

Safety considerations  
with harvesting,  
packing, covering and  
managing silage  
piles.... **& feed out.**



**Douglas W. DeGroff of Diversified Dairy Solutions**

# ***Plains-Valley Online News; January 16, 2014***

On January 13, 2014, Jason Edward Leadingham was in a bunker silo of corn silage near Dexter, NM when a massive amount (10 to 15 tons) of silage avalanched onto him and the floor of the silo. The bunker silo was owned by Pirtle Farms LP, Roswell, NM. Jason's body was not recovered from the silage until about 2 and 1/2 hours later, and it was determined that he died of mechanical asphyxia. **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.**

<http://pvonlinenews.com/tag/jason-leadingham/>

Website accessed January 24, 2014



On January 13, 2014, Jason Edward Leadingham was working alone in an over-filled bunker silo when a massive amount (tons) of corn silage avalanched on top of him. Because he was working alone, no one witnessed the avalanche and no one knew where to start looking for Jason. It took many hours to locate his body under the silage. The Office of the Medical Examiner later determined Jason died of mechanical asphyxia and had no other life threatening injuries. When his body was recovered, a sample bag was found near Jason's left hip.

The enclosed 17-minute video contains video footage of the recovery efforts and portions of deposition testimony of a Sheriff's Deputy (first responder), farm owners/managers and employees both past and present. Intermittently, Dr. Keith K. Bolsen, Professor Emeritus at Kansas State University, provides important silage safety rules and guidelines, which save lives.

This video was produced in loving memory of Jason Leadingham, father, husband, son, brother, friend and silage haul-back driver. The family hopes that Jason's death will encourage others to make silage safety their number one priority. Send your employees home safe to their families every day.

# Silage Safety

*DVD courtesy of:*

*Dr. Keith K. Bolsen, Professor Emeritus Kansas State University*

*Ruth E. Bolsen, Customer and Technical Support, Silostop*

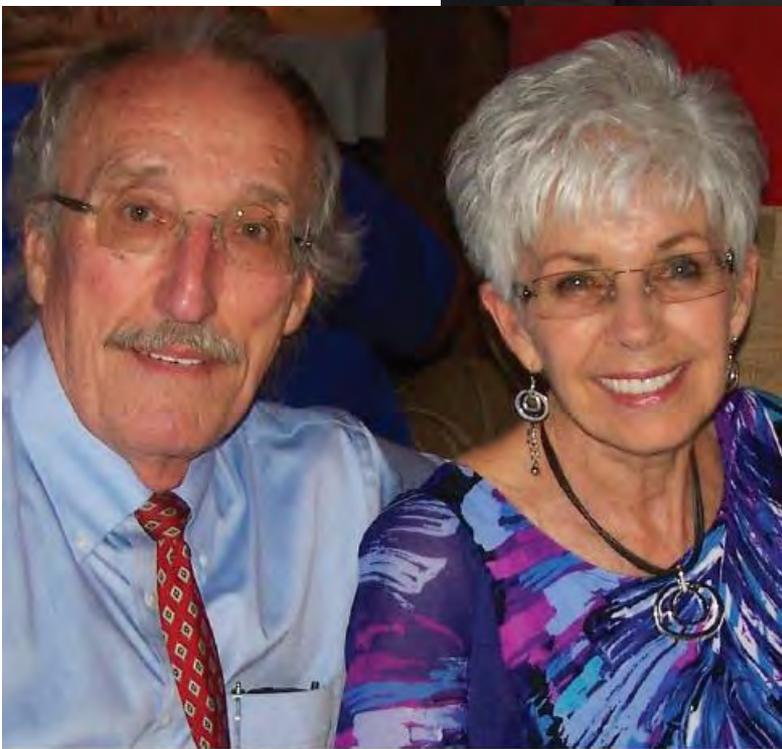


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**KEITH AND RUTHIE BOLSEN**

“Silage-related tragedies have no age boundary as family members, employees, and bystanders of all ages have been injured or killed during harvest and feedout. The first step in preventing a serious accident in any silage program is to make sure everyone on your team is aware of the possible dangers. You could be saving a life.”

*Dr. Keith Bolsen*

# What is the goal of a good safety program?

To send everyone who is involved in your harvest home to their family safe everyday!

**“We have nothing to lose by practicing safety; but we have everything to lose by not practicing it.”**

**Dennis Murphy, Extension Safety Specialist, The Pennsylvania State University, State College, PA**





**SAFETY DOES  
NOT HAPPEN BY  
ACCIDENT**

**BE CAREFUL**

**THIS MACHINE  
HAS NO BRAIN...  
USE YOUR OWN**

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# Safety-> you have to be Intentional!

