SAFETY in SILAGE OPERATIONS

Keith Bolsen Ph.D.
& Associates

K-STATE
Kansas State University

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THINK SAFETY FIRST …

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

Dennis Murphy, Ext. Safety Specialist
The Pennsylvania State University

UCD ALFALFA WORKGROUP

Major Hazards:

- ✓ **Tractor or truck roll-over.**
- ✓ **Entangled in or run-over by machinery.**
- ✓ **Fall from height.**
- ✓ **Crushed by an avalanche.**
- ✓ **Nitrogen dioxide.**
- ✓ **Complacency.**

USDA ALFALFA WORKGROUP

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There are far too many “over-filled” bunker silos and drive-over piles that are NOT SAFE!!

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At 3:45 pm on December 3, 1999, 6 tons of haylage in a bunker silo collapsed on Nick Schriner of Athens, Wisconsin. Schriner was rescued in a matter of minutes, but he suffered a C6 spinal cord injury. Nick is a quadriplegic for life.

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Successful Farming, September 2000

“Even though I was standing 20 ft from the face, 12 tons of silage collapsed on me. I didn’t hear or see anything … “

“I had been in (silage) pits hundreds of times, and you just become kind of complacent because nothing ever happens … it just took that one time”.

NCBA ALFALFA WORKGROUP

Mac Rickels; Nutritionist in Comanche, TX Dairy Herd Management, October 2000.

“I had a near miss earlier this year. I was taking a core sample at one of our large dairy customers and had just moved away from the face when a large section just fell off … This was a very well packed silo and had immaculate face management.”

Personal communication from a feedlot nutritionist; July 2008.

USDA ALFA WORKGROUP

An 11-year old boy died from injuries suffered after a feed pile collapsed on top of him at a Claremont farm **(WMUR TV, 2010).**

Andy Wheeler had previously been listed in critical condition at Dartmouth-Hitchcock Medical Center. Police said it took as long as 20 minutes to find and free Wheeler from the feed pile after the accident Tuesday.

Police said the boy was on vacation from Maple Avenue School which is why he was hanging out at the MacGlaflin Farm, where his father works. He was riding his bike near a silage crib, where livestock feed is stored, police said.

"The boy was in a silage crib where there was a large pile of silage, and that overhang collapsed," said Police Chief Alexander Scott. Scott said it took some time for anyone to realize there was a problem. "It is probably a pile close to 25 feet high" he said. School officials said they are preparing for questions from students when they return from spring break.

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WMUR TV. Claremont, NH. Web site accessed August 21, 2010.

Sugar Valley Volunteer Fire Company responded to a farm accident in Greene Township after *Kenneth R Hettinger, 63, of Rebersburg, PA, became entrapped under three tons of silage*. Fire personnel said Hettinger was removed from the silage by farm personnel.

Sugar Valley Volunteer fire company personnel attempted to resuscitate Hettinger but were unsuccessful, and *he was pronounced dead at the scene* by the Clinton County coroner.

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The Express. February 9, 2007. Man dies in farm accident. Lock Haven, PA 17745

OSHA, Idaho Dairy Agree to Reduced Fine
1:44 PM MDT on Thursday, July 17, 2008 Associated Press

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SHOSHONE -- A southern Idaho dairy will pay a reduced $1,700 federal fine for safety violations after a trucker was crushed on March 7. The OHSA had levied a $2,500 fine against the owners of 4-Bros Dairy.

Always pay Attention to Your Surroundings and Always be Alert!

"The accident happened on Saturday June 14, 1974. We were making wheat silage at K-State, and the blower pipe plugged for about the 10th time that afternoon. I started to dig the forage out from the 'throat' of the blower, and the PTO shaft was making one more revolution & zap! A blower blade cut off the ends of 3 fingers on my right hand."

