

Building Capacity

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In 1974, the first graduate course in agricultural health was introduced at the University of Iowa. This course has evolved to include training for medical students, nurses, and other health professions students, a Graduate Certificate in Agricultural Safety and Health, and an MS and PhD in Agricultural Safety and Health. In 1987, a version of this course was developed into a 40-hour continuing education course to train AgriSafe providers. Approximately 400 health and safety professionals have attended the training in Iowa.

With little availability of this type of training, the Building Capacity Program was proposed to train professionals, including AgriSafe providers, and develop resources in other regions. The goal is to train health professionals to develop sustainable agricultural safety and health training programs within their states. The course, *Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals*, is a University of Iowa course coordinated by Iowa's Center for Agricultural Safety and Health (I-CASH) and funded by NIOSH



through the Great Plains Center for Agricultural Health (GPCAH). The content of the course is guided by a consensus process among rural and agricultural health and safety professionals, and by the text book *Agricultural Medicine: Occupational and Environmental Health for the Health*

Professions. As the course is offered in different states, it is modified to include differences in agricultural processes and exposures, cultural and climatic variations, and availability and type of health services.

In 2008 the course was held in Iowa, Illinois and Vermont. In 2009, the course will be offered in Marshfield, Wisconsin on May 18-22; in Iowa City, Iowa on June 8-12; in Springfield, Illinois on August 3-7; and in Greenville, North Carolina on November 30-December 4.

For information on these training opportunities visit the I-CASH website at www.public-health.uiowa.edu/icash or contact Kay Mohling at 319/335-4219 or kay-mohling@uiowa.edu.

Agricultural Injuries - What We Know and Don't Know

by Risto Rautiainen, PhD

The results of the 2007 Census of Agriculture were released recently. The number of farms increased slightly from 2002, but National Agricultural Statistics Service (NASS) experts point out this may be due to better tracking and the farm definition (\$1000 products sold) which is affected by inflation. Farmers are aging (average age 57) and there are more women principal operators (14%). About 65% of the principal operators have off-farm employment, and only 45% have farming as their main occupation.

Agriculture is the most hazardous industry in the United States, based on occupational fatality rates reported by the Census of Fatal Occupational Injuries:

75% of them are in production agriculture and its support activities. The most recent rate was 27.3 fatalities per 100,000 workers in agriculture and 3.7/100,000 in all industries. The number of occupational fatalities in agriculture was 573 in 2007. Non-fatal injury and illness rates have declined. The non-fatal injury rate was 5.0/100 person-years among hired agricultural workers and 4.0/100 among all private sector workers in 2007. These data are not available for self-employed farmers and ranchers, as no



Risto Rautiainen, PhD

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The training course, *Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals* will be held **June 8-12, 2009** at the HotelVetro & Conference Center in Iowa City, Iowa. Nurses, physicians, nurse practitioners, physician assistants, 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 University of Iowa College of Public Health, and continuing education credits for physicians and nurses are offered. The brochure is available at www.public-health.uiowa.edu/icash. Contact Kay Mohling at 319/335-4219 or kay-mohling@uiowa.edu for more information.



Kristi Ruth, Farm Safety 4 Just Kids' newest youth representative, was recognized as one of the Red Cross of Central Iowa's Heroes of the Heartland. Kristi was honored at a breakfast banquet on March 5th in Altoona, Iowa and received the Youth Good Samaritan Award for her volunteer efforts and active role in the farm safety movement. Kristi is a senior at Chariton High School, and donates 50-100 hours per month to farm safety advocacy. In addition to public speaking, she is also actively involved with the National Organizations for Youth Safety (NOYS), and traveled to Washington DC as part of a youth panel of NOYS members from across the country.



