



Health and Safety on Dairies and Beef Feedlots

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Background

- Annually, an estimated 17,000 lost time injuries occur on dairies in the U.S.
- Approximately 12,000 injuries required medical attention
- 9,000 injuries occur from cattle handling (activity most likely to result in lost-time injuries)
- Nearly 1,000 of these injuries resulted in permanent disability
- Leg, knee and hip injuries were the most common, followed by arms, shoulders, and fingers

Background

- The frequent handling of cows on dairy farms makes dairy workers extremely vulnerable to animal-related accidents
- Results of a Minnesota farm accident survey of nearly 2,000 Ag farms indicate:
 - About 15 percent of all work-related farm accidents involved animals
 - Two-thirds of the animal-related accidents took place on dairy farms
 - Many of the victims were stepped on, kicked, fallen on, and crushed by cows or dairy bulls

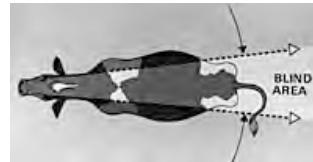
Cattle Care, Use, and Handling



$\frac{3}{4}$ of all animal related human injuries are due to lacking restraint equipment

Handling basics

- **Cattle have a panoramic field of vision.** Approaching from the side or front can be less startling to these animals than approaching from behind.
- **Cows with new calves.** A cow with her new calf is usually more defensive and more difficult to handle. Let her calf stay close to her as possible.
- **Dairy bulls.** Dairy bulls are much more aggressive by nature than cows. Although some dairy bulls appear gentle and calm, they may react at unexpected moments, inflicting serious injuries or death onto the bull handler
- **Noise and crowds.** Sudden exposure of dairy cattle to noise and crowds make cattle nervous and difficult to handle
- **Kicking.** Cows commonly kick forward and out to the side. They also have a tendency to kick toward the side where they have pain from inflammation or injuries.



Case study #1

- A dairy farmer was loading cattle
- Cow tried to push through the gate while the farmer 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



Take home ...

- Cattle handling facilities should be equipped with properly constructed animal loading structures
- Workers should avoid positioning themselves in areas of entrapment when working cattle
- Work areas should be designed or modified to eliminate potentially hazardous protrusions/crushing



Confined, hazardous spaces

Confined Space Regulations Cal OSHA

- What is a confined space?
 - Sumps, standpipes, flush tanks, molasses tanks, lagoons (empty or full), silos, etc.
 - Hazardous atmosphere or lack of oxygen
 - Can engulf personnel
 - Sloped sides where persons can slip and be trapped in bottom
 - Unsafe temperature, causes electric shock



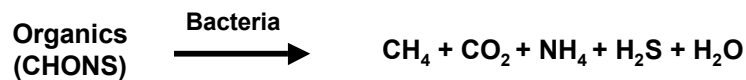
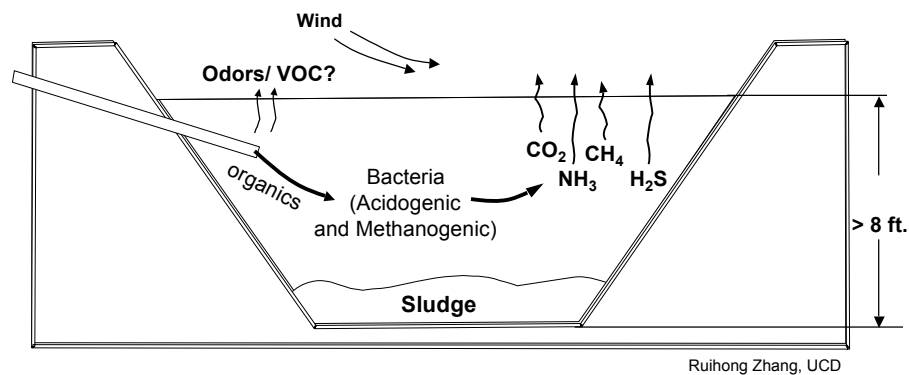
Confined Space Regulations Cal OSHA

- *Option 1*
 - File an entry permit for all confined spaces
 - Keep permit on file and revise as necessary
 - Post signs in front of all confined spaces and implement a “confined space program”
 - The confined space program is a written document that describes procedures before and during entry of confined spaces

Confined Space Regulations Cal OSHA

- *Option 2*
 - Prevent employees from entry into confined spaces by locking all entrances
 - Remove all hazardous materials from the confined space
 - Reclassify as a non-permit-required confined space
 - Prevent confined space from returning to a permit required area by supplying e.g., fresh air, maintaining appropriate temperature etc.

Anaerobic Lagoons



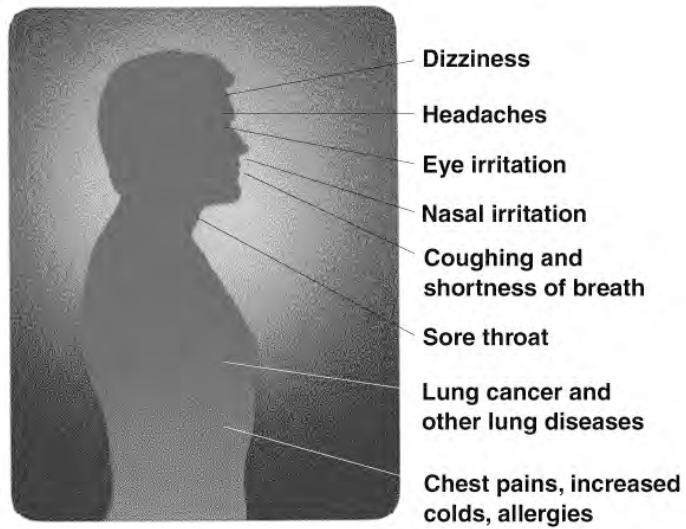
Case study #2

- Jose Alatorre worked for four months as a welder on a 1,700 cow dairy (200,000 gal waste/d)
- Waste was pumped through underground shaft from freestalls into a holding lagoon
- One day, the pump was clogged, so Alatorre and two other men were told to fix it
- Alatorre scrambled down a 30-foot concrete shaft until he stood knee-deep in manure
- At the bottom of the dark shaft, Alatorre yelled up that the air didn't seem good and he was going to come up. He began to climb, then fell, face first
- A panic gag reflex forced him to gulp more than a soda can's worth of excrement
- Co-worker Enrique Araisa scampered into the shaft to try to rescue his friend, but he too quickly passed out and died



Air Quality

Thompson and Turk: Earth Science and the Environment, 2/e
Figure 19.7



Saunders College Publishing

Personal Protective Equipment

- More than half of farm injuries can be prevented by using some type of personal protective equipment
- Use safety glasses, gloves, long trousers, steel-toed work shoes, and a bump hat for activities such as handling bulls, hoof trimming, and shipping the animals
- Use of chemical respirator, eye goggles, rubber gloves, trousers, and a long-sleeved shirt when preparing and applying pesticides
- Use dust respirator in high dust areas. Avoid breathing dust generated by moldy forage or grain (farmer's lung disease)

Summary

- Dairies and feedlots can endanger health and safety of workers
- Worker safety programs should be mandatory for:
 - **Species-specific animal care and use**
 - **Confined space**
 - **Health hazard prevention and protection**