Keith Bolsen; Austin, Texas

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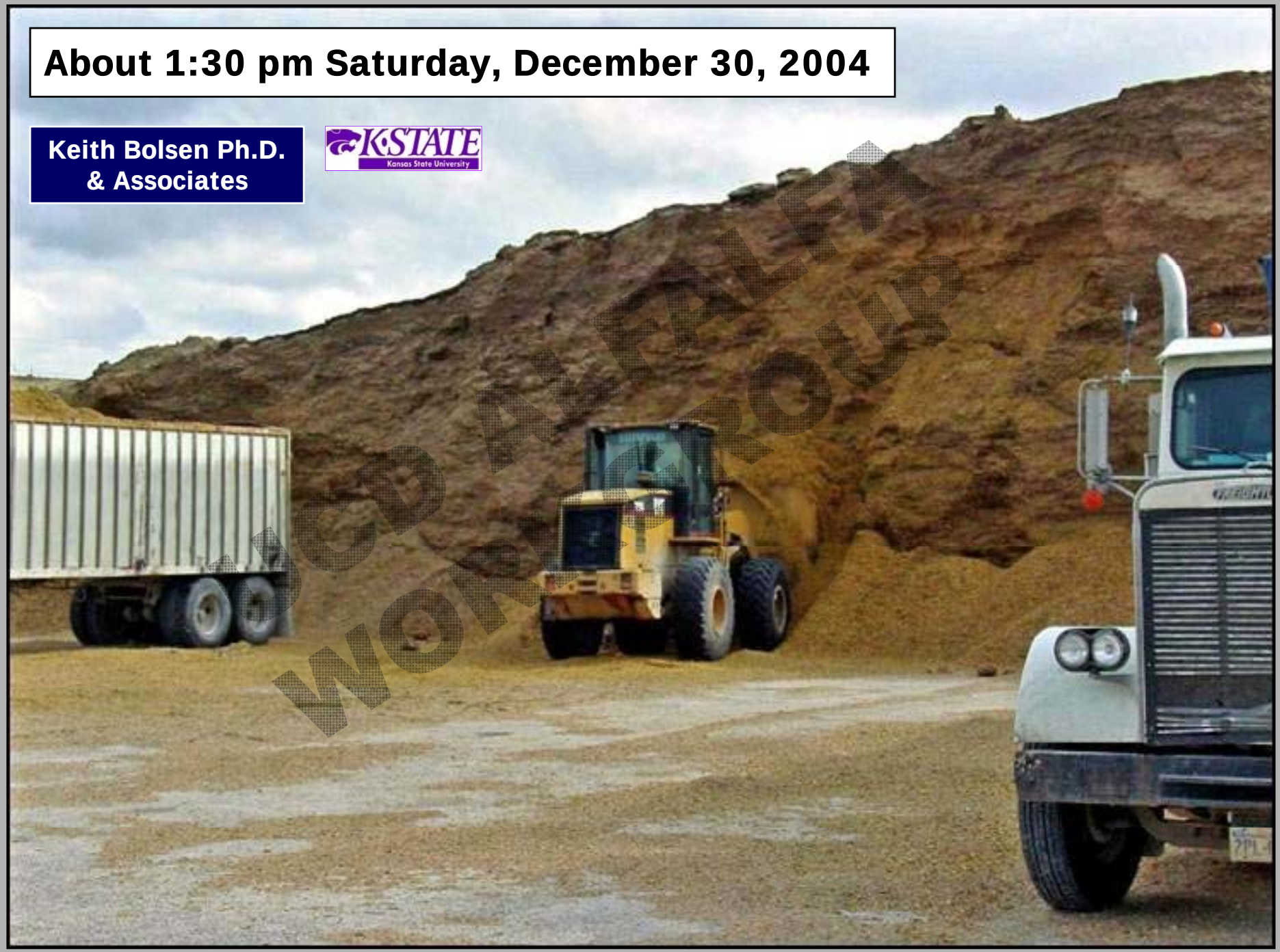
JCB ALFALFA PROGRAM

About 1:30 pm Saturday, December 30, 2004

Keith Bolsen Ph.D.
& Associates



Don't do something STUPID!!

