

AG SAFETY S.T.A.T. - SAFE TACTICS FOR AG TODAY

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ANNOUNCEMENTS – June is National Safety Month

Dee Jepsen – OSU Ag Safety & Health Specialist

To recognize the annual safety month, the National Safety Council has free resources available at <http://nsc.org/nsm>.

Accidental injury is the 3rd leading cause of death. Sadly, one American is injured every second and killed every three minutes from preventable events – a drug overdose, a vehicle crash, a fall, or a drowning. Since 2016, injuries in this category have increased by 10%.

What can you accomplish in 10 minutes?

Maybe you can brew a pod of tea or coffee; pick up your mail; or peek at your social media account.

In this same 10 minutes:

- 3 people die
- 847 people suffer an injury severe enough to require medical attention
- \$18.42 million in damage / medical costs have occurred

Check out the video from NSC to see the extent and impact of these deaths and injuries. Many of our injuries are preventable. Know the facts.

<https://www.youtube.com/watch?v=0HXeHMvedjs#action=share>

For your agricultural safety and health resources, bookmark our OSU Ag Safety and Health page at <http://agsafety.osu.edu> or contact Dee Jepsen, OSU Agricultural Safety & Health at jepsen.4@osu.edu or 614-292-6008.



SAFETY RESOURCE SPOTLIGHT – National Safety Council



The National Safety Council’s mission is to eliminate preventable deaths at work, in homes and communities, and on the road through leadership, research, education and advocacy. Their website contains information of services, safety topics, as well as tools and resources. The link to the National Safety Council’s website is <https://www.nsc.org/home>

Ohio AgrAbility in Action: Ohio AgrAbility Educational Workshops

Laura Akgerman – Disability Services Coordinator for Ohio AgrAbility

Do you know where to go if you have questions about farming with a disability? What about farming with chronic aches and pains, or limitations that may not be bad enough to be called a disability, but still make your daily work difficult? Ohio AgrAbility Program (OAP) is one of the “Best Kept Secrets in Ohio agriculture”, and the OAP team would like to change that to “The Best-Known Resource for Farming with a Disability”. One of the missions of OAP is to work with farmers with disabilities to identify ways to make changes or modifications to equipment, facilities or worksites to allow the farmer to continue farming. The second mission of OAP is to offer resources and education to all farmers on how to reduce the risks of injury and introduce modifications and technology that help farmers stay safe, and work more efficiently.

In addition to Fact Sheets, printable resources and links to Extension and agricultural resources (available on the website: <https://agrability.osu.edu/>), OAP also offers several workshops. If you would like to learn more about OAP services, and farming with a disability or working with chronic pain or limitations, schedule OAP to present a workshop for your organization. Most workshops last about one hour, with time at the end for questions and answers.

Current Ohio AgrAbility workshops:

- **Farming with a Disability** – *The Ohio AgrAbility Program works with farmers with disabilities to modify work tasks, utilize assistive technology & prevent secondary injury, so they can continue farming*
- **Collaborating with Ohio AgrAbility** – *Program information for disability services, education, rural health, Extension professionals, agricultural business and service organizations and community advocates; reviews ways professionals and advocates can work with Ohio AgrAbility to serve Ohio farmers with disabilities*
- **Arthritis in Ag** – *Discover how arthritis impacts our agricultural communities and effective ways to manage on the farm*
- **Gardening and Urban Ag** – *Learn creative solutions to continue working in your garden or small farm with a disability, chronic pain or other limitations*
- **Preventing Injuries on the Farm** – *Learn about hazards and how to prevent common ag injuries, and how to prevent secondary injuries*
- **Designing Accessible AgriTourism** – *Is your AgriTourism business welcoming to visitors of all abilities? Learn what areas of your business need to be accessible, and ways to utilize Universal Design principles to make your AgriTourism business accessible to people of all ages and abilities*

The OAP team may be able to customize a workshop to meet you and your organizations specific needs. If you would like more information about workshops or would like to schedule a workshop please contact Laura Akgerman, Ohio AgrAbility and OSU Extension Disability Services Coordinator, at Akgerman.4@osu.edu, or 614-292-0622.

INJURY PREVENTION – Livestock Handling Safety

Kent McGuire – OSU Ag Safety and Health Coordinator

There are many activities during the summer that involve working with livestock. No matter if you are moving animals to different pastures, providing veterinary care, or youth working with 4H animals for the fair, safety should be a priority when handling livestock. Animal behavior can be unpredictable at times and livestock can revert to instinctual reactions when they feel threatened or stressed. Individuals can be injured due to preoccupation, haste, impatience, or even anger. Injuries that are common when working with livestock include bites, kicks, being stepped on, pinned against a solid surface, or overcome by a single animal or the whole herd. Some general guidelines when working with livestock include:

