

# ***Health and Safety on the Farm: A Look at Immigrant Workers in Dairy*** **Rural Migrant and Immigrant Health Conference**



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**Northeast Center for Agricultural and Occupational Health**

**March 19, 2013**

## **Pennsylvania man, 2 teen sons found dead in massive manure pit**

**Philip Caulfield / NEW YORK DAILY NEWS**  
MAY 24, 2012

Tragedy struck a small-town Pennsylvania farming family on Thursday when a man and his two teenage sons were found dead in a large manure pit, authorities said.

Glen Nolt, 48, and his sons, Kelvin, 18, and Cleason, 14, of Peach Bottom, Pa., were pulled from the 20-foot pit at a Maryland dairy farm where they worked early Thursday morning, WGAL television reported.

## **Farming Accident Victim Identified**

**Wisconsin**  
March 7, 2013

The victim of a deadly farming accident in Brown County has been identified. Hobart/Lawrence Police say 29-year-old Israel Lepe-Quezada was found pinned underneath a piece of machinery on a farm in Hobart on County Line Road last Sunday. It took the police and the FBI several days to identify him. Lepe-Quezada's family will bring his body home to Mexico for burial. The cause of the accident is still under investigation.

## **Farmhand gored by Holstein**

9/22/2012

Town of Russia—A farmhand was sent to the hospital after he was gored by a bull in a field in Grant Road Monday.

State Police at Herkimer said they responded to 216 Grant Road for a report of an agricultural accident. An investigation revealed that Luis M. Martinez, an employee of Davis Farms, was attempting to herd cows into the barn when he was attached and gored by the 3-year old Holstein bull.

## **Western man dies after farm accident**

Lincoln Journal Star, 2/29/12

Two young girls have lost their father to a farm accident. Justin Kunc, 33 of Western was working at about noon Tuesday in a grain bin on the Vyhnalek family farm about three miles southwest of Crete when a sweep auger caught his clothes, Crete Fire and Rescue Chief Mahlon Kohn said. Emergency responders cut him free and took him to the Crete Area Medical Center where he was pronounced dead.

## **Man dies in Ithaca farm accident**

2/26/213

Ithaca—A 30-year-old man was killed when he was entangled in a piece of farm equipment Tuesday.

Ithaca Fire Department and Bang's Ambulance responded to the accident just before 1 p.m. at Sweyolakan Farm on Bostwick Road.

According to Lieutenant Thomas T. Basher Jr., public information officer for the fire department, the man suffered fatal injuries when he was tangled in an auger-type device. He was pronounced dead at the scene.

## **Fatal farm accident prompts immigration investigation**

WBNG Binghamton, 2/13/12

Authorities head to a farm for a fatal equipment accident and find illegal immigrants working there. Jenaro Lopez-Batista, 20 was teaching another person how to use a skidsteer when the front attachment on the equipment pinched Batista between the hydraulics and the cab. The injury was ruled accidental, and Batista was pronounced dead at Wilson Hospital. While at the farm, deputies and the United States Border Patrol found several people working there were actually illegal aliens