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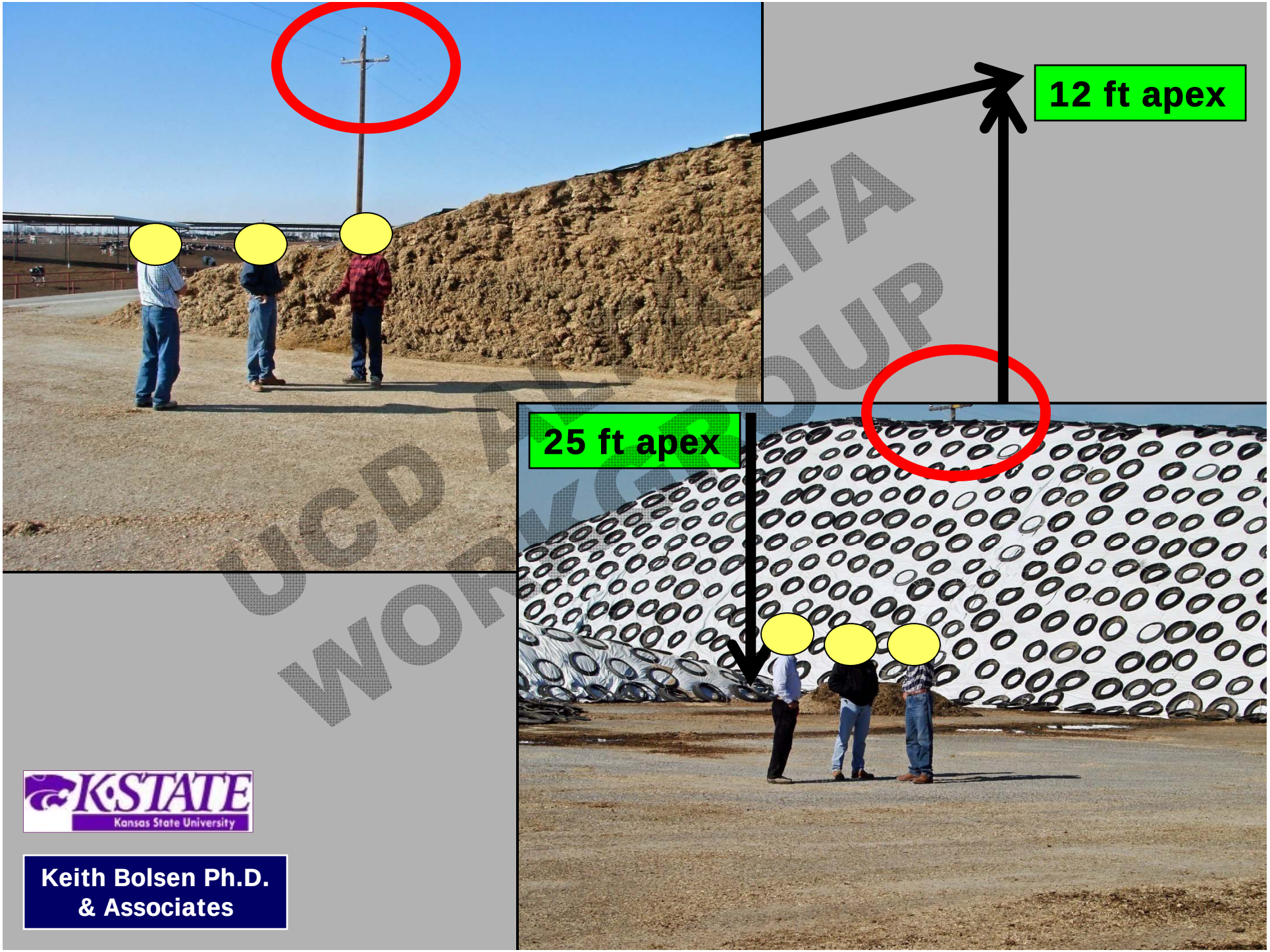
12 ft apex
25 ft apex
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From: Luciana Jonkman

ljonkman@progressivedairysolution.com

Date: Tue, Sep 1, 2009 at 12:06 AM

Subject: Doug crushed by silage last Thursday!

