

Agricultural Safety and Health Hazards and Prevention

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Objectives:

Identify agricultural illness, injuries and fatalities

Describe hazards and controls in agricultural settings

Explain the value of participation in the International Society for Agricultural Safety and Health Conference June 21 to 24, 2015

The Agriculture, Forestry and Fishing sector

Growing crops, raising animals, harvesting timber, and harvesting fish and other animals on a farm, ranch, or from their natural habitats.

There were approximately 2.2 million AgFF workers in 2011. There were 566 fatal occupational injuries among AgFF workers that year, almost half of which were in crop production (245).

The incidence of OSHA-recordable nonfatal injuries and illnesses on farms with 11 or more employees, forestry, and fishing workplaces was 5.5 per 100 full-time equivalents in 2012, compared to 3.7 per 100 FTEs in all private and public industry.

The 2012 fatal injury rate for AgFF workers was the highest of any industrial sector, at 21.2 per 100,000 FTEs compared to 3.2 per 100,000 for all workers in the US.

<http://www.cdc.gov/niosh/agforfish/>

Fatalities

In 2012, 374 farmers and farm workers died from a work-related injury, resulting in a fatality rate of 20.2 deaths per 100,000 workers. Tractor overturns were the leading cause of death for these farmers and farm workers.

On average, 113 youth less than 20 years of age die annually from farm-related injuries (1995 -2002), with most of these deaths occurring to youth 16-19 years of age (34%).

Of the leading sources of fatal injuries to youth, 23% percent involved machinery (including tractors), 19% involved motor vehicles (including ATVs), and 16% were due to drowning.

<http://www.cdc.gov/niosh/topics/aginjury/>

Fatal Occupational Injuries in Indiana's Agriculture Industry

The information provided below was extracted from the Indiana Department of Labor's preliminary analysis of the Bureau of Labor Statistics' Census of Fatal Occupational Injuries (CFOI) data for 2010.

22 workers in Indiana's agriculture industry died on-the-job in 2010.

More than 60% of the workplace fatalities in the agriculture industry in 2010 are attributed to the crop production segment.

1 in every 5 fatal workplace injuries in Indiana in 2010 occurred in the agriculture industry.

12 of these fatal workplace injuries were transportation-related.

Non-fatal Occupational Injuries and Illnesses in Indiana's Agriculture Industry

The information provided below was extracted from the Indiana Department of Labor's analysis of the Bureau of Labor Statistics' Survey of Occupational Injuries and Illnesses (SOII) data for 2010.

The agriculture industry has the second highest non-fatal worker injury and illness rate (7.2 per 100 workers) in Indiana.

More than 38% of the non-fatal injuries in this industry required the affected worker to spend 1 or more days away from work.

The average number of days away from work for the affected worker was 3.

The most common nature of injury in the agriculture industry in Indiana is sprains (43%).

Further analysis will be provided in the Indiana Department of Labor's annual IN Review publication, which will be published early 2012.

Indiana Department of Labor's INSafe division

The Indiana Department of Labor's INSafe division provides free, confidential and onsite consultation to Hoosier employers. Employers will

not receive citations for safety and health hazards identified by INSafe Consultants. Instead, INSafe Consultants proactively work with employers and employee to identify and correct these hazards. Requests for onsite consultation or technical assistance will not initiate an OSHA inspection.

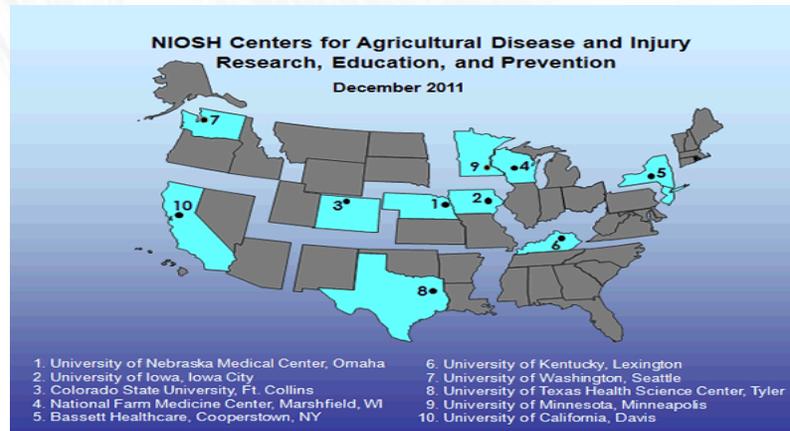
For more information about INSafe, please click [here](#). Employers may request a free onsite consultation online by clicking [here](#).

