SILAGE AVALANCHES CAN BE DEADLY **March 3, 2017**
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Introduction

Silage avalanches are real and there is no way to predict when and where they will occur. It only takes a fraction of a second for part of a silage face to silently break off and fall, and the result can be deadly for anyone located beneath it. There have been several avalanche fatalities in the USA the past few years, and although rarely reported, we have heard numerous accounts of someone having a near miss with a silage avalanche or a feedout face collapsing.

Silage avalanche tragedies

It started out as a typical day for Doug DeGroff of Tulare, CA. He pulled up to his client's corn silage pile for a forage sample, bucket and pitchfork in hand. After filling the bucket, he turned to walk back to his pickup to mix and take a sample. "The sun basically went out – I could not see any light and the feed hit me on my head and covered me completely," says DeGroff. "I knew what was happening before I hit the ground. The entire face fell on me ... about 18 tons broke away." DeGroff, who had celebrated his 36th birthday with his wife and two toddlers two days before August 27 last summer, was caught in a silage avalanche. DeGroff offered these additional comments, "This particular pile did not look unsafe at all. It was only 11 to 12 feet tall at the time that I sampled it and was mechanically shaven. I personally have taken feed samples from piles where I should not have been. I knew they were not safe, but I took the risk. This pile looked safe from any angle you looked at it from. I feel very blessed to be here and that everything still works. Yes, it was a broken back, but it could have been so much more. I am not on pain medication, and I don't think there are going to be long-term issues" (Hay & Forage Grower, Feb. 2010).

A Nebraska newspaper reported the following fatal accident. A 53-year old Norfolk, NE man died Monday, October 21, 2013 in a feedlot accident. Stanton County Sheriff Mike Unger said Matthew Winkelbauer died after he was buried by a large silage pile that fell in an open silage pit at Four-Quarters Feedlot east of Norfolk. Winkelbauer, who was the owner and operator of Four-Quarters, was pronounced dead at the scene. A co-worker was seriously injured in the accident. The victim was standing in front of the feedout face, which was about 15 to 18 feet high, and the avalanche pushed the falling silage more than twice that distance away from the face.

On January 13, 2014, Jason Edward Leadingham was working alone in a bunker silo when 10 to 15 tons of corn silage collapsed on him. Jason was a silage haul-back driver for Pirtle Farms LP of Roswell, NM. Jason's body was not recovered from the silage until about 2 and 1/2 hours later. The Office of Medical Examiner later determined that he died of mechanical asphyxia and had no other life threatening injuries. There was a sample bag near Jason's left hip. He was clutching silage in his hands and had silage in his mouth, which suggest that Jason struggled to survive in the final moments of his life.

A Kansas rancher parked the front of his pickup about 12 feet back from the face of a bunker silo that was about 14 feet high. Apparently there was a fracture line about 2 feet behind the face. This pivoted from the bottom toward the truck, so the top foot or so had significant momentum toward the truck. It hit the hood of truck hard enough that one could easily see the outline of the air cleaner. This 'near miss' supports the recommendation to stay much farther away from the feedout face of a bunker or pile than the silage is tall.

Far too many bunkers and piles are just too large to be safe. It is not uncommon to have silage feedout faces that are 18 to 20 feet tall or taller. Common sense tells us that a silage face, which is 20 to 25 feet high, is much more dangerous than one that is only 10 to 12 feet high.

Preventing silage avalanche accidents

We believe that every farm, dairy, feedlot or livestock operation should have written safety policies and procedures for their silage program, and they should schedule regular meetings with all their employees to discuss safety. Here are guidelines that can decrease the chance of having a fatality or serious injury caused by a silage avalanche.

- Never allow people to approach the feedout face. No exceptions!
- A rule-of-thumb is never stand closer to the silage face than three times its height.
- Suffocation is a primary concern and a likely cause of death in any silage avalanche. Follow the "buddy rule" and never work in or near a bunker or pile alone.
- Bunker silos and drive-over piles should not be filled higher than the unloading equipment can reach safely, and typically, a large unloader can reach a height of 12 to 14 feet.
- Use caution when removing plastic or oxygen-barrier film, tires, tire sidewalls or gravel bags near the edge of the feedout face.
- Do not remove surface spoiled silage from bunkers and piles that are filled to an unsafe height.
- Use proper unloading technique, which includes shaving silage down the feedout face.
- Never dig the bucket into the bottom of the silage. Undercutting creates an overhang of silage that can loosen and tumble to the floor. This is a situation that is quite common when the unloader bucket cannot reach the top of an over-filled bunker or pile.
- Never drive the unloader parallel to and in close proximity of the feedout face in an over-filled bunker or pile.
- When sampling silage, take samples from a front-end loader bucket after it is moved to a safe distance from the feedout face.
- Never ride in a front-end loader bucket.
- Never park vehicles or equipment near the feedout face.
- Avoid being complacent! Always pay attention to your surroundings and never think that an avalanche cannot happen!
- A warning sign, 'Danger! Silage Face Might Collapse', should be posted around the perimeter of bunker silos and drive-over piles.

Bottom line

We cannot stop avalanches from happening, and they are impossible to predict, but we can prevent people from being under them. If a silage program is not safe, then nothing else about it really matters. It's about sending everyone in your silage program home to his or her family safe EVERYDAY.