Upcoming **AgriSafe Distance Learning Webinars** include "Health and Safety in the Fields: Reaching teen farm workers through high school ESL classes" and "Helping Farm People Manage Their Behavioral Health." For the most up-to-date information and further details on how to join the sessions go to www.agrisafe.org/education or contact Stacey Jenkins at 763/786-4340 or sjenkins@agrisafe.org

Agricultural Injuries (continued from page 1)
consistent surveillance mechanism exists for them. Surveys and studies continue to show that the injury rates among farmers are high and so are the costs. According to some estimates, occupational injury costs in the United States rival the costs of cancer and heart disease.

Recent studies, including those by Great Plains Center for Agricultural Health (GPCAH) investigators, have identified many risk factors for injury. Male gender, older age, larger farm size, raising of livestock including horses, impaired hearing, arthritis, and several other factors are known to increase the risk of injury. A current GPCAH pilot study in collaboration with NASS will address the injury risks in part-time farming. Fatality Assessment and Control Evaluation (FACE) investigations in Iowa and other states have identified numerous sources of fatalities involving machinery, buildings and structures, outdoor environments, and livestock.

While the injury data for agriculture are not perfect, we know enough to identify many types of injuries that should be prevented. Are we making progress? A recent systematic review of the literature, to which GPCAH made a contribution, found only eight high quality agricultural injury intervention studies. Many more are needed.

While the knowledge of agricultural injuries has gradually improved, and we have made progress in prevention, we have produced only marginal results in reducing the injuries. New types of resources for sustained education, enforcement, and engineering might be needed to effectively build a culture of safety in agriculture.

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SAVE THE DATE

Midwest Rural Agricultural Safety and Health Forum

November 18-19, 2009

Des Moines, IA

Check the GPCAH and I-CASH websites for updated information

www.public-health.uiowa.edu/gpcah

www.public-health.uiowa.edu/icash



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Fatalities Caused by Cattle- Iowa, Kansas, Missouri, and Nebraska

by Wayne T. Sanderson, PhD, CIH and Murray D. Madsen, MBA

Agriculture has ranked as the most hazardous industry in the U.S. every year since 2003. The University of Iowa Fatality Assessment and Control Evaluation (IA FACE) program and the Great Plains Center for Agricultural Health (GPCAH) analyzed surveillance data collected within the four state region



of Iowa, Kansas, Missouri, and Nebraska of all occupational fatalities, as well as press clippings, for fatalities associated with cattle for the years 2003 through 2008. Over 21% of the nation's cattle and calf herd are raised within this region, and a total of 21 workers were killed by cattle during these years.

The 21 victims were typically older males; the age range was 8 to 86 years old with a median age of 65 years. Only one of the victims was female. An average of 3.5 incidents occurred per year (range 2 to 6; mode 3), and at least one incident occurred in each month. One-third of the incidents occurred in March and April, which is calving season. Eight (38%) of the cases occurred in Iowa.

The most common activities of the victims at the time of the incident were working with and treating cattle in enclosed spaces (33%), and moving or sorting them toward pens, barns, or pastures (24%). Incidents also occurred while victims were loading cattle into trucks or trailers (14%), feeding (14%), or working in an open pasture (14%).

Ten (48%) of the fatalities were attacks by bulls—four dairy bulls and six beef bulls. Six (29%) of the fatalities were attacks by cows—three with calves and three without calves. The attack was not witnessed in three cases, but in some of these attacks the bull or cow had reportedly exhibited aggressive behavior in the past.

The cause of death was generally blunt force trauma to the head or chest. Common features associated with these deaths involved moving or herding cattle, working with cattle in enclosed areas, and the aggressive nature of the bulls or cows. At least six (38%) of the attacks were not witnessed, precluding any forewarning by a co-worker and the rendering of prompt aid.

To reduce injuries caused by cattle, farmers should be aware of the hazards and risks, improve their livestock handling facilities, and take special precautions when working with cattle, particularly cattle having a history of aggressive behavior. Large livestock are enormously powerful, deceptively fast, protective and especially unpredictable during breeding and birthing periods. The surveillance data provides information which can guide interventions to reduce fatal and nonfatal injuries associated with cattle. Excellent information sources and materials on cattle handling and facilities are available from state Agricultural Extension Services.

