



# AGRICULTURAL SAFETY AND HEALTH NEWS

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### Newsletter Changes Coming Soon

The time has come to change how this newsletter is distributed. It has become increasingly difficult and expensive for us to handle the physical printing, labeling and mailing of the newsletter. The occasional inserts (e.g., the annual fatality summary) only adds to the problem. You will receive the next issue (Jan-Feb. 2005) in paper form but starting with the March-April 2005 issue, the newsletter will be distributed as an email attachment. The newsletter will come to you as a pdf file which can easily be opened by most systems. (See [www.adobe.com](http://www.adobe.com) for a free Acrobat Reader download)

To facilitate this new distribution method, we need to collect email addresses. If you are an extension agent or agricultural teacher, you need **not** do anything as I already have your business email. For all others, if you wish to continue to receive this newsletter, please send your email address to [ASHnews@psu.edu](mailto:ASHnews@psu.edu) and type "ASH News" in the subject line. Email addresses will not be shown in the "To" box and we will not share your address with anyone else. You will have the chance to unsubscribe with each sending of the newsletter.

On the slim chance you do not have regular access to email, I have also enclosed a registration form to continue receiving a paper copy. Please complete the pre-addressed form and return. I appreciate your continued support of this newsletter.

**Dennis J. Murphy**

**Professor of Agricultural and Biological Engineering**

## Harvesting Health Risks: *Dusts and Molds*

Tiny dust particles and mold spores can be inhaled into the lungs. Dust that come from a living source ("organic dust") such as hair, bedding, hay, grain, silage, and dried urine and feces are most dangerous. In the natural process of decomposition, mold breaks down plant materials, producing spores and in some cases endotoxin. These tiny particles become airborne and are easily inhaled. Farm workers can be exposed to large amounts of dusts in their everyday activities. Some of these substances can cause severe respiratory problems, both immediate and long term.

### What is Farmer's Lung Disease?

It is a type of hypersensitivity pneumonitis caused by an allergic reaction to molds found in spoiled grain or forage products. Only some people are prone to develop this sensitivity.

Symptoms include chills, fever, cough, chest congestion, fatigue, and shortness of breath. These symptoms can appear from four to twelve hours after exposure, and can last from one to seven days. Since the sufferer has a sensitivity to the molds, each subsequent exposure becomes more severe and lasts longer. Over time, affected persons can also develop weight loss.

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# Try a One-Person Hitch for Tractors and Wagons

If you use tractors and wagons to move plants on your nursery or farm, consider a one-person hitch that can save you time and reduce your risk for serious injury. You can cut the time you spend connecting tractors to wagons in half. Since you never leave your tractor seat, you will also reduce the chance that you or your helper will crush fingers while positioning the hitch pin, or risk getting caught between an unstable tractor and heavy wagon.

Without a one-person hitch, the tractor driver has to climb down from the seat to lift up the wagon tongue, position it exactly around the drawbar, and drop the hitch pin in the corresponding holes. Sometimes workers use a jack or blocks to hold up the heavy wagon tongue, and often drivers recruit a helper to stand behind the tractor and do the hitching. If a tractor driver is very skilled, he or she can back up to the wagon precisely so a minimum of lifting and maneuvering is needed to hook up the tongue.

## Benefits

**Efficient.** You can hitch up a wagon in seconds with one-person hitch, since you don't spend any time climbing down from the tractor, positioning the wagon tongue, and climbing back up to the tractor seat again. Since these hitches have either a bigger receiving end or a wider opening on the wagon tongue than a regular hitch, it is easier and faster to back a tractor into the optimal position for coupling. Even minimally skilled tractor drivers can quickly hitch and unhitch wagons. If you normally use a helper to lift the wagon tongue and drop in the hitch pin, the one-person hitching system can free up that person.

**Profitable.** Using one manufacturer's design as an example, the parts for the Agri-Speed hitch cost \$275 for the tractor and \$175 for the wagon, which equals \$450 for one tractor and one wagon. If you buy a system for 1 tractor and 4 wagons (\$975), and labor is paid at \$10/hour, it would take 98 hours of freed up labor to pay for the hitching system. Factor in the savings you gain by preventing time off work due to accidents, and the one-person hitch can pay for itself in short order.

**Less risk of serious injury.** Each year, numerous agricultural workers suffer injuries in hitching accidents when heavy equipment crushes their fingers, or when they become pinned between the tractor and the wagon. Workers sometimes slip and fall while hitching or unhitching, and then risk being run over. Anyone who has ever backed up a tractor towards a person who is helping them hitch can see the inherent danger in this task. It's a situation that is best avoided. Many factors combine to make the task risky and unpredictable, such as sloping or uneven ground, mud, slippery surfaces, uneven wagon loads, differences in tire inflation, clutch and brake performance, interference from noise, misunderstood communication between driver and helper, and the hectic pace of nursery and farm work.



