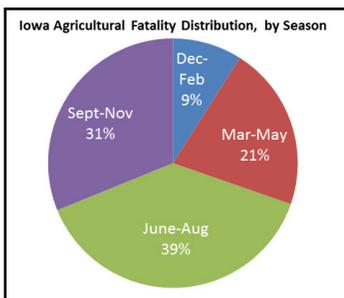


Safety Tips for Ag Workers: Lessons Learned from Fatality Investigations

Vol. 18, Issue 2 - March 2012

by T. Renée Anthony, PhD, CIH, CSP

As the agricultural community prepares for planting season, it is important to provide reminders of springtime safety hazards. Conditions associated with farmer fatalities have been evaluated in the Iowa Fatality Assessment & Control Evaluation (FACE) surveillance database to examine seasonal trends and customize prevention



guidance. The chart at left illustrates that as farmers begin fieldwork, the fatality counts begin to rise.

Of all springtime farmer fatalities, 62% involve moving tractors, trucks or automobiles. Even though

the Great Plains Center for Agricultural Health (GPCAH) has recommended roll-over protective structures (ROPS) on tractors for decades, only 1 of 8 springtime tractor rollovers had ROPS installed. There are still clear needs to retrofit older tractors with ROPS, and operators also need to be reminded of the importance of seatbelt use in all vehicles.

Another large proportion (23%) of farmer fatalities were attributed to being struck by unsecured loads, such as stacked baled crops, raised equipment, and poorly supported vehicles. Stable stacking of baled materials is critical to prevent injuries throughout the year. The weight of feed and equipment, when stored overhead, has sufficient mass to cause fatal crushing injuries. Vehicles that are raised to be worked on

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Two New Agricultural Health Centers in the Midwest and a Looming Funding Crisis

by Fred Gerr, MD

The Midwest is now home to three Agricultural Health and Safety Centers funded by the National Institute for Occupational Safety and Health (NIOSH), substantially increasing the level of expertise and resources in the region. As you may know, the Great Plains Center at the University of Iowa has been in continuous operation for twenty years and is one of the two longest serving agricultural health centers in the United States. We are now joined by the two newest agricultural health centers in the nation, the Central States Center for Agricultural Safety and Health in Omaha, Nebraska, and the Upper Midwest Agricultural Safety and Health Center, in Minneapolis, Minnesota.

The Central States Center for Agricultural Safety and Health is part of the College of Public Health at the University of Nebraska Medical Center and focuses primarily on respiratory disease research, injury surveillance, and the educational needs of farmers, including non-traditional farmers, their family members, and employees. It is directed by an expert in agricultural health and safety and former Great Plains Center faculty member, Risto Rautiainen, PhD.

The Upper Midwest Agricultural Safety and Health 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, and the Minnesota Department of Health. It will focus initially on health and safety issues related to animal agriculture production. A central theme is the interrelationship between the production practices and the health and safety conditions in the workplace. The center is directed by Drs. Bruce Alexander and Jeffrey Bender of the University of Minnesota and Dr. Matthew Keifer of the National Farm Medicine Center of the Marshfield Clinic Research Foundation.

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Fred Gerr, MD

Iowa's Center for Agricultural Safety and Health (I-CASH) is seeking proposals for its **2012 Injury Prevention in Agricultural Youth Grants**. Each year I-CASH designates funds for community grants targeted at the prevention of farm-related injury in young people and their families. Applications are available at www.public-health.uiowa.edu/icasb. For more information contact LaMar Grafft at 319/335-4233 or lamar-grafft@uiowa.edu. **Application deadline is March 31, 2012.**

The **Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals** course will be held June 11-15, 2012 in Iowa City, Iowa. Nurses, physicians, nurse practitioners, physician assistants, veterinarians, and other interested health care professionals are invited to participate. The training provides information and skills to enable the health care professional to function in the anticipation, diagnosis, treatment, and prevention of occupational illnesses and injuries in the farm community. The course may be taken for three graduate credit hours from the U of I College of Public Health. Contact Kay Mohling at 319/335-4219 or kay-mohling@uiowa.edu for more information.

The Great Plains Center for Agricultural Health (GPCAH) is pleased to announce a small grant program for fiscal year 2013. The objective of this basic and applied research small grant program is to serve as an incubator for new agricultural health and safety research, prevention, intervention, community outreach, and translation projects that have high likelihood of leading to more comprehensive projects or activities. Each project is limited to \$15,000 total cost and all funding is conditional on availability of funds to the GPCAH. **Applications must be received by March 19, 2012.** For details visit the GPCAH website at www.public-health.uiowa.edu/gpcah.

