



# AGRICULTURAL SAFETY AND HEALTH NEWS

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## IN THIS ISSUE

Death Rate Figures Up

Chainsaw Safety

Hayrides: A Real Nightmare for the Unsuspecting

Fatality Rates Higher for Senior Farmers

National Lane Grant Research and Extension Agenda

Snow Sledding Safety

## National Death Rate Figures Creep Upward

Work fatalities in agriculture increased two percent in 2002, while the all-industry average declined by three percent according to the National Safety Council. Agriculture ranked second behind the mining/quarrying industry with 21 deaths per 100,000 workers, or approximately 730 deaths. The Council also reported that tractor incidents remain the number one cause of death in agriculture. A majority of the fatalities are caused by tractors overturning without rollover protection and a seat belt. Other tractor-related fatalities result from victims being run over by tractors, highway collisions between tractors and other vehicles, and fires during equipment refueling. As noted in my last newsletter, farm-related fatalities in Pennsylvania were at an all-time low in 2002, so perhaps we are bucking the trend in this state.

Be sure to visit us at the 2004 Farm Show. Our plans as of now are to demonstrate our new Hazards of Flowing Grain simulator the entire week, and of course the State Finals of the Farm Safety and Health Quiz Bowl will be held on Wednesday, January 14, starting approximately 1:00 PM. We also expect to have information available for the new Farm Family Emergency Response Program. I hope to see you there.

Dennis J. Murphy

Professor of Agricultural and Biological Engineering

## Chainsaw Safety

*The following has been adapted from "Safety With Chainsaws", by Dr. Glen Hetzel and J. Butler, Agricultural Engineering Dept., Virginia Tech.*

Chainsaws are an invaluable and necessary tool in today's agricultural operation. From clearing land to trimming trees and cutting firewood, what farm could do without a chainsaw? However, in the hands of a careless or inexperienced operator, chainsaws can be deadly.

The following points are a good safety review for all chainsaw operators as winter comes upon us.

- **Never work alone.** At least be within yelling distance of help.
- Consider the lean of the tree before cutting. Uneven top growth and any breakage of the tree trunk will probably affect the fall.

**Continued on pg. 4**

# Hayrides: A Real Nightmare for the Unsuspecting

With the fall harvest season moving quickly across the nation, the popularity of hayrides as a fundraiser or social event is growing in many communities. Reports of accidents involving hayrides have been on the increase over the past several years. Unless these events are well organized and carefully monitored, tragedy may be just around the next corner.

One way to approach the planning and coordination of a hayride is to consider the three H's: **Hitching, Highways and Horseplay**. Hitching includes the wagon, the tractor or truck that is pulling the wagon, and the safeguards that are used to ensure that the wagon is properly attached. Never attach more than one wagon behind the pulling vehicle. Extra wagons make the *isnaking* action of the caravan more severe and may result in sideswiping or overturning of the trailing wagons. A truck or tractor should never pull a wagon so fast that it sways out of a straight line.

Proper hitching should always include: using a well designed hitch pin with a clip or lock between the wagon and the pulling vehicle, and installing safety chains to ensure that the wagon does not disconnect while in motion.

The hayride route should be carefully planned. Highways with excessive vehicular traffic moving at high rates of speed should be avoided at all costs. Hayride organizers should consult with local law enforcement agencies to seek their advice on roads to be used. Some law enforcement agencies may also be willing to provide security and safety for the hayride during the actual event. One recommendation that may reduce the highway hayride hazard is vehicles traveling in front and in back of the hayride with their emergency lights activated.

Horseplay on a hayride has the potential for disaster, thus adult monitoring of the hayride is a must. Hayride participants can easily fall from a wagon or truck being used for the event and be run over by the wagon and truck wheels causing traumatic injuries. All riders should be sitting down while the wagon or truck is moving. These rules should be clearly stated to all participants before the ride begins.



## Fatality Rates Higher for Senior Farmers

Farmers aged 75 and older are more than twice as likely to die on the job than their younger counterparts, according to the National Institute for Occupational Safety and Health (NIOSH).

NIOSH statistician Dr. John Myers reported that farmers over age 75 had a death rate of 57 per 100,000, compared to an overall death rate of 21 per 100,000 for all agricultural workers.