One-man hitching

## How does it work?

There are several one-person hitch systems on the market designed for tractors, pick up trucks, or utility vehicles. Look for a system that is built for heavy duty use, not systems designed for trucks pulling recreational trailers. Some styles fit on the tractor without interfering with the PTO. Some are simple to remove if you want to use the tractor for a task without the hitch. Most one-person hitch systems are sold separately in two different units: the part that fits onto the tractor and the parts that fit onto the wagon. They are sized to fit your drawbar hole and hitch pin.

## Where do I get a one-person hitch?

For sources of one-person hitch system, try searching the world wide web or contact your local equipment dealer.



Two-man hitching

Adapted from material provided by the University of Wisconsin Healthy Farmers, Healthy Profits Project.

# Youth Agricultural Safety

## What are the injury facts for youth living and working on farms?

An estimated 104 children younger than 20 years of age are fatally injured from agricultural injuries on U.S. farms and ranches annually.

Machinery and drowning are common causes of agriculture-related fatality to children.

Livestock and falls are common causes of non-fatal injuries to children.

Young children are often injured as bystanders in the agricultural worksites.

## What factors are key to keeping youth safe on farms and ranches?

- Restrict access of non-working children from the farm workplace
- Train and supervise children in age appropriate farm tasks
- Provide and require personal protective equipment
- Maintain equipment in working order with operational safety devices
- Parental approval of the tasks youth are performing



## What developmental factors must youth possess to work on a farm or ranch?

- The physical size, strength, coordination, and motor skills to minimize risks
- The cognitive capacity to anticipate, recognize, and react to potential hazards
- The good judgment to act responsibly, minimize risks, and react to potential hazards
- The ability to follow instructions with supervision

## What strategies help promote youth safety on farms and ranches?

- Provide safe play and child care options for non-working children
- Understand and obey child labor laws when hiring and assigning tasks
- Supervise youth based on development and skill levels as recommended by the North American Guidelines for Children's Agricultural Tasks ([www.nagcat.org](http://www.nagcat.org))
- Teach youth about farm and ranch hazards



## What role do child safety advocates play in addressing youth safety on farms and ranches?

- Be responsible and a good role model
- Promote safe behaviors based on current practices and injury experience
- Evaluate effectiveness of prevention practices
- Monitor childhood injury reports/data
- Promote the role of parents in supervising all children
- Explore policy options for protecting non-working children

## Where can I go to learn more about farm safety and youth?

Additional information and links on farm-related safety for youth can be found on the National Children's Center for Rural and Agricultural Health and Safety Web site <http://research.marshfieldclinic.org/children/Resources/Agriculture/ag.htm>. Information available includes a comprehensive listing of resources, a list of other organizations working on youth farm safety, links to the North American Guidelines for Children's Agricultural Tasks, and fact sheet. For technical assistance on youth farm-related injury prevention call 1-800-662-6900.



National Children's Center  
for Rural and Agricultural Health and Safety

Youth Safety  
Youth Safety

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### **What is Organic Dust Toxicity Syndrome (ODTS)**

Organic dust toxic syndrome is a condition caused by a reaction to inhaling a large “dose” of molds from spoiling grain and forage products.

Symptoms included cough, fever chills, body aches, and fatigue. These symptoms appear from four to twelve hours after exposure to high levels of organic dusts and molds, and can last for one to seven days.

### **What is the Difference Between Farmer's Lung and ODTS?**

Farmer’s lung disease develops because of an allergic response, and only those susceptible will react (5-8% of those exposed). ODTS can happen to anyone exposed to high levels of organic dust. Many times people with ODTS mistake it for the flu. Farmer’s lung disease, and to a lesser extent ODTS, can cause lung tissue damage.

### **How Can I Avoid Being Exposed to Dusts and Molds?**

Dust and molds are almost impossible to avoid if you work in agriculture. But you can limit your exposure by taking these general measures. Think about how they apply in your setting.

Prevent dusts and molds from forming, e.g. drying feed and cleaning animal areas regularly. Prevent dusts and molds from becoming airborne e.g. adding oils to feeds, wetting down bedding before chopping or spreading, and wetting grain storage areas prior to clean out. Prevent inhalation, e.g. use respirator as a barrier between the particles and your lungs.

**From *Dusts and Molds*, National Farm Medicine Center, Marshfield Clinic.**

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