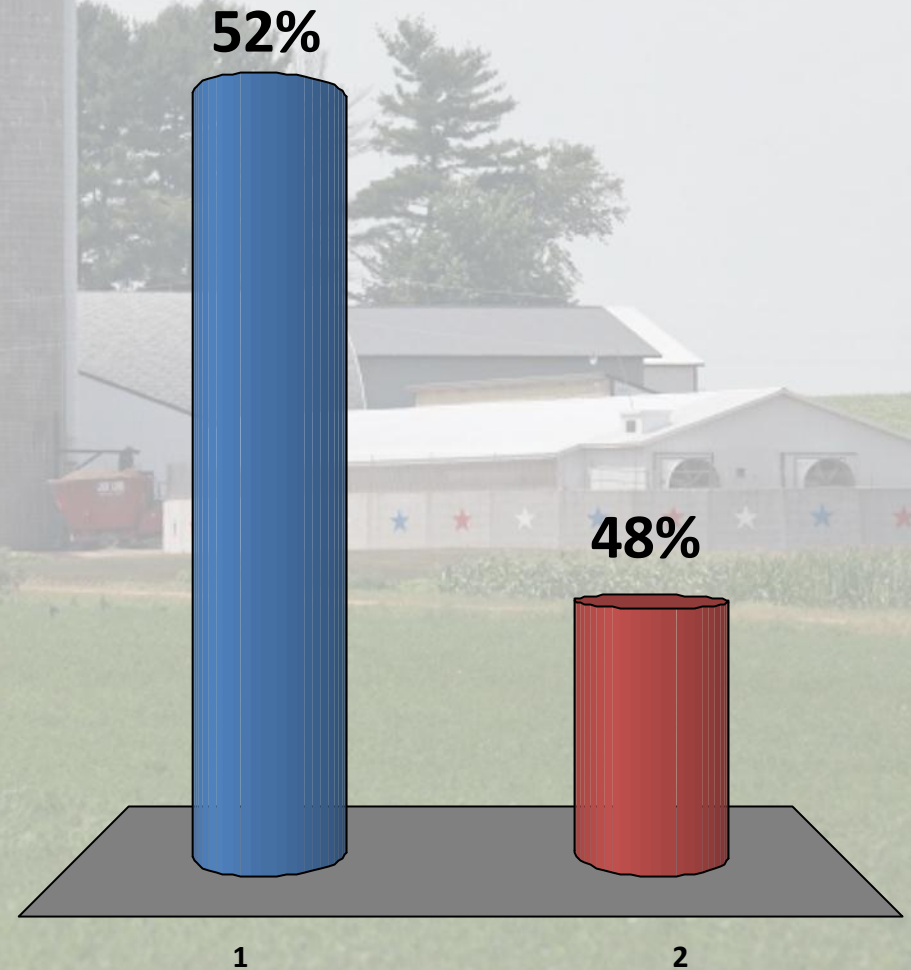
# Outline

- Dangers Dairy
  - Risks
  - Injuries
  - Regulations
- Immigration and Changes in Dairy
- Programs and Interventions
- Resources