Much of this increased risk is related to aging and involves a decrease in sensory abilities that can impact the safety of older farmers. Vision is known to be consistent throughout a person's adult life, but begins to decline by age 60.

Hearing also degrades as people age. Nearly one-half of adults have some level of hearing impairment. Some of this is normal; however, hearing loss is also attributed to noise exposure while working.

This is especially true among farmers, who experience the highest rate of hearing loss among all workers.

Hearing protection at an early age is crucial. Ear plugs or ear muffs will protect hearing. Repairing machinery and equipment that are generating excessive noise is also crucial in reducing the exposure.

## National Lane Grant Research and Extension Agenda for Agricultural Safety and Health

The culmination of two years work by agricultural safety specialists from across the country has resulted in the recently released *National Land Grant Research and Extension Agenda for Agricultural Safety and Health*.

The report outlines the 12 key areas where land grant institutions and agricultural experiment stations should focus future safety research. It was created by the NRC-197 Committee on Agricultural Safety and Research and Extension.

Agricultural production in the U.S. has been historically recognized as one of the most hazardous of all industrial categories. Most other industries have

benefited from enhanced workplace safety and expanded workplace safety regulations. However, farms have experienced little reduction in the rate of workplace deaths and injuries over the past decade.

The fatality rate for agricultural workers is estimated to be more than six times that of other industries (22.5 per 100,000 verses 3.8 per 100,000). Currently an average of 740 people lose their lives and another 130,000 are temporarily or permanently disabled each year doing agricultural work.

The entire report may be found at:

<http://www.tmvc.iastate.edu/NRC197/>.

### Youth Safety

## Snow Sledding Safety

### What are the injury facts for youth when sledding?

Injuries commonly occur in collisions with fixed objects (e.g. trees and fences) and other people.

Sledding in an area that is open to vehicular traffic significantly increases the risk of severe injury.

The absence of adult supervision increases the risk of injury.

Common injuries include head trauma, fractured bones, and contusions and abrasions.

### What developmental factors should be considered for assessing a safe level of sledding?

- The cognitive capacity to anticipate, recognize and react to potential hazards.
- The good judgment to act responsibly, minimize risk, and react to potential hazards.
- The physical capacity to climb hills, hold onto sled, and regulate body temperature.

### What factors and strategies are key to safe sledding?

#### Personal safety

- Adult supervision
- Limiting activity to developmental capacities to prevent fatigue and cold exposure
- Wearing a helmet
- Wear appropriate clothing to protect from the cold.

#### Sled safety

- Sled constructed of high quality materials without sharp edges that cannot be pierced by objects on the ground
- Sled is ridden in face forward, sitting position
- Sled has controlled direction
- Sled has easily gripped handles

#### Safe environment

- Area free from obstacles
- Designated up and down routes
- Motor vehicle traffic not in proximity
- Adequate snow base with no protruding objects
- Sledding incline less than 30 degrees with a long run out
- Sledding during daylight hours, or in well-lit areas at night
- Providing areas for sledding only



**Continued from pg. 1**

- Plan your escape route. Know in advance which direction you plan to move when the tree falls. Think of other options if the tree doesn't go as planned.
- Clear the ground. Before you start to cut, clear the ground around the base of the tree of low or dead limbs, underbrush and other obstructions. This precaution should provide clear vision, unrestricted movement and an unhampered escape route when the tree begins to fall.
- Whenever you are cutting, be sure your body is clear of the natural path the saw will follow when the cut goes through.
- Always shut off the engine before setting the chainsaw down; even when you are retreating from a falling tree.
- Always take into consideration wind direction and speed. Never fell trees on a gusty, windy day.
- In every cutting situation you must make sure you have secure footing. If the ground is slippery from rain, snow or ice, then you should not cut there.
- Always maintain control by holding your saw firmly and taking your hand off the trigger between cuts.
- Make sure the saw is off and the chain has stopped before making any adjustments or repairs.

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AGRICULTURAL SAFETY AND HEALTH NEWS is written and designed by Rob Carson under the direction of Dr. Dennis J. Murphy. Please send any ideas you have for articles in future editions to Dr. Dennis J. Murphy, 246 Agricultural Engineering Building, University Park, PA 16802 or call (814) 865-7685.

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