<http://www.in.gov/dol/2729.htm>

NIOSH AG Centers

The Centers for Agricultural Disease and Injury Research, Education, and Prevention represent a major NIOSH effort to protect the health and safety of agricultural workers and their families.

<http://www.cdc.gov/niosh/oep/agctrhom.html>



Hazards and Controls:

Issue + People + Resources

Tractor Overturns: Crops and Rops

Youth

Grain Handling

Heat

Agribility

Immigrant Workers

Tractor Overturns: Rops and crops

The most effective way to prevent tractor overturn deaths is the use of a Roll-Over Protective Structure (ROPS). In 2012, 59% of tractors used on farms in the US were equipped with ROPS. If ROPS were placed on all tractors used on US farms manufactured since the mid-1960s, the prevalence of ROPS-equipped tractors could be increased to over 80%.

How the ROPS (Rollover Protective Structure) Rebate Program Works

The National Farm Medicine Center ROPS Rebate Program will rebate 70% of the cost of purchasing and installing the ROPS (Rollover Protective Structure) up to \$865 maximum rebate. This includes the cost of the ROPS (rollbar, ROPS with awning or ROPS cab), shipping, and installation charges.

[Apply on-line](#) or call the ROPS Rebate Hotline (1-877-ROPS-R4U or 1-877-767-7748) for registration and pre-approval. [Click here to apply](#). You must be a resident of the state in which you are applying for a rebate and the ROPS you install must be certified. There are no other qualifying conditions. Pre-approval is required only to ensure that funding is available for the rebates. Rebates are available on a first come first served basis.

Only one tractor per farm can be rebated during a program year.

<https://www.nycamhoutreach.com/ropsr4u/wi/>

Cost-effective rollover protective structures (CROPS)

The NIOSH Division of Safety Research and Protective Technology Branch has developed a cost-effective rollover protective structures (CROPS) as an alternative to installing commercially available ROPS, which are hard to find, or as an option for older wheeled agricultural tractors for which ROPS are not commercially available. CROPS have been designed for four tractor models: (1) [Ford 8N](#), (2) [Ford 3000](#), (3) [Ford 4000](#), and (4) [Massey Ferguson 135](#). The NIOSH CROPS for each of the tractor models listed was successfully tested in accordance with Society of Automobile Engineers (SAE) industry standard performance test SAE J2194.

<http://www.cdc.gov/niosh/topics/aginjury/CROPS/default.html>



Installation of Cost-Effective ROPS (CROPS) Construction and Installations into Ag Mechanics Courses

An innovative model of prevention through design (PtD), this pilot study is testing the feasibility of integrating CROPS construction and installation projects into required Agricultural Mechanics classes in four rural county high school agricultural education programs (Montgomery, Laurel, Whitley and McCreary Counties).

This study builds upon the success of the [Economics of Prevention](#) projects (EOP I and II) in developing highly engaging, interactive agricultural safety and health content that meets state core curriculum requirements for economics, social studies, and vocational agriculture instruction.

<http://www.mc.uky.edu/scahip/CROPSinstallationVincentfeasibility2013.htm>

Indiana University Environmental Health Science

Environmental health is about prevention. Our goal is to intervene before people get sick or injured. We intervene through a framework of anticipation, recognition, evaluation and control of natural and human-made exposures to physical, chemical, biological, and psychosocial hazards.