# Did you grow up on or near a farm or farms?

1. Yes

2. No

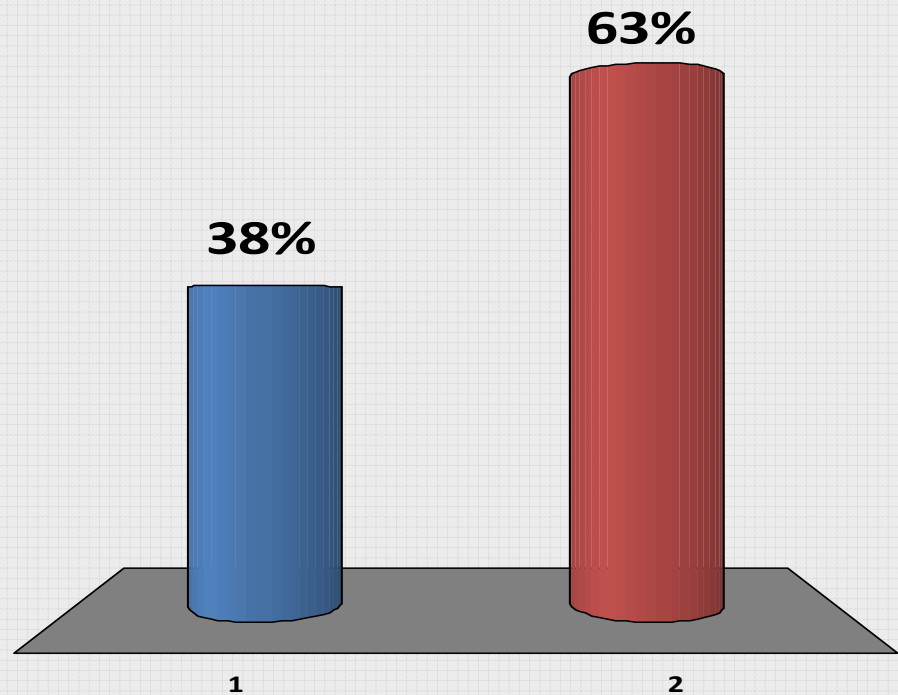






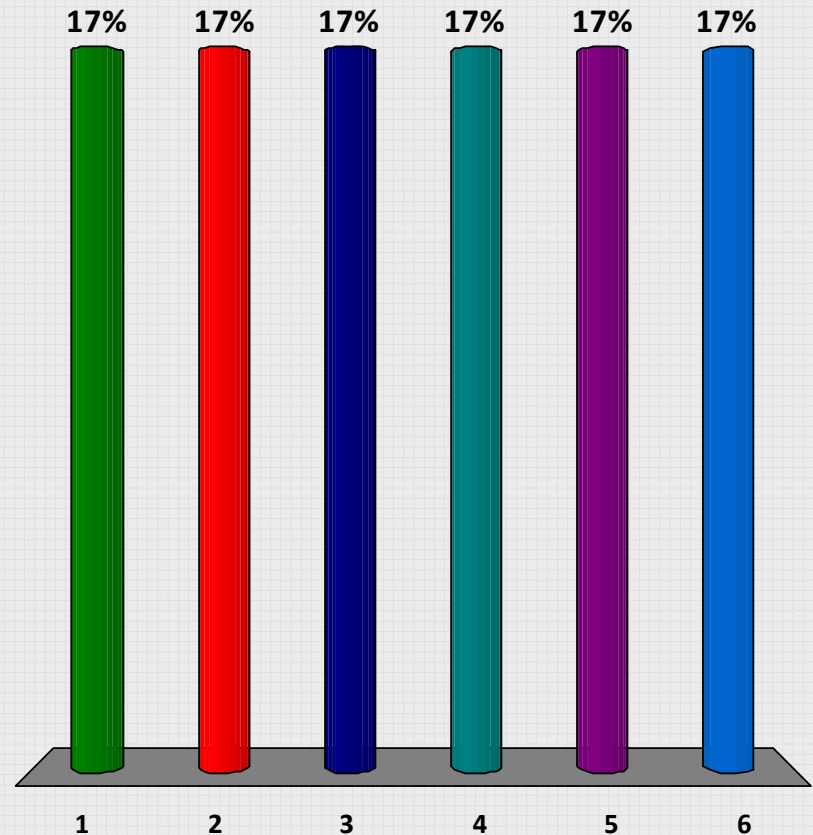
# Have you ever worked on a farm?