- SAFETY Meetings
- Signs
- Written Protocols
- Expectations
- Buddy System
- Safety Clothing
- Properly Maintained Equipment
- Adequate Rest



# Safety Rules to Follow;

- Bunker silos and drive-over piles should not be filled higher than the unloading equipment can reach safely; 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 “pitch” spoiled silage. It is simply too dangerous to remove surface spoilage from the top of many bunkers and piles.
- 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.
- Never allow people to approach the feedout face. A rule-of-thumb is never stand closer to the silage face than three times its height.
- Avoid being complacent. Always pay attention to your surroundings and never think that an avalanche cannot happen.
- Follow the “buddy rule” and never work in or near a bunker or pile alone.
- A warning sign, ‘Danger! Silage Face Might Collapse’, should be posted around the perimeter of bunker silos and drive-over piles.
- If a bunker silo or drive-over pile is in a remote area on the farm, then the perimeter should be fenced and a sign posted, ‘Danger: Do Not Enter. Authorized Personnel Only’.

- Always use a packing tractor which has a rollover protective structure (ROPS).
- Wear your seat belt at all times.
- Allow only experienced operators to drive the packing tractor.
- Set the tractor's wheels as wide apart as possible, or use dual wheels to increase the tractor's stability.
- Use a four-wheel drive or front-wheel assist tractor for better control.
- Pack the forage at a maximum slope of 3:1
- prevent the slope from becoming too steep.
- When packing on steep slopes, back the tractor up the slope of the forage instead of driving forward
- When two tractors pack one bunker, establish a driving procedure which prevents the tractors from colliding.







**Table Rock Farm**

Page Liked · October 13, 2014 ·

The harvest team was inspecting and preparing silage trucks before the sun was up on Thursday. This should be our last day of corn silage harvest- just about 25 acres to go!