<http://pbhealth.iupui.edu/index.php/about/divisions/environmental-health/>

Steven Lacey, PhD, CIH, CSP

ASSOCIATE PROFESSOR & DEPARTMENT CHAIR, ENVIRONMENTAL
HEALTH SCIENCE

<http://pbhealth.iupui.edu/index.php/about/faculty-and-staff/l/steven-lacey-phd/>

Youth

The problem of children being injured while living, working, or visiting agricultural work environments (primarily farms), has been recognized for several decades. Although many individuals and groups have crusaded for the prevention of childhood agricultural injuries over the years, there was not a national, coordinated effort.

<http://www.cdc.gov/niosh/topics/childag/default.html>

ATV use on the farm is becoming ever more common. The I-CASH Producers Committee decided that ATV safety on the farm is a major concern that should be addressed by I-CASH.

I-CASH promotes ATV safety at events and created a brief brochure to help farmers and their families use ATVs safely.

[ATV Safety Brochure](#)

Youth

In 2014, the Clay Central / Everly Middle School FFA were recognized at the MRASH conference for producing an outstanding project on hearing loss prevention, creating PSAs for Farm Safety Week, and distributing ear plugs during their Feed the Farmers event.

Examples from the past:

- Distributed ear plugs, sun screen, and cookies to farmers at harvest time
- Built a farm safety hazard hunt scene
- Purchased blurred vision goggles for an educational program
- Held a coloring, poster, or writing contest about tractor, ATV, livestock safety
- Held a car seat checkup and gave out candy to those using them

I-CASH annually designates funds for community grants to youth aimed at the prevention of farm-related injury. \$500 grants are available to decrease the risk of illness and injury due to farm hazard exposure.

<http://www.public-health.uiowa.edu/icash/programs/Youth-Ag-Safety-Grants/index.html>

<http://www.public-health.uiowa.edu/icash/resources/ATV-Safety/index.html>

Youth electrocution deaths

Representatives of the Occupational Safety and Health Administration are in northwestern Illinois today, continuing an investigation into the electrocution deaths Monday of two 14-year-old girls working in a cornfield.

According to spokesperson Rhonda Burke in the agency's Chicago office, OSHA representatives were in Tampico yesterday as well after Jade Garza and Hannah Kendall, both of Sterling, died after coming in contact with a field irrigator while working at removing tassels from corn. [A Facebook page](#) has been created to remember the two girls.

<http://www.chicagotribune.com/news/local/breaking/chi-osh-a-investigating-farm-accident-that-killed-two-teens-20110726-story.html>



Grain Handling,

On July 28, 2010, in the small town of Mt. Carroll, IL, 14-year old **Wyatt Whitebread** and 19-year old **Alex Pacas** were killed working in a grain bin. Will Piper, 20, was trapped for several hours before being rescued. Chris Lawton, 15, was able to escape and call for help.

Alex Pacas' aunt, Catherine Rylatt, realized a true need existed to educate and train those working in the industry. Catherine reached out to Dr. Robert Aherin, Agricultural Safety and Health Program Leader at the University of Illinois. Together, they sought out individuals, organizations, and agencies with connections to the grain and/or agricultural industries.

Thus, **the Grain Handling Safety Coalition (GHSC) was established.**

<http://grainsafety.org/>



Ag Resources IL

The Agricultural Safety and Health program seeks to provide research-based information and resources that assist individuals and organizations in the understanding and prevention of injury and illness while working in and around Illinois agriculture.

<http://web.extension.illinois.edu/agsafety/index.cfm>

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Heat

HEAT ILLNESS CAN BE DEADLY. Every year, thousands of workers become sick from exposure to heat, and some even die. **Heat illnesses and deaths are preventable.** Employers are responsible for providing workplaces that are safe from excessive heat.

[What is heat illness? How can heat illness be prevented?](#)

[Who is affected? https://www.osha.gov/SLTC/heatillness/](https://www.osha.gov/SLTC/heatillness/)



Resources Community Health Partnership

CHP has five health clinics that serve migrant and seasonal farmworkers and their families. We operate a nurse-managed health program for farmworkers that stresses outreach, health promotion, and case management.

CHP offers all medical and dental services according to a sliding fee scale. However, the vast majority of patients qualify to pay only a modest, voluntary co-pay for doctor visits, diagnostic services and prescription medicines.