1. Yes
2. No




# What do you do for work?

1. Clinician
2. Outreach Worker
3. Work for a university
4. Work for a non-profit
5. Farmworker/Farmer
6. Other



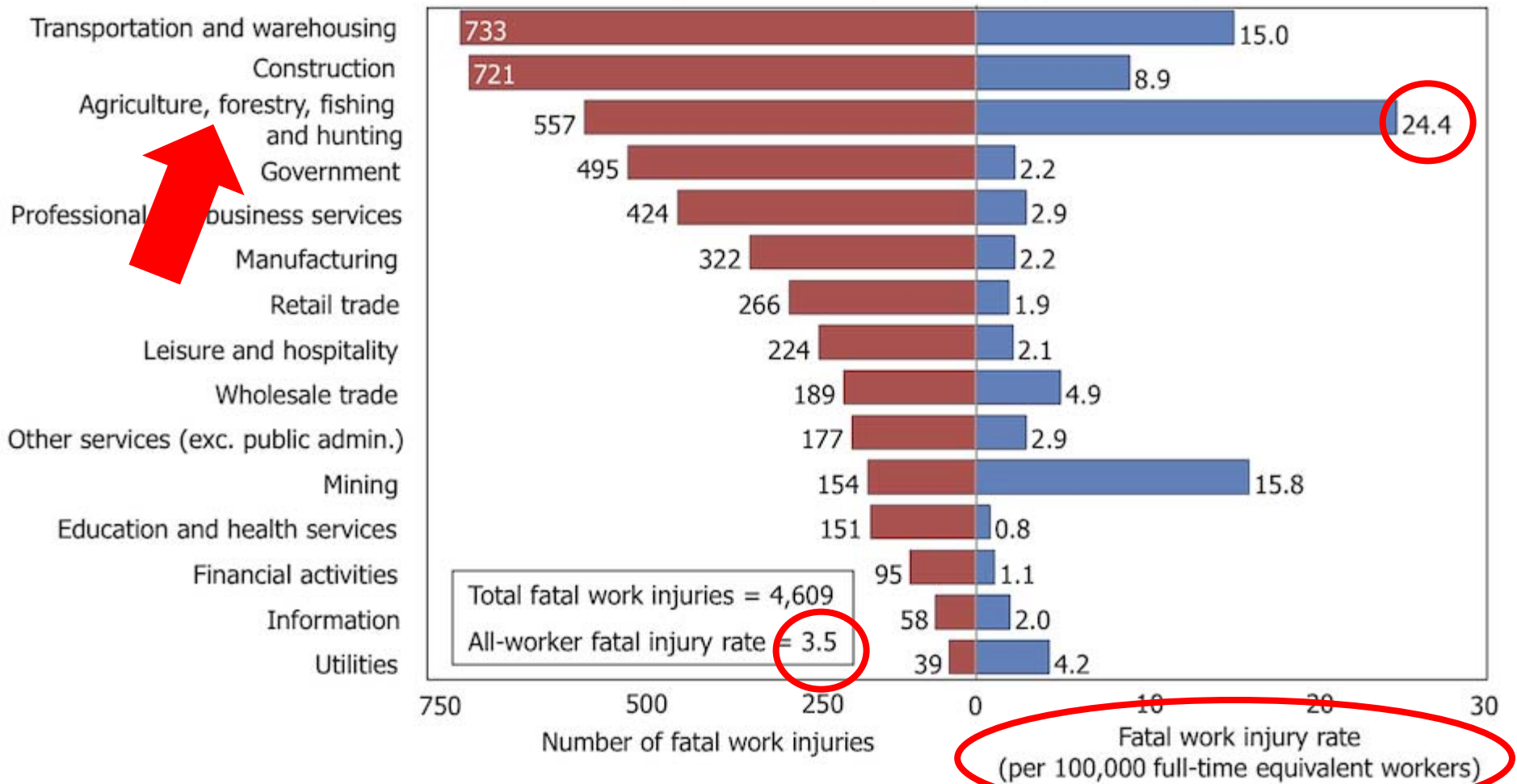


A man wearing a black long-sleeved shirt, a black cap with a red brim, and a black apron with tan suspenders is harvesting red apples from a tree. He is holding a branch with several ripe red apples. A large black bucket filled with red apples is hanging from his belt. The background is a dense green tree.

**Agriculture is classified  
as one of the most  
dangerous occupations  
in the US**

**-US Department of Labor**

# Number and rate of fatal occupational injuries, by industry sector, 2011\*



Transportation and warehousing surpassed construction in having the highest number of fatal injuries in 2011. The agriculture, forestry, fishing, and hunting sector had the highest fatal work injury rate.

\*Data for 2011 are preliminary.  
 NOTE: All industries shown are private with the exception of government, which includes fatal injuries to workers employed by governmental organizations regardless of industry. Fatal injury rates exclude workers under the age of 16 years, volunteers, and resident military. The number of fatal work injuries represents total published fatal injuries before the exclusions. For additional information on the fatal work injury rate methodology changes please see <http://www.bls.gov/iif/oshnotice10.htm>.  
 SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