“Last Thursday my friend and partner Doug DeGroff was crushed by a silage pile. He is thankfully lying in a hospital bed, as I write this, and able to move all his limbs.”

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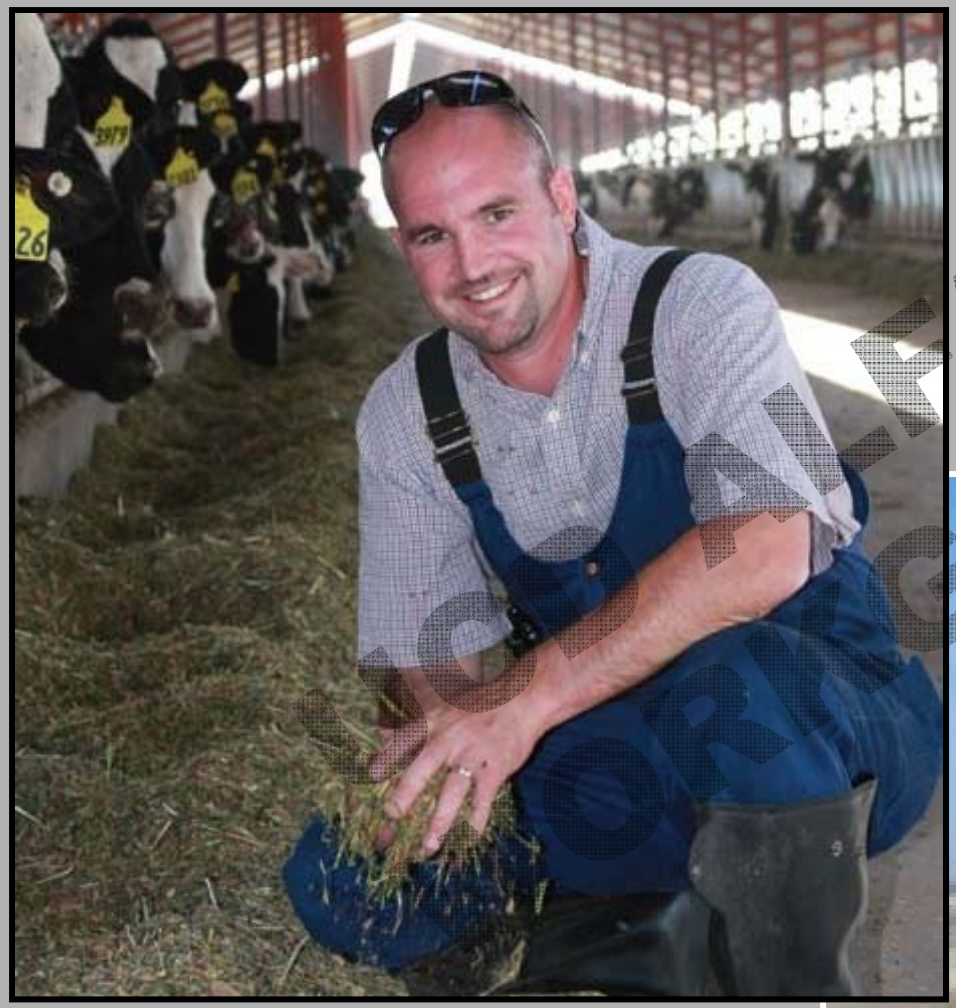
February 2010 | Hay & Forage Grower



Surviving A Silage *Avalanche*

UC ALFALFA FORAGE GROUP

PHOTO: Doug DeGroff

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February 2010 | Hay & Forage Grower

Surviving A Silage *Avalanche*

It started out as a typical day for dairy nutritionist Doug DeGroff of Tulare, CA. He pulled up to a 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 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 20 tons broke away."

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February 2010 | Hay & Forage Grower

Surviving A Silage *Avalanche*

DeGroff, who celebrated his 36th birthday with his wife and two toddlers 2 days before August 27 last summer, was caught in a silage avalanche!!

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Important Quotes …

“Start taking Silage Safety Seriously … Today”, Ruthie Bolsen.