CHP is experienced in health and safety research, as well as intervention programs for agricultural workers and their employers. We have been involved in various projects funded through the National Institute for Occupational Safety and Health (NIOSH) the Great Lakes Center for Occupational and Environmental Health, and the United States Environmental Protection Agency. These projects address pesticide safety, eye and back injury prevention, and childhood environmental health issues.

<http://chpofil.org/>

AgrAbility

The vision of AgrAbility is to enhance quality of life for farmers, ranchers, and other agricultural workers with disabilities. While the term "disability" often brings to mind conditions such as spinal cord injuries and amputations, AgrAbility addresses not only these but also many other conditions, such as arthritis, back impairments, and behavioral health issues.

Through education and assistance, AgrAbility helps to eliminate (or at least minimize) obstacles that inhibit success in production agriculture or agriculture-related occupations.

<http://www.agrability.org/>



Resources Purdue Engineering

Train rural leaders to increase their effectiveness in promoting agricultural safety and health issues.

Conduct in-depth investigations into specific high risk areas of agricultural production.

Improve rural and agricultural emergency response training.

Develop a rehabilitation technology information base and demonstrate service delivery strategies designed to enhance the independence of rural and farm families impacted by disability.

<https://engineering.purdue.edu/~agsafety/ASH/Program/programAreas.html>

William E. Field, Professor. Bill Field is a Professor in Agricultural and Biological Engineering at Purdue University. Bill provides leadership for both the department and Purdue University's agricultural health and safety program which includes teaching, research and extension education components. He also supervises the Breaking New Ground Outreach Program which provides assistance to farmers with physical handicaps.

<https://engineering.purdue.edu/~agsafety/ASH/staff.html#Faculty>

Immigrant Workers

Principles of Public Health for Community Health and Outreach Workers

Migrant Clinicians Network, a UMASH partner organization, announces a new series of 10 monthly webinars, conducted **entirely in Spanish**.

This course will offer an overview of the issues and challenges most relevant to public health, as well as the importance of the participation of community health workers and health promoters in strengthening public health.

Participants must register individually for each webinar. Continuing education credit can be provided.

[For more information, visit the MCN website](#)

<http://umash.umn.edu/events.html>

Immigrant Dairy Workers

The National Farm Medicine Center offers FREE, on-the-farm, safety and health training for your workers in Spanish and in English. [Seguridad en las Lecherías: Immigrant Dairy Worker Health and Safety](#) is a five hour, interactive training is facilitated by bilingual trainers and will help your farm comply with OSHA regulations. Safety consultations and walkthroughs with an ASC safety specialist are also available. Contact **Iris Reyes at 715-387-5923** or reyes.iris@marshfieldclinic.org to schedule a training or a walkthrough on your farm at a time convenient for you and your workers.

https://www3.marshfieldclinic.org/nfmc/?page=nfmc_coreunit_umash_seguridad_en_las_lecherias



Making Ag Safety and Health the New Normal. June 21-25, 2015, Normal, IL

ISASH is an organization dedicated to the professional development of agricultural safety and health professionals, providing national and international leadership in preventing agricultural injuries and illnesses to the agricultural community. ISASH provides opportunities for sharing information about research and intervention programs, improving professional skills and knowledge, networking and other supportive activities. <http://isash.org/>

“MAKING AG SAFETY AND HEALTH THE NEW NORMAL”



June 21-24, 2015
ISASH Annual Conference
Normal, Illinois

Resources – Chip Petrea

How to Cope with Stress on the Farm

Robert "Chip" E. Petrea, Extension Specialist, Farm Safety, Department of Agricultural and Biological Engineering, (217) 333-5035, repetrea@uiuc.edu

Accidents are a major cause of death and injury among agricultural workers. A study by the National Institute for Occupational Safety and Health showed that farmers also have the highest rates of death as a result of stress-related conditions. Heart and artery disease, hypertension, ulcers and nervous disorders top the list of killers.

http://urbanext.illinois.edu/agupdate/0812_articles.html

Questions - Feedback

Thank you for your participation. Please let me know your thoughts, questions and feedback.