- Understand and study the typical behaviors of the livestock you are working with.
 - Herd livestock such as cattle or sheep can become agitated or stressed when one animal is isolated from the herd.
 - Maternal female livestock can become aggressive in an effort to protect their young.
 - Mature male livestock can become aggressive in an attempt to show dominance.
 - Understand aggressive warning signs such as showing of teeth, ears laid back, raised hair, snorting, or stomping of feet.
- Recognize that livestock such as beef, swine, sheep and dairy cattle are generally colorblind and have poor depth perception, which may cause the animal to balk at contrasting shadows or rapid changes from light to dark.
- Avoid startling an animal by making it aware of your approach before getting too close. Approach from an angle that you can be seen.
- Move calmly, deliberately, and patiently. Avoid quick movements or loud noises that may startle animals.
- Excessively changing of the animal's environment or daily routine can take the animal out of their comfort zone.
- Avoid being in travel paths during the feeding of a herd or large group of livestock.
- Be aware of your surroundings and always leave an escape route when working in close quarters with livestock.
- Be patient, and avoid frustration when working with difficult or stubborn livestock. Back injuries, muscle strains and slip /fall injuries can occur when frustrations lead to over aggressive handling practices.
- Bottle fed or show livestock can become playful because of constant handling, After being placed back in with the general livestock as an adult, they may still approach you in a playful manner when you are not expecting it.
- Use the proper personal protective equipment to prevent injuries and exposure to potential zoonotic illnesses.
- Utilize good housekeeping practices in barns and livestock facilities to prevent slips, trips, or falls.
- Plan ahead and consider your safety and the animal's safety when loading, unloading, and trailering livestock.

For more information about OSU Ag Safety visit <http://www.agsafety.osu.edu> or contact Kent McGuire, OSU Agricultural Safety & Health, at m McGuire.225@osu.edu or 614-292-0588.

Emergency Management - Hay and Straw Barn Fires a Real Danger

Jason Hartschuh, Mark Sulc, Sarah Noggle and David Dugan,

Ohio State University Extension Guest Contributors

We've heard of one barn fire here in Ohio this morning and a lot of hay was put up last Thursday ahead of the rain. Much of the hay was wetter than it should have been for safe dry hay storage.

Watch those moist bales very carefully for the next two to three weeks! Use a hay temperature probe and monitor the internal temperature of the hay during these first three weeks after baling.

Usually, we think of water and moisture as a way to put a fire out, but the opposite is true with hay and straw, which when too wet can heat and spontaneously combust. This is more common with hay than straw because there is more plant cell respiration in hay. When baled at moistures over 20% mesophilic bacteria release heat causing temperatures to rise between 130°F and 140°F. If bacteria die and bales cool, you are in the clear but if thermophilic bacteria take over temperatures can raise to over 175°F.

The moist bales should be kept outside or in a well ventilated area. Don't stack the moist bales, because that prevents the heat and moisture left in the hay from escaping. It is normal for hay to go through a "sweat" in the first few days after baling. Internal temperatures of 110° F in the first five days after baling are quite common in our region and are not a big concern.

Assessing the Fire Risk

Most hay fires occur within the first six weeks after baling

Was the field evenly dry or did it have wet spots

Were moistures levels kept at 20% or less

If over 20% was hay preservative used

Monitoring at-risk Hay

If you are concerned that your hay or straw may be a fire risk, you should monitor it twice a day for the first six weeks or until low temperatures stabilize. Ideally, temperatures are taken from the center of the stack or down about 8 feet in large stacks.

If you have a long probe thermometer it can be used but some homemade options are available. A ¾ inch pipe with the ends closed into a point and 3/16 inch holes drilled in the bottom 4 inches can work well, lower a thermometer on a string or the sensor wire of a thermometer into the pipe. The sensor on a long wire can work very well once in place you can read temperatures without removing it. Leave the thermometer in the stack for 15 minutes to get an accurate reading.

Another cruder option is to stick a 3/8 pipe into the stack and pull out twice a day if the pipe is too hot to hold in your hand, you are at risk for a fire. Be very cautious when taking hay temperatures if the hay gets hot and a cavity burns out underneath you can fall in. Use planks to spread out your weight and have someone nearby in case you fall in a burned out pocket. Using a harness and tying yourself off would be even better as a safety measure when checking bales.

Hay bale temperatures of 120° to 130° F will likely result in mold growth and will make the protein in the hay less available to animals. While those temperatures are not high enough to cause hay fires, the concern is if the mold growth continues and pushes temperatures upward into the danger zone.

If the temperature in the hay continues to rise, reaching temperatures of 160° to 170° F, then there is cause for alarm. At those elevated temperatures, other chemical reactions begin to occur that elevate the temperature much higher, resulting in spontaneous combustion of the hay in a relatively short period of time. If the hay temperature is 175° F or higher, call the fire department immediately, because fire is imminent or present in the stack.

