



LEARN MORE. DO MORE. SAVE MORE LIVES.

It can be sobering to learn that it takes just seconds to be engulfed in a grain bin. But it's comforting to know that it takes just a few minutes to stay safe.

Below are some statistics about the dangers of grain bins and solutions to help address the problems.



Suffocation from engulfment is the leading cause of death in grain bins.¹

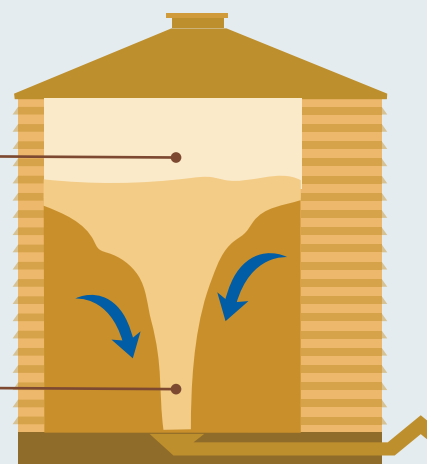
Suffocation hazards

Oxygen-deficient atmospheres

A worker entering a bin **can be quickly overcome by toxic gases and die or suffer serious injury**. Suffocating atmospheres can result from machinery in use in or near bins, spoiling or deteriorating grain or other problems.

Engulfment

Much like quicksand, **flowing grain can bury a worker within seconds**. And its behavior and weight make getting out without assistance almost impossible.



In 2017, 74% of documented grain engulfments occurred in the Midwest.²



It takes only seconds to become helplessly trapped in flowing grain.

440
documented
entrapments
from 2007 to 2019²

50%
of grain
entrapments in 2018
were fatal²

Grain bin accidents can result in
multiple deaths
when untrained people
rush in to help.

SAFETY STARTS WITH:

Maintaining quality grain

Grain bin safety starts with putting quality grain into a bin and continues by maintaining grain quality in storage.



Core bins to **remove fines and improve airflow** through the center of the bin.



Learn and practice stored-grain quality management.



Utilize temperature and moisture monitoring systems to help detect potential problems early.

Establish safe grain bin entry procedures



Create a grain bin entry permit to be used prior to entry — each and every time.



Train workers on safe bin entry procedures before any bin entry activities can occur.



Train workers to identify grain bin hazards and risks.



Work with your local fire department or emergency response team to develop and implement a comprehensive emergency action/rescue plan.

If grain bin entry is truly necessary,
follow safe entry procedures!³

1 Use a grain bin entry permit.

2 De-energize and lock out all equipment.

3 Test bin atmosphere for toxic gases and oxygen levels.



4 **Never walk down grain.**

5 Wear a body harness secured to a lifeline that's attached to a fixed anchor point.

6 Utilize at least one outside observer who can both see and hear you.

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Since 2014, Nationwide has collaborated with the National Education Center for Agricultural Safety (NECAS) to help raise awareness about suffocation hazards of grain bins and dangers of grain-related structures. By establishing and following safe grain bin entry procedures, you can help reduce the number of preventable injuries and deaths associated with grain handling and storage. Nationwide can help your operation establish and follow safe grain bin entry procedures.

For more information, visit grainbinsafetyweek.com.

¹ "Inspection of Grain Handling Facilities," OSHA Fact Sheet 29 CFR 1910.272.

² "2018 Summary of U.S. Agricultural Confined Space-Related Injuries and Fatalities," Purdue University (June 2019).

³ "Permit-Required Confined Spaces," OSHA Fact Sheet 29 CFR 1910.146.

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