

Agronomy Spotlight

Harvest Safety Tips

During harvest (Figure 1), farmers must be aware of the potential for fatigue and inattentiveness that may increase the possibility of injury when using farm equipment. In addition, farm workers need to know the hazards of flowing grain and how to prevent a grain entrapment situation. Taking shortcuts to perform routine tasks may increase the risk for injury, so it is important to take the extra time to stay safe and perform tasks properly.¹



Figure 1. Harvesting corn.

Equipment Safety

Safety tips for farm workers include:

- Thoroughly inspect farm equipment before use.
- To help decrease operator fatigue, shut the machinery off to do a walk-around visual inspection of the equipment at least once every hour.
- Stay hydrated to help maintain awareness.
- To reduce fall hazards, use grab bars when mounting and dismounting machinery, and wear non-slip shoes.
- When transporting machinery on roads, have these items in place: reflectors or flashers from the manufacturer or approved by the Department

- of Transportation (DOT), a slow-moving vehicle sign, and red flags on each end of wide implements (e.g., planters, combine headers, sprayers). Most accidents and injuries that involve equipment occur while machinery is in operation.
- Idle machinery can also be dangerous to workers. It is important to take care when doing a preharvest inspection, making sure that basic safety checks are in place.
- Keep all guards, shields, and access doors in place while operating equipment.³
- Keep children and animals away from working areas or equipment that is in operation.

The following are some important steps to follow during machinery maintenance:

- Before working on equipment, make sure the machine is turned off and in park or neutral with the parking brake engaged. The process of unplugging crop material from a combine or baler can be especially dangerous if the power unit is running.¹
- The front loader and any other raised implements on a tractor, as well as combine headers, should be lowered to the ground prior to performing maintenance.
- Wait several minutes after turning off farm equipment to make sure all parts have completely stopped moving.
- Always refer to the manufacturer's manual before performing any maintenance.

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Bin Safety

When a grain bin (Figure 2) is being unloaded from the bottom, the grain flows downward from the top center creating a funnel effect. If a worker is on top of the grain in a bin being unloaded, they can be pulled into the flowing grain within seconds, likely rendering them helpless and possibly causing suffocation.

Anyone who works with grain, whether it is loading, unloading, or moving it to another bin, needs to know about the hazards of flowing grain and how to prevent a grain entrapment situation. **Be aware** that entrapment can happen quickly. The Occupational Safety and Health Administration (OSHA) estimates that as grain begins to flow, a person can become trapped in 4 to 5 seconds and be completely covered by grain in 22 seconds.²

If someone must enter a bin, it is extremely important to follow these safety precautions:

- Avoid entering the bin when possible. Instead of having a worker enter a bin to break up crusted grain, a long pole can be used. Grain that has crusted can cover open spaces, which will likely not support the weight of a person.
- Shut off and lock all unloading equipment before entering a bin.
- When possible, ladders should be installed inside grain bins as emergency exits.



Figure 2. Bins for grain storage.

- Wear a harness that is attached to a properly secured rope.
- Stay near the outer wall of the bin. If the grain starts to flow, move to the bin ladder or safety rope as quickly as possible.
- Never enter a bin alone. Have at least one person stand outside the bin who can help should you become entrapped. When entering a bin, it is best to have two people that are professionally trained to follow all safety procedures available.
- Wear a dust filter or respirator when working in a grain bin, especially while cleaning.
- Do not allow children to play in or around grain bins, wagons, or truck beds.

Sources:

¹Henna, M. and Schwab, C.V. 2017. Harvest safety yields big dividends. Safe Farm. lowa State University. https://store.extension.iastate.edu/product/4613

²Occupational Safety and Health Administration. OSHA 3329-06-2011. https://www.osha.gov/sites/default/files/publications/OSHA_3329.pdf

³10 safety tips to remember about farm equipment and their uses. Rural Mutual Insurance Company. https://www.ruralmutual.com/resource/farm-safety/farm-machinery/10-safety-tips-remember-farm-equipment-uses/
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