

**GROWING A NEW GENERATION
OF ILLINOIS FRUIT AND VEGETABLE FARMERS**

FARM SAFETY

Jeff Kindhart
and Jeremy Shafer

April 2015

Farm Safety

- Agricultural work is both dangerous and hazardous!!!
 - Danger: The possibility of suffering harm or injury
 - Hazard: An unavoidable danger or risk, even though often foreseeable
- Personal Safety
- Legal Responsibilities
- Moral Responsibilities

Personal Health and Safety

- Eye protection
 - Sun glasses, Safety glasses, Prescription glasses
 - Physical injury
 - Glaucoma
- Hat and Sunscreen
 - NCI 2011 Study – Farmers have higher rates of skin cancer than general population

Hearing Protection

- Over ear
- In ear
- In ear + over ear



Gloves and Good Shoes

- Gloves should fit and provide the appropriate degree of protection and grip for the tasks being performed
- Shoes capable of keeping feet both comfortable and dry are well worth the investment.
- Steel toed and/or chemically resistant boots may be appropriate for some activities

High tunnels and greenhouses are particularly good places to experience excessively high temperatures in summer.

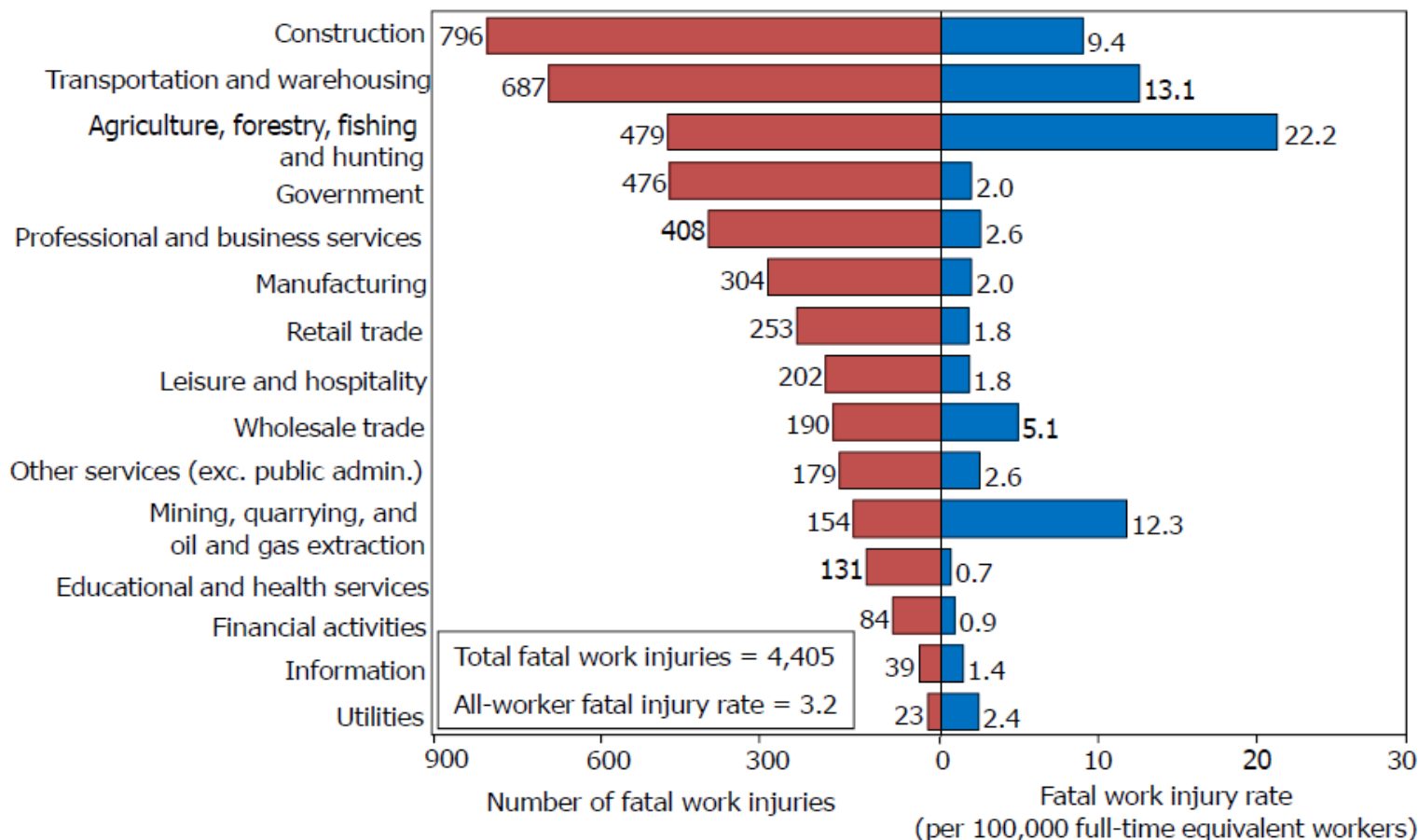


Heat Illness

- Heat exhaustion and stroke are definite concerns for agricultural workers.
- May be fatal in severe cases and heat stroke may have some long term health consequences for some victims.
- Make sure you and your employees do not dehydrate and exercise good judgment.
- Smart phone apps can warn of heat warning and advisories to alert you to the need for extra caution

How Dangerous?

Chart 2. Number and rate of fatal occupational injuries, by industry sector, 2013*



*Data for 2013 are preliminary.

Note: Fatal injury rates exclude workers under the age of 16 years, volunteers, and resident military. The number of fatal work injuries represents total published fatal injuries before the exclusions. For additional information on the fatal work injury rate methodology, please see <http://www.bls.gov/iif/oshnotice10.htm>.

Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2014.



Table 2. Fatal occupational injuries by industry and selected event or exposure, 2013^p

Industry ¹	Fatal injuries		Selected event or exposure ² (percent of total for industry)			
	Number	Percent	Homicides	Roadway ³	Falls, slips, trips	Struck by object or equipment
Total	4,405	100	9	22	16	11
Private industry	3,929	89	9	22	16	12
Goods producing	1,733	39	2	14	22	16
Natural resources and mining	633	14	2	14	8	24