In January, Farm Safety 4 Just Kids (FS4JK) staff attended the Ag Expo in Poplar Bluff, MO. The event served as a USDA Risk Management Agency regional workshop where Shari Burgus, education director, presented on farm safety and health. In addition, Ellen Duysen of the University of Nebraska Medical Center and Karen Funkenbusch with the University of Missouri joined Shari to staff a farm safety and health booth. Farmers were interviewed about their preference for educational resources and programs, and personal protective equipment was given to trade show participants.

from underneath also pose a significant crushing hazard if they are not fully supported. Jacks are intended to lift a vehicle off of the tires and, if they have a sufficiently large contact area with the vehicle being lifted, allow a person to work from the side of the vehicle (such as to change a tire). However, jacks are not designed to eliminate the risk of a raised vehicle from falling. Vibrations to the vehicle, such as the force of a wrench, may cause it to slip off of the jacks. When working under a raised vehicle, the weight should be supported by cribbing designed to support the load. In the springtime, with muddy ground, even this cribbing could be insufficient. When the ground is muddy or otherwise unstable, using large, thick boards under the cribbing helps to spread the weight of the supported vehicle over a larger ground surface, minimizing risks.

Behavioral factors associated with these fatalities show that 50% of fatalities were associated with the injured standing in the way of moving equipment, charging animals, and falling materials. Pedestrians walking around tractors are also at risk for injury. It is important to develop rules and communicate with those around you on how to approach vehicles (maintain eye contact first) and how to check the area prior to moving a vehicle, both to ensure no one is in harm's way.

These recommendations apply year-round to agricultural workers, and they are important reminders as we ready equipment to begin the new growing season. As tragic as it is to investigate farmer fatalities, the Iowa FACE team is committed to providing guidance to workers around the country on how to prevent these injuries from happening to others. For more information on the Iowa FACE program, please visit www.public-health.uiowa.edu/face.

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Two New Agricultural Health Centers continued from page 1

While the addition of two new centers is great news for agricultural safety and health in the Midwest, the recently announced possibility of elimination of all ten national agricultural health centers is deeply worrisome. Those of you who followed this issue last year will recall that the NIOSH Agriculture Forestry and Fishing Program was initially cut from the federal budget and, after a substantial public outcry, eventually restored to previous funding levels. In that process, we came very close to losing this important national resource for protecting the health and safety of the nation's agricultural producers. Unfortunately, with the release in February of the draft FY 2013 federal budget, these programs are *again* proposed for elimination. Following restoration of funding last year, I wrote in the September 2011 issue of *Alive and Well*, that "It now appears that each additional year of funding will likely require a well-coordinated effort to 'remind' our appropriators of the value of protecting the health of those who grow our nation's food, fuel, and fiber." I am seldom sorer when my own words come true.

In response to this attack on the health and safety of agricultural workers, we will be reaching out to you to ask for your opinions and your support in our efforts to restore funding for the NIOSH Agricultural, Forestry and Fishing program. We will, of course, also be making our appropriators aware of the importance of this program.

Dr. Fred Gerr directs the GPCAH, housed in the Department of Occupational and Environmental Health of the College of Public Health. He can be reached at 319/335-4212 (fred.gerr@uiowa.edu).

Research to Practice continued from page 4

decreased respiratory health conditions, and decreased medical care costs of farm injuries and illnesses.

Collaborations with engaged stakeholders are essential to implementing research to practice activities, and CSF partnerships have expanded the program to include agricultural production methods employed in differing geographic regions of the U.S. These partnerships have led to the creation of a multi-state coalition of interested parties to further the adoption of CSF concepts into agricultural production operations. The goal is to develop a national model of a sustainable CSF program that will have consistency, quality, and coordination among the participating parties, featuring incentives from insurance and other agricultural service companies.

CSF research to practice activities include the implementation of the program at a large, private farm in Iowa, and the implementation of CSF within a rural health outreach program in Central Wisconsin⁵. A CSF program has also been introduced in a five-county area of North Carolina through a joint program of the North Carolina Cooperative Extension and AgriSafe of North Carolina. Pilot testing of the CSF program has begun in New York and Nebraska agricultural operations, and a component of the CSF program to address OSHA regulations on large farms is being developed.

