



## Protecting the Agricultural Safety and Health of Farm Families

### GLC Newsletter May 2005



This newsletter is a publication of the Great Lakes Center for Agricultural Safety and Health based at The Ohio State University.

The goal of the Center is to promote agricultural safety and health for farm, forestry and fishery employers, workers, families and their communities in the Great Lakes region (Illinois, Indiana, Kentucky, Michigan, Ohio, Pennsylvania, Wisconsin and West Virginia). The Great Lakes Center for Agricultural Safety and Health currently has the following agricultural safety and health focus areas: Ergonomics; Pesticide Exposure and Health Effects Assessment; Acute Unintentional Injury; Virtual Reality Simulation of Hazardous Agricultural Jobs and Agricultural Safety and Health Education and Outreach.

For more information, contact Cynthia Brundage, Program Manager, Great Lakes Center for Agricultural Safety and Health, The Ohio State University, Agricultural Engineering Building, 590 Woody Hayes Drive, Room 263, Columbus, Ohio 43210, E-mail: [brundage.19@osu.edu](mailto:brundage.19@osu.edu), Telephone: 614-292-0622, Fax: 614-292-9448

Great Lakes Center for Agricultural Safety and Health website: <http://www.ag.ohio-state.edu/~agsafety/glc>

## GLC PROJECT UPDATE Farm Grain Engulfment Hazard Assessment Tool

At Illinois State University in Normal, IL, Assistant Professor Doug Kingman is hard at work with his project "Field Test of the Farm Grain Engulfment Hazard Assessment Tool." The Farm Grain Hazard Assessment Tool (FGHAT) is a 28-question survey with the goal of predicting the increased likelihood of an engulfment in flowing grain and identifying existing contributing factors to engulfment through the analysis of its responses. The survey, which is both web- and paper-based, asks questions in regards to the grain handler's current perceptions and activities relating to grain storage management and work procedures. Kingman is receiving assistance from the Illinois Farm Bureau and two talented students (Wade Meter and Kara Nelson). Ultimately, Kingman hopes to have the web-based version of FGHAT as a real-time assessment with feedback that identifies specific risky behaviors and recommends preventative measures to reduce the risk of engulfment to the grain handlers.



## May 2005 Contents

### GLC PROJECT UPDATE

#### Research: Farm Grain Engulfment Hazard Assessment Tool

Focuses on an Illinois State University project that has the goal of reducing the risk of engulfment to grain handlers.

#### Education and Outreach: GLCASH Fellows Evaluation Course Now On-line

Provides information on an on-line educational program where participants learn about effective evaluations, work with a mentor who is an evaluation specialist, and practice what they learn by evaluating their programs.

#### GLC STAFF SPOTLIGHT New Addition to the GLC Staff

Introduces Cynthia V. Brundage, the new Program Manager for the Great Lakes Center for Agricultural Safety and Health.

#### REGIONAL AG. SAFETY SPOTLIGHT:

#### Amish Transportation Safety Projects in Ohio

Highlights Ohio State University Extension's efforts to enhance buggy safety, bicycle safety, pedestrian safety and motorist safety in areas with Amish populations.

#### New Indiana Publication Offers Advice for Farmers Dealing with Arthritis

Reviews a publication designed specifically for agricultural workers with arthritis. Ordering information is included.

#### SAFETY & HEALTH CALENDAR

#### May-September 2005

Provides dates and locations for various safety and health conferences.



## GLCASH Fellows Evaluation Course Now On-line

A total of 13 Fellows came together face-to-face on February 10 and 11, 2005, at the Holiday Inn on Lane Avenue in Columbus, OH, to participate in the Great Lakes Center for Agricultural Safety and Health (GLCASH) Fellows Program conference.

The GLCASH Fellows Program is an on-line educational program where participants learn about effective evaluations, work with a mentor who is an evaluation specialist, and practice what they learn by evaluating their programs.

The conference marked the beginning of the Fellows on-line WebCt Evaluation course. This new Fellows program is based at The Ohio State University and includes individuals who are developing or implementing agricultural and/or rural safety and health education programs. The Fellows and mentors represent the Great Lakes states which include Ohio, Wisconsin, Michigan, Kentucky, Pennsylvania, West Virginia, Indiana and Illinois.

To learn more about the program, visit <http://glcfellows.osu.edu> or call Karen Bruns or Reyna Layton with OSU CARES/ OSU Extension at 614-688-4486 (Reyna Q. Layton).

## REGIONAL AGRICULTURAL SAFETY SPOTLIGHT New Indiana Publication Offers Advice for Farmers Dealing with Arthritis

Arthritis, a condition that can reduce strength and mobility for completing routine chores, is a pain to farmers.

"Arthritis is one of the most common disabling conditions, and it especially affects farmers due to the physical nature of their work, which may include baling hay, moving livestock or bending down frequently when milking dairy cows," said Paul Jones, manager of Purdue University's Breaking New Ground Resource Center.

