

Grain Dryer Safety **Leader's Guide**

1. Discuss what causes an explosion:
 - a. Fuel – grain dust
 - b. Ignition – a spark or flame such as a hot bearing, metal rubbing against metal
 - c. Oxygen – it's in the air
 - d. Confinement

2. Discuss where all the Ignition Sources might be found.
 - a. Static electricity
 - b. Sparks from welding and cutting.
 - c. Sparks from electrical fixtures or connections.
 - d. Sparks from tramp metal in the system.
 - e. Smoking
 - f. Lightning
 - g. Overheated bearings, belts, motors, etc.
 - h. Hot surfaces from lights

3. Discuss your facility's housekeeping frequency:
 - a. Frequency during busy time
 - b. Frequency during slack time
 - c. Some continuous housekeeping during harvest

4. Discuss cleaning methods
 - a. All employees are responsible to assure that grain dust does not accumulate in their work areas.
 - b. During production runs, the grain dust should be swept off the floor areas periodically throughout the day.
 - c. When larger accumulation occurs, forced air can be used to blow dust off areas where it has accumulated.
 - d. When performing a blow down, all equipment in the area of the blow down that may produce sparks or excessive heat must be shut down. The pressure of forced air can not exceed 30 pounds per square inch (psi).

5. Discuss any disciplinary action that may be taken if an employee intentionally disregards housekeeping rules.

Grain Dryer Safety

- Do not open the rear door of the machine or any panels unless the machine has been stopped and the electrical power has been turned off to the machine.
- Do not make any adjustments to the machine or other equipment while in operation.
- Follow all manufacturers instructions.
- Do not by-pass safety switches.
- Keep children away from all operating farm machinery or equipment.

When shutting down grain drying equipment, be sure to:

- Turn off the fuel valve closest to the supply and allow time for the flame to burn out.
- Cool grain by running cool air through it for 15 to 45 minutes.
- Turn off the power switch on the electrical panel.

Grain dryer safety tips

Poorly maintained grain drying equipment can lead to malfunctions such as a gas leak and fires, resulting in property damage, injury and even loss of life. It is also important that anyone who is near or operates a grain dryer understands the safety precautions attached to the equipment and owners manual.

The following safety tips will help you work safer:

- Have your grain drying equipment installed by licensed gas contractor.
- Your licensed gas contractor will ensure that all the required safety controls are connected and functioning properly and that your grain dryer is connected to the gas source for which it is certified (propane or natural gas).
- Ensure your appliance is approved for drying grain (no tiger torches, construction heaters, or home made dryers).
- Carefully inspect and clear away any dust, dirt, cobwebs and nests from the equipment before starting.
- Avoid damage or stress to any gas lines which could cause a leak and consequent fire and injury (do not drive over the hose with your vehicle or other types of equipment).
- If smoke appears or the grain starts on fire, stop the blower immediately to reduce the supply of oxygen.
- Turn off the grain dryer immediately if there is excessive vibration, unusual noises, or you smell propane or natural gas.
- Keep all grain dryer shields in place and closed to avoid injury.
- Ensure guards on the intake of your auger are in place to avoid injury to hands or limbs.
- Engage the power take off (PTO) drive machine slowly.
- Keep loose fitting clothing and articles away from the blower intake and from any moving parts to avoid injury.