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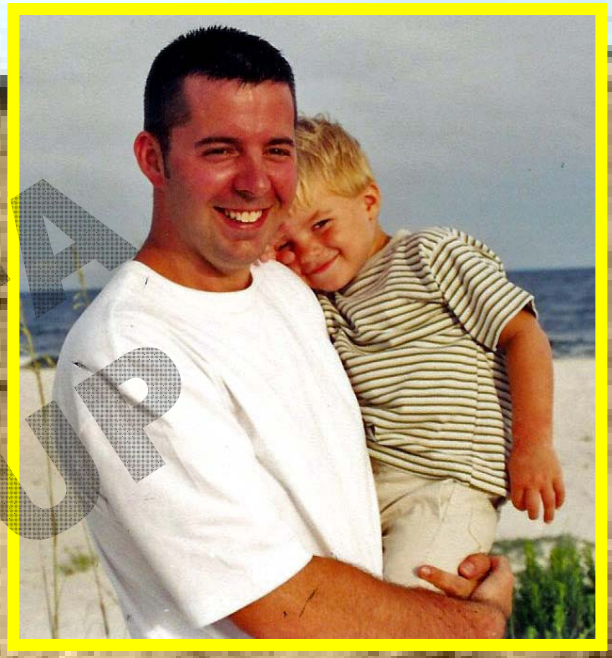
Footnote ...



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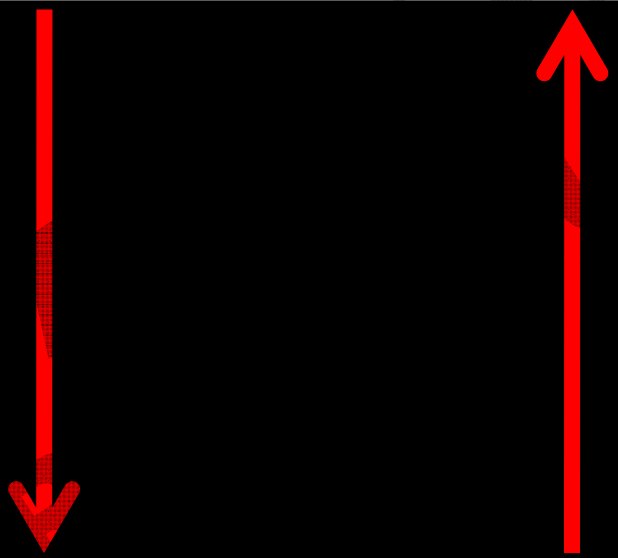
Ruthie's son, Kreg Morris, died on 9-30-01 in an auto accident that did NOT HAVE TO HAPPEN. Kreg was a 32-year attorney with a 3-year old son at the time of his accident.

Safe Silage



Efficient Silage

Keith Bolsen Ph.D.
& Associates

K-STATE
Kansas State University

What is the "Market Value" of Corn Silage based just on Shrink Loss?

- $50 / ton ÷ 95.0% = $52.63
- $50 / ton ÷ 90.0% = $55.55
- $50 / ton ÷ 85.0% = $58.82
- $50 / ton ÷ 80.0% = $62.50
- $50 / ton ÷ 75.0% = $66.66
- $50 / ton ÷ 70.0% = $71.43

Forage In vs. Silage Out

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Safe Silage??

Efficient Silage??

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Opportunity: 16 lbs per ft³

?? % of all the tons above the RED lines will be below the red lines!

10-11 lbs per ft³

8-10 lbs per ft³

13- 15 lbs per ft³

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UCDAVIS FAD WORKSHOP

Take home message …

"Do you discuss bunker silo and drive-over pile 'safety issues' with your employees?

It's really not about shrink loss, feed conversion, cost of gain, a close out, or milk over feed cost.

It's about sending all feedlot and dairy employees home to their family safe … EVERYDAY".

****Ruthie Bolsen, Managing Director, Keith Bolsen PhD & Associates.**

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THANK YOU!!

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www.ksre.ksu.edu/pr_silage