021. The program will offer ten cycles of the four webinars. Information on each webinar, dates, and registration links are available at <https://sh.ae.iastate.edu/#farmers> | #COVID19 | #MaskUpIA | #farmbureau

The **Iowa Spanish Helpline (515) 344-3936** is available to help the Spanish-speaking community in Iowa with the goal of providing information, resources, and support. The line is answered by professionals from the Latino community, and all information is confidential. Hours are Monday - Friday, 8:00 am - 5:00 pm.

I-CASH Agricultural Youth Grant applications are now available.

Each year I-CASH provides funds for community grants to Iowa youth groups and organizations for the prevention of farm-related injury. Past projects have included distributing safety supplies, building farm safety hazard displays, and developing agricultural safety materials and presentations. **Applications are due April 15th.** Visit www.i-cash.org for details.

Rural PREP (Preparing for Rural Practice) offers free educational materials on topics related to rural practice. Diane Rohlman, PhD, UI Professor and Endowed Chair in Rural Health and Safety has developed two teaching kits for the Rural PREP Resource Library. The ***Mental Health in Rural Communities*** and ***Agricultural Exposures: Organophosphate Pesticide Poisoning and Prevention*** teaching kits contain everything needed to facilitate the learning activity. For more information visit <https://ruralprep.org/resources>

Rural Health and Safety of Eastern Iowa, in collaboration with Mercy Iowa City, conducted COVID-19 testing from their mobile clinic in six rural communities, of those tested 27% were positive. COVID-19 vaccination clinics are being planned using the rural mobile clinic. Visit <https://ruralhealthandsafety.org> for details.

Upcoming Events

March 22-24

North American Agricultural Safety Summit

Virtual Event

April 5-9

Public Health Conference of Iowa

Virtual Event

April 15

I-CASH Agricultural Youth Grant

Deadline

May 4-7

National Rural Health Association Annual Rural Health Conference

Virtual Event

May 24-26

American Industrial Hygiene Conference & Exposition

Dallas, TX - Hybrid Event

June 14-18

Agricultural Safety and Health: The Core Course

Virtual Event

June 21-24

International Society for Agricultural Safety and Health (ISASH) Conference

Virtual Event

July 11-14

American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting

Virtual and On-Demand

July 13-16

Central States Center for Agricultural Safety and Health (CS-CASH) Agricultural Health and Safety Course



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