Agriculture, forestry, fishing and hunting	479	11	2	11	6	25
Crop production	210	5	2	11	7	19
Animal production	129	3	3	11	8	18
Forestry and logging	81	2	–	16	–	63
Mining, quarrying, and oil and gas extraction ⁴	154	3	–	25	12	20
Mining, except oil and gas	39	1	–	–	8	23
Support activities for mining	103	2	–	33	14	18



Common Perils

- Tractor Rollovers
- Power Take Off and or Machinery Entanglement
- Grain Bin Accidents



Centers for Disease Control and Prevention

CDC 24/7: Saving Lives. Protecting People.™

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.

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-1960's, the prevalence of ROPS-equipped tractors could be increased to over 80%.

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.

Injuries

Every day, about 167 agricultural workers suffer a lost-work-time injury. Five percent of these injuries result in permanent impairment.

In 2012, an estimated 14,000 youth were injured on farms; 2,700 of these injuries were due to farm work.

A national occupational safety and health [agenda](#) for the agricultural production industry has been developed as part of the [National Occupational Research Agenda](#) (NORA) process. Further information on agriculture production safety and health is also available as part of the [NORA Agricultural, Forestry, and Fishing Sector](#) activities.



Information on Tractor Safety

- http://www.aces.edu/farmsafety/documents/Tractor_Machinery.pdf
 - A graphic slide set from Alabama Extension showing consequences of tractor and machinery accidents.

More from Alabama Extension

- [A Farm Safety Management Plan for Alabama Farmers](#) (PDF file) - without pictures
- [Farm Safety Management Plan Presentation](#) (PDF file) - with pictures for use in training
- [General Farm Safety Rules](#) (PDF file) - all participating farmers must review all of the rules and use only those that apply to their unique operation
- [Electrical Safety Rules](#) (PDF file) [Fire Safety Rules](#) (PDF file)
- [Tool Safety Rules](#) (PDF file) [Machinery Safety Rules](#) (PDF file)
- [Animal Safety Rules](#) (PDF file) [Toxic Safety Rules](#) (PDF file)
- [All Farm Safety Rules](#) (MS Word file) - a list of all rules that can be modified
- [PTO and Post Hole Digger Safety](#) (YouTube video)
- [How to Install and Maintain a Shaft Cover on a Tractor PTO](#) (YouTube video)



Other lesser talked about perils

- Weather
- Chainsaw Accidents
- Electrocutions
- Carbon Monoxide Poisoning
- Etc.

