



STATE OF NEW YORK DEPARTMENT OF HEALTH

FATALITY ASSESSMENT AND CONTROL EVALUATION

Dairy Farmer Dies from Crushing Injuries Sustained while Loading Cows

Case Report: 03NY040

SUMMARY

On July 6th, 2003, a 48-year-old dairy farmer was helping load cattle onto a trailer when he was fatally crushed between the end of a gate and a steel fence. At the time of the incident, the farmer and two other workers were attempting to load cows onto a trailer using a chute created by fencing and some portable gates. One of the cows turned and rushed back through the gate into the barn area. The workers were able to turn the cow so that it was once again going toward the trailer and had passed through a makeshift gate. Once again the cow turned, and tried to push through the gate while the victim was standing by the side wall at the open end of the gate. The victim was crushed by the gate and his heart punctured by a metal protrusion on the end of the gate. Workers on the scene called for help and initiated resuscitation efforts. Upon arrival, the emergency squad continued these efforts and a helicopter transport was called in. The victim was pronounced dead on arrival at a nearby major trauma hospital.

New York State Fatality Assessment and Control Evaluation (NY FACE) investigators concluded that to help prevent similar incidents from occurring in the future:

- *Cattle handling facilities should be equipped with properly constructed animal loading structures to minimize hazards associated with animal transport;*
- *Workers should avoid positioning themselves in areas of entrapment when working around large animals;*
- *Dairy cows should be monitored for signs of unusual aggression. Dangerous animals should be promptly removed from farms to prevent worker injury;*
- *Work areas should be designed or modified to eliminate potentially hazardous protrusions*

INTRODUCTION

The NY FACE program learned of an agricultural fatality on July 7th, 2003 through a news article. The victim was a 48-year-old Caucasian male farm owner who died as a result of crushing injuries sustained while attempting to load a dairy cow onto a trailer.

The FACE evaluation team consisted of two NY FACE incident investigators who visited the farm location on October 16th, 2003. The investigation team inspected the incident location and met with the brother of the victim, who was present on the day of the incident and witnessed the injury event. FACE investigators also gathered information from the State Police's site investigation, and reviewed the coroner's report and death certificate.

The victim owned and operated the dairy farm where the incident occurred with his 45-year-old brother. The two brothers had grown up on the dairy farm and had purchased the farm from their parents. They had been operating the farm for the past 23 years.

The farm owners and four other full-time workers maintained 330 milk cows, more than 300 additional young stock and dry cows, and 1000 acres of cropland to feed the herd. The dairy farm appeared to be well maintained and operated.

INVESTIGATION

On July 6th, 2003, the victim, his brother, and a farm employee were loading cows onto a livestock trailer in order to ship them from the farm. They had selected a few cows out of the herd to sell for various reasons, with one cow in particular (Cow A) being sold because she had an unruly disposition. Most of the cows on the farm were said to be well-mannered with a calm disposition. However, Cow A, who was approximately six years old, had reportedly been difficult to handle her entire life on the farm and had previously acted aggressively toward a farm employee in the freestall barn. This action did not result in injury; however, due to her disorderly nature, the owners had decided to sell the cow.

On the day of the incident, the livestock trailer was parked in an area outside of a freestall barn with its back facing the barn gate by the right side of the barn. Two portable 16-foot long metal gates were placed at the passenger side of the trailer to form a chute and guide the cows into the trailer door. The barn gate was a 16-foot steel gate with a five-inch protrusion at the open end (Figure 1). The protrusion was part of the original design of the gate, enabling the gate to be latched in a closed position. At the time of the incident, the protrusion was not being used since the gate was fastened using a locking chain. The barn gate opened outward to demarcate the loading zone

The farmers loaded four cows and secured them in the front half of the trailer. They then attempted to load a few more cows, including Cow A, onto the back half of the trailer, when Cow A, a well-muscled animal weighing approximately 1700 pounds, resisted loading, turned around and rushed back through the rear gate. She pushed through the gate, opening it, and ran back into the barn area. The three farmers guided her back into the loading area and began a second attempt to load her onto the trailer.

