



Grain Bin Safety

The very first type of grain storage was built in Europe in the early to mid-1800's as experimental airtight underground storage tanks. Researchers found that even in less than desirable conditions, this method led to a higher yield of usable grains, rather than traditional outdoor storage. That early prototype has morphed into what is today the modern silo and the grain bin.

Grain bins, when used and maintained properly, are the most efficient way to store your grain. However, working around and inside of a grain bin can expose you and your employees to many hazards. The most common include:

- Grain engulfment
- Entanglement
- Falls
- Electrical hazards
- Toxic air due to dust, mold, and other accumulated gases
- Collapse

It is important to note that some grain bins will qualify as a "Permit-Required Confined Space" per the Occupational Safety and Health Administration's (OSHA) definition. It is your responsibility to understand if your grain bins meet that definition and to provide your employees with the proper safety equipment and protocols to protect them while working.

One of the most important ways to reduce personal risk when working with grains bins is to ensure the grain is being stored properly.

- Grain should always be dried to the proper moisture level before storing
- Consider installing temperature sensors to monitor the temperature of the grain
- Be sure there is proper aeration and it's functioning properly
- Check the bin for leaks and cracks
- Clean out any out of condition grain. If you're unable to clear out-of-condition grain according to the bin manufacturer's recommendations, call a professional

When you do need to enter the grain bin, never do so alone

Always Work in Threes:

1. One person to enter grain bin and perform maintenance/repairs
2. One person to watch and listen for the worker inside the bin
3. One person to run and get help in the event of an emergency. Equipment and vehicles

Safety Precautions to Consider When Working in a Grain Bin:

- Prior to entering a bin, de-energize and disconnect all mechanical, electrical, and pneumatic equipment that could expose you or your employees to danger. Make sure the power source is locked out and tagged before entering
- Be aware of “bridged” grain. This is a crust of grain that forms at the top of the grain pile due to excess moisture. Even if the grain below it has shifted down, this bridge can remain and collapse when walked upon
- Use a safety harness for the person working inside the grain bin. Two people should be on the outside of the bin anchoring the safety line
- Wear a respirator when working around moldy or dusty environments
- Never remove or modify guards that are on augers or other equipment
- Always be alert when working in a grain bin. Out-of-condition grain can cause cave-ins, avalanches and grain crusts
- Use OSHA’S Safe Entry checklist, even if not required



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