Weather - Lightning

- Open cab tractor
- Field workers on foot
- Weatherbug or other smart phone app that has lightning notification
- Losing a few bushel of produce in NEVER worth trading for a persons LIFE!!!!

Chainsaw Safety

UNIVERSITY OF ILLINOIS EXTENSION



Illinois Forestry

[Home](#) [Ask a Forester](#) [Calendar of Events](#) [Useful Links](#) [Photo Gallery](#)

- Forest Management →
- Timber Harvesting →
- Tree Planting
- Forest Health
- Illinois Big Tree Register
- Timber Prices Bulletin
- Agroforestry
- Urban and Community Forestry
- Publications
- What's New in Illinois Forestry
- Technical Assistance

Logging & Chainsaw Safety

These fact sheets were originally prepared by Mike Bolin (retired UI Extension) for the Illinois Pro Logger Training Series and Soren Eriksson's Game of Logging™ training program presented by Tim Ard.



- The Back Cut
- Carburetor Tune-Up
- Reducing Down Time
- The Felling Plan
- Saw's Reactive Forces
- Setting Up The Hinge
- Limbing and Bucking

http://web.extension.illinois.edu/forestry/timber_harvest/logging_chain_safety.html



Electricity

- Greenhouses are commonly well grounded structures made of electrical conductive metal.
- Greenhouses are often wet environments making them a better than average potential for electrical shocks.
- Wire greenhouse circuits in accordance with electrical standards including conduit where appropriate and use of ground fault interrupt devices.

Overhead and Underground



SmartSign.com • 800-952-1457 • S-6303



Ladders, Lifting and Falls



Bulletin #2326, Ladders, Lifting and Falls



Maine Farm Safety Program

Ladders, Lifting and Falls

By Dawna L. Cyr, farm safety project assistant, and Steven B. Johnson, Ph.D., Extension crops specialist

For information about UMaine Extension programs and resources, visit extension.umaine.edu.

Find more of our publications and books at extensionpubs.umext.maine.edu.

Many farm injuries can be attributed to poor lifting techniques, improper ladder use or falls. Use the proper procedures and body position when lifting to reduce the risk of injury. Use the proper ladder for the job, and make sure it is safe and secure. Take precautions to eliminate falls.

Lifting

Lift objects properly. Avoid bending over. Instead, squat before the object to be lifted and use your knees to rise. Protect hands and feet with safety gloves and safety shoes. Get a good grip and good footing, bend the knees and lift with the leg muscles. Use hooks, straps and pulleys to lift a heavy load from the floor. Reverse the procedure to set a heavy object down.

- Lift with the legs, not the back.
- Visually inspect a ladder before using it.
- Make sure the ladder has a secure footing before climbing.



<http://umaine.edu/publications/2326e/>



Carbon monoxide

- Greenhouses, high tunnels, coolers, packing sheds and other possible farm structures have the potential to hold carbon monoxide from internal combustion engines and poorly vented heating sources.
- Always afford ventilation when operating gasoline powered engines
- Have heat sources inspected
- Carbon monoxide detectors.

Legal Responsibilities

- If using pesticides you must be in compliance with US EPA worker protection standard
- <http://www.epa.gov/agriculture/htc.html>
- OSHA Reg's. often not applicable

CPL 02-00-051 - CPL 2-0.51J - Enforcement Exemptions and Limitations under the Appropriations Act.



Table 1

(Exeptions and limitations)

TLC= Temporary Labor Camp EES= Employees ERS= Employer

OSHA Activity	Farm with 10 or fewer EES and no TLC activity within 12 mo.	Farm with more than 10 EES or a farm with an active TLC within 12 Mo.	Non-farm ERS with 10 or fewer EES in a SIC listed in Appendix A
Programmed Safety Inspections	Not Permitted	Can Inspect	Cannot Inspect
Programmed Health Inspections	Not Permitted	Can Inspect	Can Inspect
Employee Complaint	Not Permitted	Can Inspect	Can Inspect (See limits on Citations and Penalties)
FAT/CAT and Accidents	Not Permitted	Can Inspect	Can Inspect
Imminent Danger	Not Permitted	Can Inspect	Can Inspect



Biological Hazards

- Vector-borne disease
- Venomous wildlife and insects
- Poisonous plants

To reach us

Contacts	Contact information
Jeff Kindhart	jkindhar@illinois.edu
Jeremy Shafer	jshafer@illinois.edu
Rick Weinzierl	weinzier@illinois.edu