Information on the CSF program is available at www.certifiedsafefarm.com or by contacting Aaron Kline at 319/335-4065 or (aaron-kline@uiowa.edu)

Information on the GPCAH Community Partnerships program is available at www.public-health.uiowa.edu/gpcb.

1.) Donham KJ, Anders T. *Agricultural Medicine: Occupational and environmental health for the health professions*. Ames, IA: Blackwell Publishing; 2006. 2.) Donham KJ, Merchant JA, Lassise D, Popenorf VJ, Burmeister LF. Preventing respiratory disease in swine confinement workers: Intervention through applied epidemiology, education, and consultation. *Am J Ind Med* 18(3):241-261, 1990. 3.) TRAC-SAFE: A community-based program for reducing injuries and deaths from tractor overturns. DHHS (NIOSH) Publication No. 96-108. National Institute for Occupational Safety and Health. 1996. 4.) Donham KJ, Venzke JK. Agricultural occupational health nurse training and certification program: addressing the need for occupational health professionals in agricultural environments. *J Agromedicine* 4(1/2): 105-116, 1997. 5.) Schiller LS, Donham KJ, Anderson T, Dingledein DM, Strebel RR. Incorporating occupational health interventions in a community based participatory preventive health program for farm families: a qualitative study. *J Agromedicine*. 15(2): 117-26. 2010.

calendar

March 22-24

Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals
Marshfield, WI
www.public-health.uiowa.edu/icash

March 23

Women in Agriculture Conference
Moline, IL
www.extension.iastate.edu/scott/news/womeninagriculture

March 30

I-CASH Spring Meeting
Des Moines, IA
www.public-health.uiowa.edu/icash

March 31

2012 Injury Prevention in Agricultural Youth Grant deadline
www.public-health.uiowa.edu/icash

April 2-8

National Public Health Week
www.nphw.org

April 17-18

Iowa Governor's Conference on Public Health
Ames, IA
www.iowapha.org

April 17-20

National Rural Health Association's Annual Rural Health Conference
Denver, CO
www.ruralhealthweb.org

June 11-15

Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals
Iowa City, IA
www.public-health.uiowa.edu/icash/education/agmedtraining.html

June 24-28

International Society for Agricultural Safety and Health (ISASH) Conference
Burlington, VT
www.isash.org

July 16-19

Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals
Omaha, NE
www.public-health.uiowa.edu/icash/education/agmedtraining.html

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Research to Practice

Highlighting The Certified Safe Farm Program

Over the past 20 years, a large investment in agricultural safety and health research has been made in the U.S. and internationally. However, translating research into practice (R2P), defined by NIOSH as “the translation of knowledge, interventions, and technologies into highly effective prevention practices and products which are adopted into the workplace” (www.cdc.gov/niosh/r2p), has been challenging in the agricultural setting. To address this concern, the Great Plains Center for Agricultural Health (GPCAH) has introduced the *Community Partnerships: Research-to-Practice with Regional Agricultural Health Organizations* program. Creating partnerships with community-based agricultural health and safety organizations who have already established relationships with agricultural workers will facilitate the translating of evidence-based findings into prevention programs that directly impact agricultural producers.

This new column will introduce examples of evidence-based intervention/prevention programs to encourage readers to translate these programs to their constituent groups. Additional information, facilitation, and competitive pilot grant funding will be provided to parties interested in these or other research-based interventions.

The Certified Safe Farm (CSF) program, which began in 1996 as a research project of Iowa’s Center for Agricultural Safety and Health, is one example of an intervention that has proven effective through scientific research and development of partnerships with engaged stakeholders. The CSF program fits the R2P model, and would be eligible for potential support through the community competitive grants program.

The core concepts of the CSF program were guided by the “Iowa Integrated Model of Prevention Programming” described in the book *Agricultural Medicine: Occupational and Environmental Health for the Health Professions*.¹ These principles include the integration of: 1) an occupational health screening and wellness check conducted by health care providers trained in agricultural medicine, 2) an on-farm safety audit conducted by trained auditors, 3) educational programs, and 4) financial incentives and agribusiness or insurance discounts. These core concepts are built on a foundation of research from the University of Iowa that started in 1983, beginning with the Swine Producers Respiratory Hazards Prevention program,² the Tractor Risk Abatement and Control program,³ and the Agricultural Occupational Health Nurse Training and Certification Program.⁴ Major findings of the CSF program are an increased use of personal protective equipment,

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