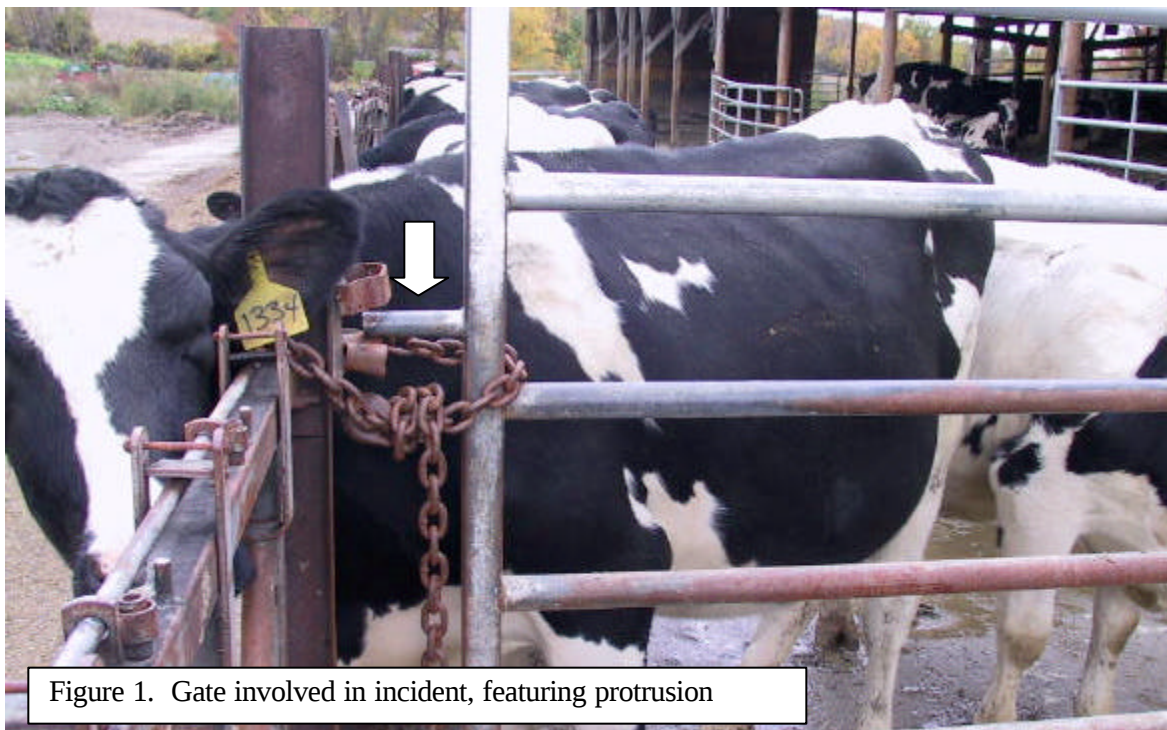


Figure 1. Gate involved in incident, featuring protrusion

Just prior to the incident, the victim was standing at the end of the barn gate behind Cow A as she was moved into the loading area. As the victim's brother and the employee tried to load Cow A onto the trailer, the cow again resisted, quickly turned around and ran forcefully against the gate. The victim was crushed between the end of the gate and the side steel wall (Figure 2). The metal protrusion at the end of the gate was pushed into the victim's chest by the force exerted by the cow. Cow A continued pushing the gate, which opened past center, allowing her to run into the barn.

The victim's brother and the employee both ran to the victim, who fell to the ground, to offer assistance. The brother could find no pulse on the victim and began CPR in an attempt to resuscitate him.

Meanwhile, the employee went to get assistance. Normally the employee carried a cell phone with him, but he had left it in his pick-up truck so that he would not drop the phone in the barnyard area while they were loading cows. The employee yelled to the truck driver, who was sitting in the cab of the truck during loading and had a cell phone with him, and instructed the truck driver to call the emergency squad.

The local volunteer emergency squad responded to the scene within 10 to 15 minutes. They did not find a pulse in the victim, but did take over resuscitation procedures. In an effort to save the victim, a helicopter transport was called to the scene and the victim was quickly transported to a nearby major trauma unit. The victim was pronounced dead upon arrival at the hospital.

CAUSE OF DEATH

The cause of death was listed on the death certificate as a ruptured heart due to or as a consequence of a crushed chest.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: *Cattle handling facilities should be designed with worker safety in mind including such components as safe loading facilities.*

Discussion: In this incident, the design of the freestall barn area and the gate were appropriate for a dairy freestall facility, but were not suitable for loading animals. During the incident, makeshift loading squeeze chutes were erected so the cows would channel from the holding area down a narrowed pathway into the loading door of the trailer. In facilities where cattle are loaded onto trailers regularly, permanent loading areas should be constructed where the animals are narrowed down into a single file pathway such that they do not have sufficient room to turn around and leave the area. These facilities should also have gates that are equipped with properly functioning latching systems designed to lock quickly and securely. Using an area such as this may have prevented the cow from being able to turn and push through the gate.

Recommendation #2: *Workers should position themselves to avoid areas of entrapment when working around large animals.*

Discussion: When standing at the open end of the gate, the victim inadvertently placed his body in a pinch zone between the end of the gate and the wall of the containment area. Had the gate been properly latched and the victim been standing outside the pinch zone, the victim could have avoided entrapment.

Recommendation #3: *Dairy cows should be monitored for signs of unusual aggression. Dangerous animals should be promptly removed from farms to prevent worker injury.*

Discussion: The cow involved in this incident had exhibited an unruly temperament during her entire adult life and had previously been involved in a close call that did not result in injury. Potentially dangerous animals such as this should be removed from farms as soon as possible to help prevent worker injury.

Recommendation #4: *Potentially hazardous protrusions should be removed from work areas.*

Discussion: In this incident the protruding pipe at the open end of the gate no longer served a functioning purpose as the gate was locked by a locking chain. Since workers routinely passed through this gate by opening it, walking through, and then closing the gate, the protrusion was in an area of work activity. Protrusions such as this represent potential hazards and should be removed.

Keywords: *dairy farm, cow/cattle, crushed by*

The Fatality Assessment and Control (FACE) program is one of many workplace health and safety programs administered by the New York State Department of Health (NYS DOH). It is a research program designed to identify and study fatal occupational injuries. Under a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH), the NYS DOH FACE program collects information on occupational fatalities in New York State (excluding New York City) and targets specific types of fatalities for evaluation. NYS FACE investigators evaluate information from multiple sources. Findings are summarized in narrative reports that include recommendations for preventing similar events in the future. These recommendations are distributed to employers, workers, and other organizations interested in promoting workplace safety. The FACE program does not determine fault or legal liability associated with a fatal incident. Names of employers, victims and/or witnesses are not included in written investigative reports or other databases to protect the confidentiality of those who voluntarily participate in the program.

Additional information regarding the New York State FACE program can be obtained from:

New York State Department of Health FACE Program
Bureau of Occupational Health
Flanigan Square, Room 230
547 River Street
Troy, NY 12180

1-866-807-2130

www.health.state.ny.us/nysdoh/face/face.htm

Steel Sidewall

Outer Area of Barn

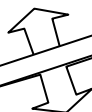
Freestall barn

Latch

Hinge



Victim



Cow A

Temporary
Metal Gates

Livestock
Trailer

Figure 2. Diagram of Incident