



## GRAIN BIN SAFETY - ENTRAPMENT AND ENGULFMENT

The grain handling industry is a high hazard industry where workers can be exposed to numerous serious and life threatening hazards. These hazards include: fires and explosions from grain dust accumulation, suffocation from engulfment and entrapment in grain bins, falls from heights and crushing injuries and amputations from grain handling equipment. According to researchers at Purdue University, more than 900 cases of grain engulfment have been reported with a fatality rate of 62% in the past 50 years. In 2010, at least 26 U.S. workers were killed in grain engulfment accidents – the highest number on record. To educate employers, employees and the public about safety in the grain handling industry, Grain Bin Safety Week is held February 17-23, 2019.

Storage and handling of grain creates unique hazards. Potential hazards include engulfment and entrapment, injury from falls, and respiratory and breathing problems from inhalation of dust, molds and allergens. Be aware of these entrapment and engulfment hazards when working around grain bins:

- Flowing grain – Grain is flowing when a bin is being unloaded from the bin. Flowing grain can act like quicksand, pulling a person into the grain and entrapping them in a matter of seconds. Suffocation and death is often the result.
- Bridged grain – Bridged grain occurs when the top layer crusts over a void making the bin appear full. It may look safe, but walking on the bridge may cause it to collapse, engulfing you. Break up the crusted grain from outside the bin with a long pole.
- Columned grain – Columned grain occurs when grain is stuck to the side walls of a bin, creating very steep slopes. Avalanching can occur, engulfing anyone near the base of the column. Break up the crusted grain from outside the bin with a long pole.
- Due to the dangers associated with grain bins, youth working on farms and agribusinesses should NEVER enter a grain bin.
- Engulfment in grain bins can result in multiple fatalities when others attempt to rescue and become victims as well. Rescues should only be attempted by properly trained and equipped professionals.



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