



# Farm Safety Training Program



## Goal

The goal of this safety training program is to reduce the number of farm-related injuries, illnesses, and deaths that occur each year.

## Objective

This farm safety training program aims to equip farmers, agricultural workers, and their families with the knowledge to identify hazards and take preventive action.

## Hazards

The list of potential hazards in farming is vast. Here are some common dangers in the agricultural workplace:

- **Tractor accidents.** Tractor accidents, often due to rollovers, are the leading cause of farm fatalities. Rollovers can occur on slopes or while working near ditches, gullies, or stumps. Taking turns at high speeds, using improper hitching, losing control

of towed loads, or colliding with road traffic are other common causes of tractor rollovers. Run-over accidents also occur, usually when riders – often children -- fall off tractors.

- **Entanglement in machinery.** Clothing and limbs can become entangled in moving machinery parts, such as augers or chainsaws, resulting in severe injuries or death.
- **Hydraulic failure.** Pinhole leaks and pressure failure in hydraulics can cause equipment, such as jacks, to drop suddenly during maintenance activities.
- **Animal incidents and attacks.** Handling livestock, especially dairy breed bulls, can result in deadly injuries.
- **Farm and feedlot accidents.** Asphyxiation and engulfment risks can occur in storage structures such as

silos, grain bins, wagons, and manure pits.

- **Power line contact.**  
Overhead power lines contacting equipment, especially portable augers, can result in electrocution.
- **Slips, trips, and falls.**  
Accidents on barn lofts, storage unit walkways, and ladders are common.
- **Exposure to dust and pesticides.**  
Inhalation of grain dust, molds, hay, silage, and pesticides can lead to allergies, respiratory issues, and poisoning.
- **Physical strain.**  
The physical demands of farm work can lead to injuries. Improper heavy lifting and repetitive motions contribute to the high injury rate among farm workers.

## Accident prevention

In rural areas, hospitals and emergency medical care are often not readily available to farm and ranch workers. This makes the value of accident prevention vital. Many benefits, including fewer injuries, increased production, and reduced medical costs may result if the following steps are practiced:

- **Inspect your operation** and identify hazards.
- **Develop accident prevention plans** for fires, vehicle accidents, electrical shocks, and chemical storage accidents.
- **Read and follow operator equipment manuals and product handling and storage instructions.**
- **Maintain vehicles and machinery to prevent failures.**
- **Install approved rollover protection structures and seat belts** on motorized equipment.

- **Prohibit extra riders on tractors.**
- **Ensure proper tractor lighting,** including amber flashers and reflective triangle placards for times when the machinery is driven on a road.
- **Wear helmets** when operating ATVs.
- **Shield power take-offs** on tractors and other equipment. Restore these guards after maintenance.
- **Check for hydraulic pinhole leaks** with paper or cardboard. Support equipment with stands in addition to jacks during maintenance.
- **Wear protective equipment** such as heavy gloves, goggles, and hearing protection as needed and when using chainsaws.
- **Implement safe animal handling procedures.** In animal housing and handling areas, use even lighting. Shadows cast by uneven lighting can frighten animals. Construct chutes for animals that allow them to pass through, but they cannot turn around. Do not enter cramped areas such as stalls when large animals are present. New mothers, such as cows and sows, may suddenly attack if they feel their offspring are endangered.
- **Never enter a manure pit without a supplied-air respirator.** Manure pits contain toxic hydrogen sulfide and explosive methane gases. Never allow flame or spark sources near manure pits. Agitating a manure pit will cause an extra release of gases. Always ventilate pits before entry. Construct manure pits to prevent accidental entry.
- **Never enter a silo for three weeks after filling,** the peak period for production of the gas. Silos may contain gases, such as nitrogen dioxide, which

can cause severe and sometimes fatal lung burns. Always vent silos before entry.

- **Never allow people to enter grain bins or wagons during loading or unloading operations** due to the engulfment hazard. Provide respiratory protective masks to prevent inhalation of dust, bacteria, and mold spores during grain, silage, and hay transfer operations.
- **Educate your workers on chemical hazards, provide the recommended personal protective equipment, and wash all chemical stations.** The Environmental Protection Agency (EPA) oversees the [Worker Protection Standard](#) regulation that applies to the handling of pesticides used in agricultural production. This standard applies to all farms, not just those with employees. Your County Extension agent can provide information on labeling requirements and certification for purchasing restricted-use pesticides.
- **Allow for good drainage when constructing concrete floors and walkways.** Leave a rough finish to provide better footing in wet conditions.
- **Secure all portable equipment, such as augers, in a lowered position when moving them.** Consider rerouting or burying any overhead power lines in work areas.
- **If children are present on your farm, control their activities.** Teach children to stay away from areas where farm work is underway and keep them away from machinery even when it is parked. When children are given chores, ensure that the work is within their physical, mental, and emotional abilities and train them thoroughly in the assigned tasks.

By embracing these preventive measures, farms can reduce injuries, boost productivity, and cut medical costs - protecting both lives and livelihoods.

## Review Questions

### 1. Tractor accidents cause the most fatalities on farms in the United States.

True or False

### 2. If you must operate a tractor on public roads, equip it with\_\_\_\_\_.

- a. Proper lights.
- b. Amber flashers.
- c. Reflective triangle placards.
- d. All of the above.

### 3. Manure pits can contain toxic and explosive gases.

True or False

### 4. Which types of bull breeds are more dangerous to handlers?

- a. Beef breeds.
- b. Dairy breeds.

Answer Key: 1. True 2. D 3. True 5. B.



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