To provide help for agricultural workers with arthritis, Breaking New Ground has partnered with the Arthritis Foundation, Indiana Chapter, to publish, "Arthritis and Agriculture: A Guide to Understanding and Living with Arthritis."

"Arthritis and Agriculture" covers a variety of arthritis-related topics, including



common types of arthritis, managing arthritis, unproven arthritis remedies and sources of assistance, according to Jones.

Designed specifically for agricultural workers, the guide also gives advice on methods of modifying farm and ranch tasks to provide added protection to joints. In addition, emphasis is placed on proper diagnosis, exercise, medication, stress management and working with a team of professionals to cope with arthritis. A variety of organizations are listed for those wanting further assistance with arthritis or disability-related issues.

"Arthritis affects one in three adults, that is 1.7 million Hoosiers," said Sharyl Border of the Arthritis Foundation, Indiana Chapter.

The term arthritis refers to more than 100 different ailments known as rheumatic diseases. The most common types are osteoarthritis, rheumatoid arthritis, bursitis and tendonitis.

Osteoarthritis causes the breakdown of the smooth, gliding surface of a joint, known as cartilage. When cartilage is destroyed, raw bone surfaces rub together and the bone ends may thicken and form boney overgrowth called spurs.

For farmers, frequent lifting of heavy objects, repeated use of vibrating machinery or constant bending to perform certain tasks can add to the stress on joints and set the stage for osteoarthritis, particularly of weight-bearing joints, according to "Arthritis and Agriculture."

Rheumatoid arthritis, an inflammatory condition that primarily affects the thin membrane (synovium) that lines and lubricates a joint, involves the entire body.

## GLC STAFF SPOTLIGHT New Addition to the GLC Staff

In January 2005 the Great Lakes Center for Agricultural Safety and Health (GLC) hired a Program Manager, Ms. Cynthia V. Brundage. As the Program Manager she is enjoying getting to know her counterparts at the other NIOSH Agricultural Centers and working with the talented people at The Ohio State University.

Born and raised in Chicago, IL, not only is Brundage new to the GLC but to Ohio as well. It was in Chicago that her interest in working for the public was first peaked while she received a Bachelor of Arts in Public Policy from DePaul University. From there Brundage continued her education at Indiana University where she received a Master's in Public Administration.

"One year later I followed my heart to Columbus, OH, and eventually to the GLC," states Brundage. "Working for the GLC and living in Columbus has been an exceptional experience. I'm looking forward to the work ahead and implementing the mission of the NIOSH Agricultural Health and Safety Centers." The GLC staff welcomes Brundage and are glad to have her aboard.

For more information, contact Cynthia V. Brundage @ 614-292-0622, [Brundage.19@osu.edu](mailto:Brundage.19@osu.edu)

It can affect men and women of all ages, but is more common among females in their 20s and 30s.

A farmer may develop bursitis or tendonitis when certain muscles or tendons are stressed, such as by too much lifting, carrying or throwing, or by constantly gripping and manipulating the controls on farm equipment, according to information in the brochure. Both bursitis and tendonitis are painful conditions that usually last only a short time and do not cause permanent damage.

There is no cure for arthritis, but “Arthritis and Agriculture” lists several ways to reduce its effects.

First, don’t ignore joint pain—see a doctor and get a specific diagnosis. The doctor will suggest a treatment plan, and a commitment to following that plan is essential to reducing the affects of arthritis.

Be active. Regular exercise protects joints by strengthening the muscles around them, lessens the pain and allows for an increased range of movement, and reduces fatigue. Exercise also can help reduce excess weight, and less weight equals less stress on joints, especially the knees, hips, back and feet.

“Arthritis and Agriculture” is available by calling the Arthritis Foundation, Indiana Chapter, at (800) 783-2342, <http://www.arthritis.org>.

For additional information about farming with a disability, contact Breaking New Ground at (800) 825-4264, <http://www.breakingnewfound.info>.

*Source: September 10, 2004, news release from Purdue University, Department of Agricultural Communication*

### **Amish Transportation Safety Projects in Ohio**

The horse and buggy is the most easily recognized symbol of Ohio’s Amish population.

A population that generally prefers to stay out of the mainstream and spotlight has ironically grown into one of the leading tourism draws in Ohio. The horse and buggy that catches the eyes of tourists is a legitimate means of transportation for the Amish. In more recent years, the horse and buggy has also caught the eye of Amish safety committees, law enforcement and Ohio State University (OSU) Extension.

Ohio has Amish populations in at least

33 of its 88 counties. One-third of all Amish in North America live in Ohio, with the Wayne/Holmes County community representing the largest settlement anywhere. For generations, the Amish have used horse-drawn buggies, bicycles and walking as their primary methods of transportation. While these have remained relatively constant, rural populations have increased and tourism in Amish communities has risen. Members of Amish Safety Committees have reported that the population of Amish in Ohio doubles roughly every 20 years. This leads to many more motorists, buggies, bicycles and pedestrians sharing the roads, creating an increased risk for incidents.

