



### Don't Go with the Flow

Grain generally flows freely from a storage container such as a grain bin. But, the flow of grain can be interrupted for various reasons. Farmers may then feel it is necessary to enter the grain bin to fix the issue. If the unloading has not be shut-off or if another person approaches the grain bin and turns on the unloading auger not realizing that a colleague has entered the bin to fix an issue the person in the bin can be quickly pulled under the surface of the flowing grain.

Flowing Grain has several characteristics that makes it potentially dangerous. In a grain bin:

- Grain flows in funnel downward
- The center grain flows first
- Grain on the outer edges of the grain bin moves inward toward the center
- If the grain it out of condition it may crust over creating air pockets underneath the surface
- Grain flows into empty space

This activity will show what can happen should someone be in a gravity-box wagon, grain cart, truck or gain bin and the unloading mechanism is running.

### Procedure

1. Cut off the bottom of an empty 2-liter bottle.
2. Put cap on bottle and support it upside down. High enough for good visibility. (You may wish to construct a structure to hold the 2-liter bottle in an upside-down position)
3. Place a collecting container under the 2-liter bottle to catch the grain as it is discharged.
4. Fill bottle with grain.
5. Place object representing the person in the top of the grain sample.
6. Remove the cap and watch the flow of the grain AND the person at the top of the grain
7. Use something that you can easily hold and control to stop the flow so you may discuss the different characteristics of flowing grain at intervals during the unloading process.

### Materials Needed



2-liter bottle with cap (clear plastic))



Small grain such as soybeans, wheat or rice



Imitation people objects



Small bucket or container

Remind the students that if you are caught in the flow of the grain, you will be pulled towards the opening in the center of the bin. Once you are caught in the flow, you will not be able to escape. If you must enter a grain bin, make sure that power to the unloading auger has been shut off and that the controls have been locked out and tagged. This will prevent another person from turning on power to the underloading auger.