Dr. Wayne Sanderson directs the GPCAH, housed in the Department of Occupational and Environmental Health of the College of Public Health. He can be reached at 319/335-4207 (wayne-sanderson@uiowa.edu). Murray Madsen is the Associate Director of the GPCAH. He can be reached at 319/335-4481 (murray-madsen@uiowa.edu)

calendar

April 16

I-CASH Annual Spring Meeting
Johnston, IA
www.public-health.uiowa.edu/icash

May 18-22

Wisconsin AgriSafe Training
Marshfield, WI
www.public-health.uiowa.edu/icash

May 30-June 4

American Industrial Hygiene Association Conference: Discoveries Beyond Borders
Toronto, Canada
www.aiha.org/aihce09/default.htm

June 8-12

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

June 14-18

National Institute for Farm Safety, Inc. Annual Conference
New Orleans, LA
<http://ohioline.osu.edu/~agsafety/NIFS/nifs.htm>

June 21-24

ASABE Annual International Meeting
Reno, NV
www.asabe.org/meetings/aim2009/

August 3-5

The Clock is Ticking for Rural America
Sioux Falls, SD
www.agriwellness.org

August 3-7

Agricultural Occupational Health Training
Springfield, IL
www.public-health.uiowa.edu/icash

September 1-3

2009 Farm Progress Show
Decatur, IL
www.farmprogressshow.com

November 18-19

Midwest Rural Agricultural Safety and Health Forum
Des Moines, IA
www.public-health.uiowa.edu/icash

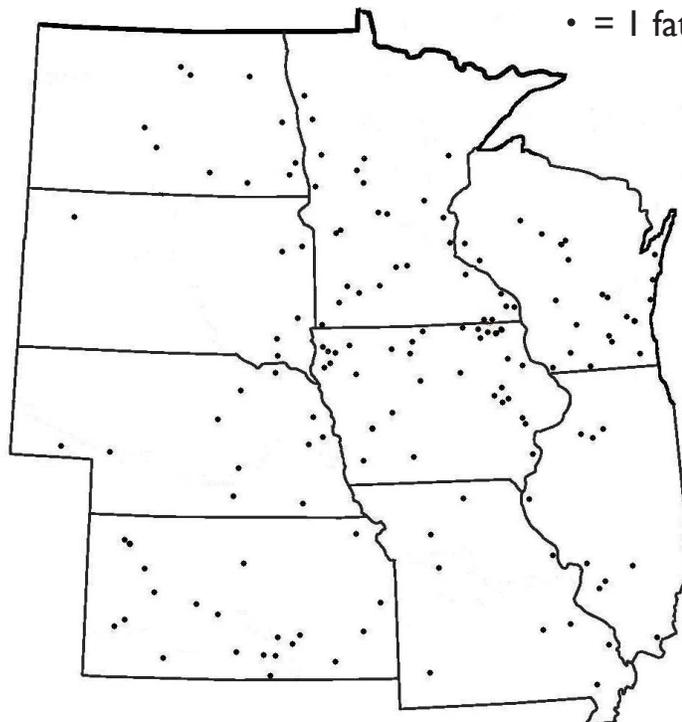
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RETURN SERVICE REQUESTED

+++++It All Adds Up
 Farm and Agricultural Deaths Reported in Press Clippings, 2008

Clips About Deaths (146)	
Tractors and Machinery	62.3%
(Incl ATV utility haulers at work)	
Overturn	28.5%
Runover	23.1%
Crushed	17.6%
Collision	9.9%
Entangled	9.9%
Other	11.0%
Grain/Feed Storage and Handling	6.8%
Livestock Handling	5.5%
Other	25.4%



• = 1 fatality clip