Critical Temperatures and Actions to Take

Temp. (°F) Condition and Action

125° No Action Needed

150° Hay is entering the danger zone. Check twice daily. Disassemble stacked hay bales to promote air circulation to cool the hay outside.

160° Hay has reached the danger zone. Check hay temperature every couple of hours. Disassemble stacked hay to promote air circulation to cool hay have fire department present while unstacking from here on.

175° Hot pockets are likely. Alert fire service to possible hay fire incident. Close barns tightly to eliminate oxygen.

190° With the assistance of the fire service, remove hot hay. Be aware the bales may burst into flames.

200°+ With the assistance of the fire service, remove hot hay. Most likely, a fire will occur. Keep tractors wet and fire hose lines charged in the barn and along the route of where bales are to be stacked.

If you are in the risk zone and there is machinery or livestock also in the barn, remove them before removing the hay for safety. Also call the fire department when you are in the risk range. They would much rather be present and not have to put a fire out than have to call mutual aid when your entire barn is on fire. For more information on Preventing Fires in Baled hay and straw visit- <http://articles.extension.org/pages/66577/preventing-fires-in-baled-hay-and-straw>

Extreme caution needs to be taken when monitoring hot hay. Please read the article below for additional safety guidelines and procedures for monitoring hot bales and for preventing and controlling hay fires:

Hay Fire Prevention and Control, Virginia Cooperative Extension

<http://www.pubs.ext.vt.edu/442/442-105/442-105.html>

References:

Preventing fires in baled hay and straw. (2012). Farm and Ranch eXtension in Safety and Health (FReSH) Community of Practice. Retrieved from <http://www.extension.org/pages/66577/preventing-fires-in-baled-hay-and-straw>.

Hay Fire Prevention and Control, Virginia Cooperative Extension

<http://www.pubs.ext.vt.edu/442/442-105/442-105.html>

EMERGENCY MANAGEMENT – An Important Piece of Fire Prevention on the Farm

Lisa Pfeifer – OSU Ag Safety and Health Education Coordinator

Do you have fire extinguishers located on your farm property?

Fire extinguishers can often be one of those out of sight out of mind tools. Or alternatively, extinguishers can be so frequently passed by that the location no longer registers. Stop and take a mental inventory of where the fire extinguishers on your farm are located. If you come up with a mental void, it is time to do

something about the safety of your property. Consider placing extinguishers in the shop, barns, equipment cabs and on the baler. A fire extinguisher may be able to put a small fire out or contain it until help arrives. The farm environment has no shortage of combustible materials and accelerants that can lead to a fire. You might encounter bedding, grain dust, cobwebs, fuels, and chemicals all during a day's work on the farm, each of which can contribute to a fire under certain conditions.

The National Fire Protection Association, Fire Analysis and Research Division gathered data reflecting during 2006-2010, an estimated 830 structure fires in barns were reported to U.S. fire departments per year, with associated losses of: 1 civilian death, 10 civilian injuries, and \$28 million in property damage annually.

Take the time and steps to establish fire prevention practices on your farm operation, starting with the installation of fire extinguishers. For more help deciding what type of fire extinguisher to purchase and how to properly operate the device, take a look at some of the resources listed below.

An Ohio State University Extension fact sheet on fire extinguishers is located on Ohioline at <https://ohioline.osu.edu/factsheet/aex-79025>.

Find information on "Choosing and using fire extinguishers" at the U.S. Fire Administration webpage, <https://www.usfa.fema.gov/prevention/outreach/extinguishers.html>. Their resources breakdown to:

- Explain the types of fire extinguishers
- Help people decide when to use a fire extinguisher
- Teach people how to use a fire extinguisher
- Educate on the importance of fire extinguisher maintenance

The National Fire Protection Association has a list of fire extinguisher safety tips on their public education webpage at <https://www.nfpa.org/Public-Education/By-topic/Fire-and-life-safety-equipment/Fire-extinguishers>.

Make your farm a safer place by installing fire extinguishers and training employees how to properly use them.

The OSU Agricultural Safety & Health website Employee Safety tab is another resource to explore for additional information pertaining to fire extinguishers, <https://agsafety.osu.edu/programs/cfaes-osh/fire-prevention-fire-extinguishers>.

For more information about OSU Ag Safety, visit <https://agsafety.osu.edu/> or contact Lisa Pfeifer, OSU Agricultural Safety & Health, at pfeifer.6@osu.edu or 614-292-9455.

Ag Safety S.T.A.T. – Safe Tactics for Ag Today is an e-mail newsletter prepared by Dee Jepsen, Extension Agricultural Safety Specialist and team members from the State Safety Office, in the Department of Food, Agricultural and Biological Engineering at OSU. The primary goal of this monthly newsletter is to help you stay connected to everyday safety news and activities that maybe used in your own newsletters or programs. If you have safety-related questions or program ideas that you would like to share, please contact Dr. Jepsen at jepsen.4@osu.edu