09/09/2011





# Bagging Silage







06/01/2010





# Nitrogen dioxide (NO<sub>2</sub>)



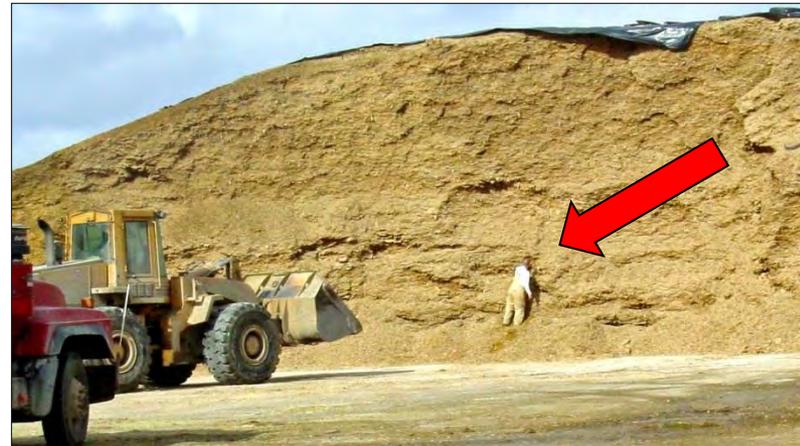




09/06/2010

# What are the Two Biggest Problems in Bunker/Pile Silage Management Today?

## 1. Safety



# What are the Two Biggest Problems in Bunker/Pile Silage Management Today?

## 2. Shrink



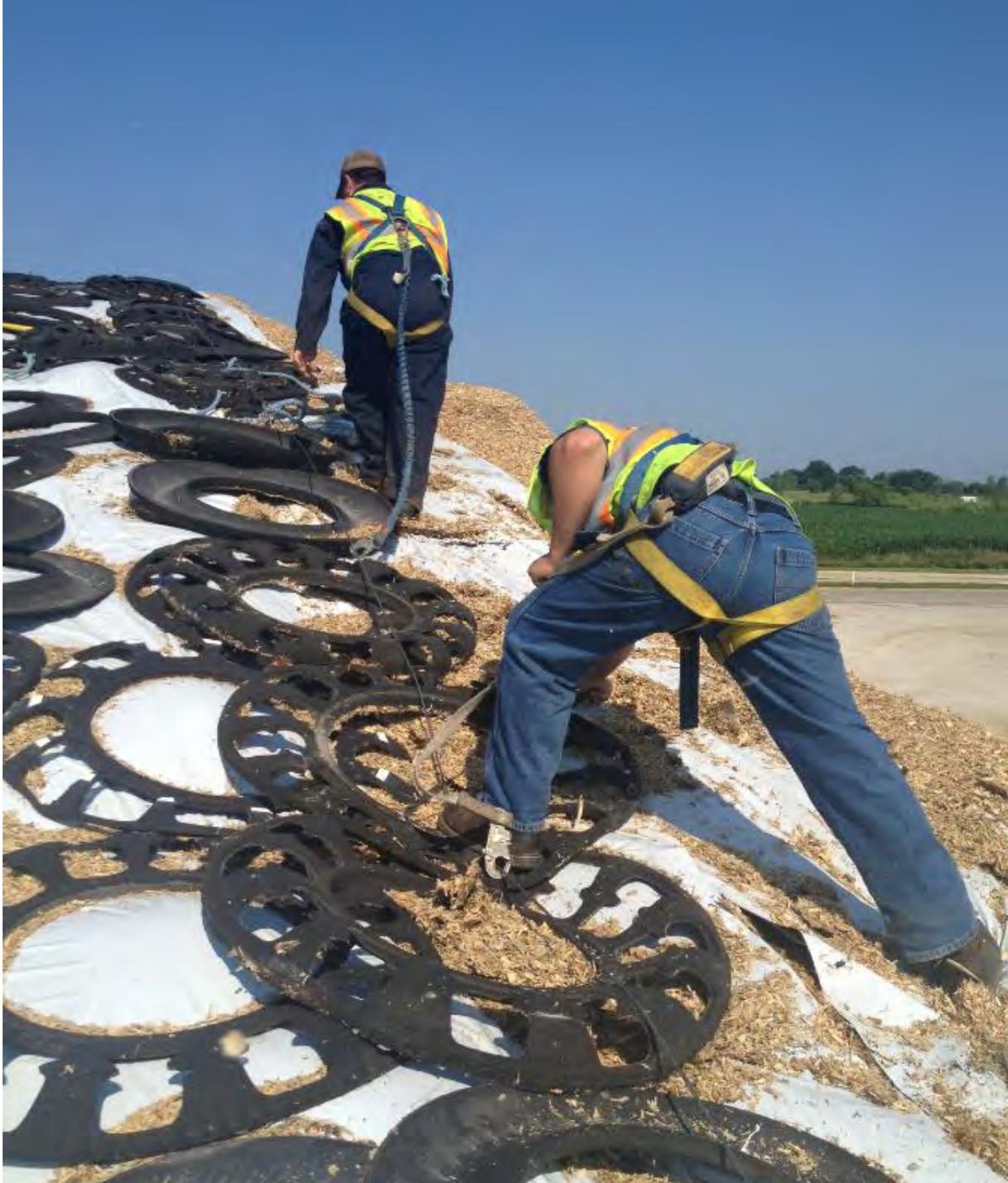




















575H

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SILVANT  
www.silvant.com

03/10/2010







# **Diversified Dairy Solutions**

## **Silage sampling protocol**

- 1) Have the feeder clean out feed box thoroughly to prevent any contamination with leftover feed. The easiest and best way is to use some of the silage that will be sampled, be sure not to sample the silage used to clean out the feed box.
- 2) Have the feeder load one day usage up to 10,000lbs. in the mixer. This should represent silage face both vertical and horizontal. Have the feeder mix the silage in the feed box for approximately 5 minutes

# **Diversified Dairy Solutions**

## **Silage sampling protocol**

- 3) Have the feeder unload silage in a safe area.
- 4) Using a bucket collect 10-15 handfuls of the silage from different areas.
- 5) Mix the silage thorough in the bucket and then fill & label the sample bag.





# THINK SAFETY FIRST

“We have nothing to lose by practicing safety; but we have everything to lose by not practicing it.”

Dennis Murphy, Extension Safety Specialist, The Pennsylvania State University, State College, PA



## Major Hazards:

- ✓ Fall from height
- ✓ Run-over by machinery
- ✓ Tractor roll-over
- ✓ Entangled in machinery
- ✓ Crushed by an avalanche
- ✓ Complacency

# Don't do something STUPID!!



# Take home message ...

**It's really not about shrink loss, feed conversion, cost of gain, yeilds, or milk over feed cost.**

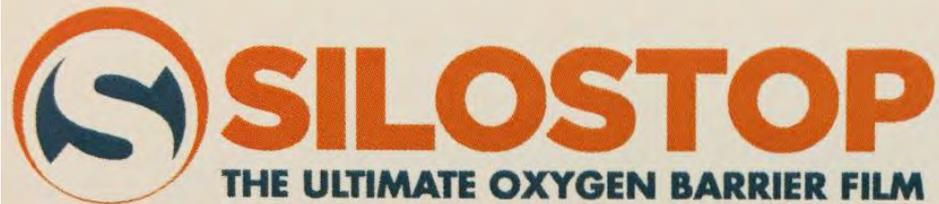
**It's about sending everyone in your silage program home to their family safe ... EVERYDAY”.**

**DDSDIVERSIFIED DAIRY SOLUTIONS, LLC**

DOUG DEGROFF

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# Safety Video



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