### **Amish Transportation Safety Program**

In 1991, some OSU Extension county offices and the OSU Extension Agricultural Safety office began work with Ohio’s Amish in response to a request from the Amish for assistance in decreasing the number of motor vehicle/buggy crashes. This resulted in the development of a Buggy Driving Safety Curriculum for use in Amish Schools. In 1993, work continued in the area of buggy lighting and marking research and educational programming. The Ohio Department of Public Safety (ODPS) and the Governor’s Highway Safety Office (GHSO) provided funding beginning in 1996 to expand these programs.

For the past five years, the ODPS/GHSO increased funding to support the Amish Transportation Safety Program at the OSU Extension Agricultural Safety Office. This close collaboration was a result of greater frequencies in injury and fatal crashes involving horse-drawn buggies and motor vehicles and the request from the Amish for more educational efforts.





## Buggy Safety

The Amish Transportation Safety Program encourages acceptance of a universal buggy lighting and marking program among all Amish of Ohio. This is a continuation of previous work with more emphasis on localized plans.

When dealing with both Amish and English audiences, it was necessary to develop different approaches for disseminating information. Multiple approaches increase exposure to the program and help more conservative groups of Amish take the first steps toward safety awareness and increased visibility while traveling on Ohio's roads. The tools available at this time include demonstration buggies with recommended lighting and marking configurations, poster displays, a video made in cooperation with the Ohio State Highway Patrol, fact sheets, and other printed material.

## Bicycle and Pedestrian Safety

Bicycle and pedestrian safety education, awareness and acceptance by the Amish are more recent efforts included in the program. This was a result of a request from the Amish out of concern for their children traveling to and from school. Target audiences were expanded to include young and old Amish as well as the general motoring public. Some of the work in the areas of bicycle and pedestrian safety, such as fact sheets, are also applicable to rural audiences as a whole. New supplements were developed for the 1991 Buggy Driving Safety curriculum to address bicycle and pedestrian safety issues. An evaluation of the supplements was conducted in 2003 on the effectiveness of the lesson plans. When surveyed, all of

the teachers who used the supplements in their schools reported that they planned to use the lessons again. A pre-test/post-test study of student knowledge resulted in all students improving test scores as a result of the supplements.

In 2003, a study was conducted to determine an acceptability level of bicycle helmet use among the Amish. About 80% of the classroom students who participated accepted a helmet. A higher percentage was noted at the Amish Health and Safety Day. A total of 186 helmets were distributed to students from 35 different schools (4 additional families were home schooled) and five different counties. Those counties include Holmes, Wayne, Tuscarawas, Stark and Monroe. It was also noticed that 65 of these students were female. This is slightly over 50% of the total distribution. This contradicts prior opinion that the helmets would definitely not be acceptable for females due to the head coverings required by their beliefs. It is hoped that since parental consent was required to receive a helmet, that the helmets will actually be used.

## All Who Travel Ohio Roads

Educational efforts must also be made toward the motorists who share the same roads as the Amish. Amish Transportation Safety displays were present at county fairs in the four largest Amish populated counties and varying smaller Amish populated counties from 2002 to 2004. These displays, in cooperation with the Ohio State Highway Patrol or County Sheriff's Office, provide a gentle reminder that buggies are in the community and safe driving must be practiced when approaching them on the road.

Safety programs will not prevent all incidents from occurring. However, we may reduce the number or at least reduce the severity of these incidents when they do occur. Cooperation from both the Amish and the motoring public is essential for an effective program. The Amish Transportation Safety Program is working toward addressing safety issues while keeping recommendations effective, economical and acceptable to Amish beliefs.

For additional information about the Amish Transportation Safety Program, contact Wayne Dellinger at Ohio State University Extension, Agricultural Safety and Health, at 614-292-1952 or [dellinger.6@osu.edu](mailto:dellinger.6@osu.edu).

## SAFETY & HEALTH CALENDAR May–September 2005

### May 12–14, 2005

National Farmworker Health Conference  
San Juan, Puerto Rico

### May 25–26, 2005

Occupational Safety & Health Issues of Special Populations

University of New England  
Biddeford Campus,  
Maine

*Sponsor: Maine  
Department of Labor*

### June 25, 2005

NIFS Pre-conference:  
Childhood Agricultural Injury Prevention  
Wintergreen, Virginia

### June 26–30, 2005

National Institute for Farm Safety (NIFS)  
Wintergreen, Virginia

### July 11–13, 2005

The Clock Is Ticking for Rural Americans: A Behavioral Health and Safety Conference  
Minneapolis, Minnesota

### September 18–22, 2005

XVIIth World Congress on Safety and Health at Work  
Orlando, Florida

*Support for this newsletter provided to the Great Lakes Center for Agricultural Safety and Health through Cooperative Agreement Number R01 OH04192 from Centers of Disease Control and Prevention.*

THE OHIO STATE UNIVERSITY

glc

Great Lakes Center for  
Agricultural Safety & Health