



## GRAIN SAFETY TIPS

### STATISTICS + FACTS

- There were 22 grain bin fatalities IL from 2007-2016.
- A 6-foot person could be completely buried in 25 seconds with a 10-inch output auger.
- It would require approximately 900 pounds of pull to remove a 165-pound person engulfed in grain over his head and this can't be done.
- Once grain levels reach a victim's knees, trained assistance is necessary for their removal.

### HOW IT HAPPENS

- **Unloading/Flowing**  
If you stand on moving grain, it reacts like quicksand and buries the victim in seconds.
- **Bridging Entrapments**  
The crusted top surface of a grain pile collapses due to the weight of the person. The victim can become injured in the fall and possibly buried in grain pile.
- **Avalanche/Vertical Entrapment**  
If the victim attempts to dislodge the shelf of grain, the grain shelf engulfs the victim.

### PREVENTION

- Use inspection holes or grain level markers.
- Use a pole to break up grain bridges from outside the bin.
- Enter a bin only if absolutely necessary.
- Lockout/Tag-out power to augers before entering bin.
- Use a body harness secured to the outside of the bin when entering.
- Have at least two observers during grain bin entry.
- Use hand signals to communicate and make sure everyone you are working with knows the hand signals, too.
- Work from top to bottom when cleaning grain bin walls.

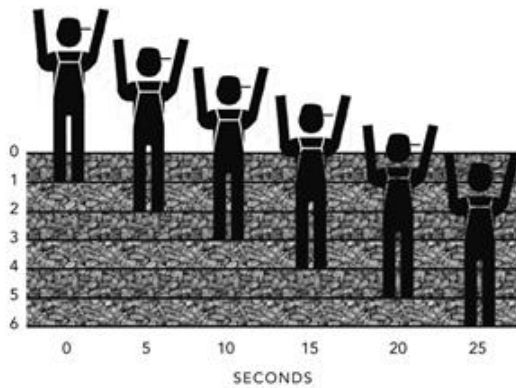
### How Does Entrapment Happen?



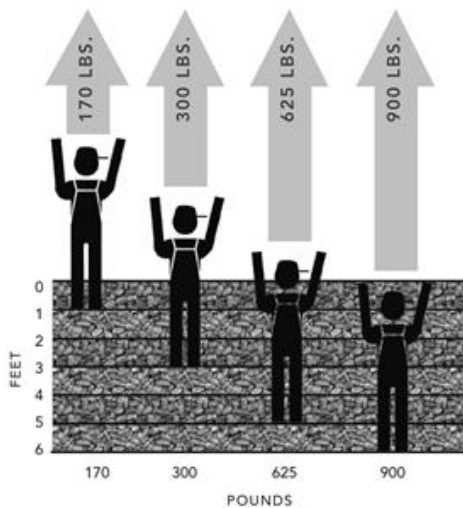
### IF ENTRAPMENT HAPPENS

- Make sure the auger is shut off to stop grain flow.
- Disable the power.
- Turn ventilation fans on to supply fresh air to the victim. Be cautious not to turn on any dryers.
- Dial 911.

### HOW FAST DOES IT HAPPEN?



### WHAT DOES IT TAKE TO PULL OUT A 165 LB. PERSON?



### REFERENCES

- Ref. 1 - Farm Deaths: 2016 & 1986-2016. University of Illinois Extension. Agricultural Safety and Health.
- Ref. 2 - Hazards of Flowing Grain. Pennsylvania State University. <http://www.abe.psu.edu/ash/FlowingGrain/2%20HFG%20Notes.pdf>
- Ref. 3 - Hazards of Flowing Grain Instructor's Notebook. Penn State Agricultural Safety and Health.