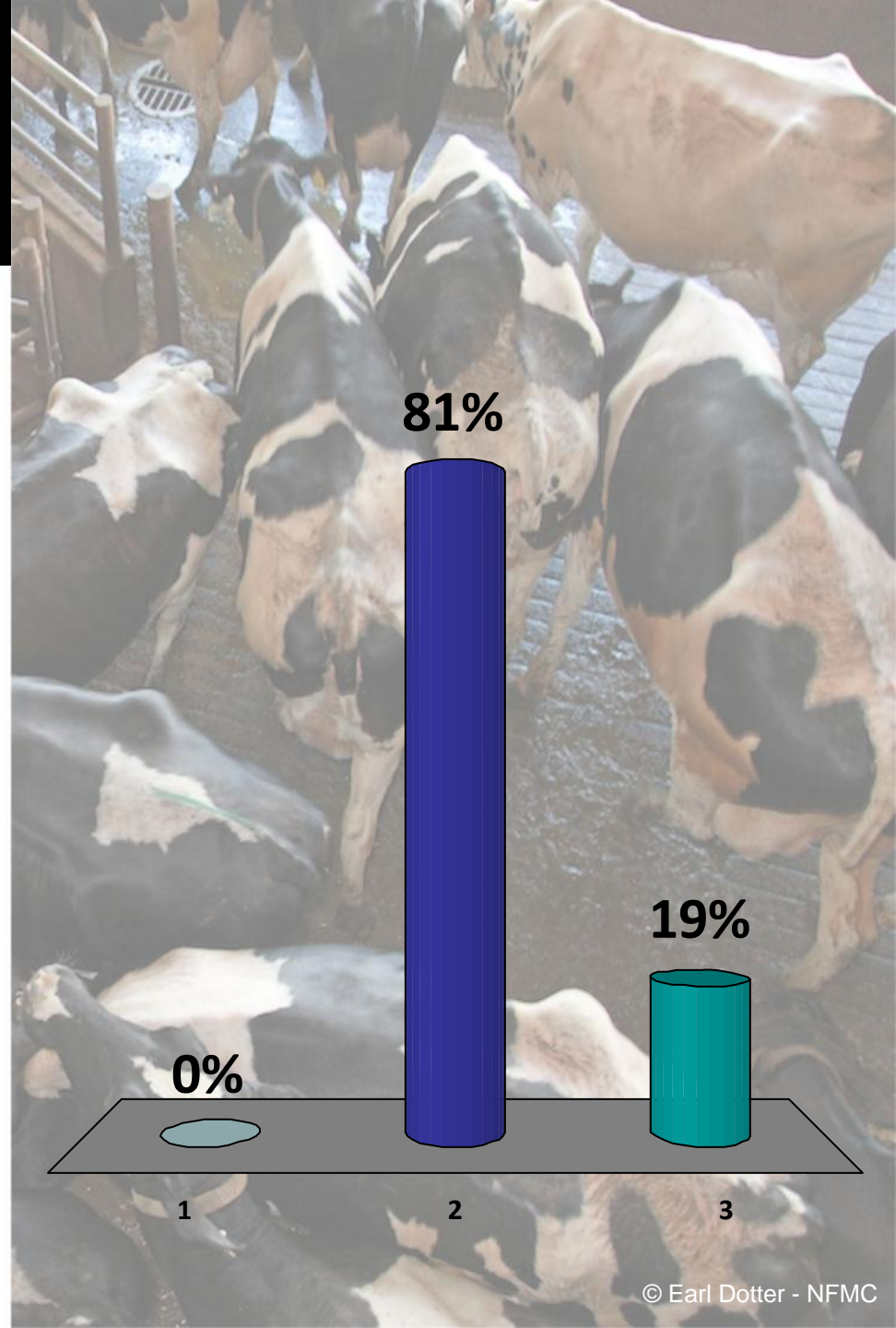


# Risks in Dairy



# How much does an average cow weigh?

1. 500 lbs
- ✓ 2. 1500 lbs
3. 2000 lbs







© NFMC-Earl Dotter

Average weight of a worker: **150 - 200 lbs**

Average weight of a cow: **1,200 - 1,500 lbs**



# Dangers of working with COWS



# Animal Handling Injuries

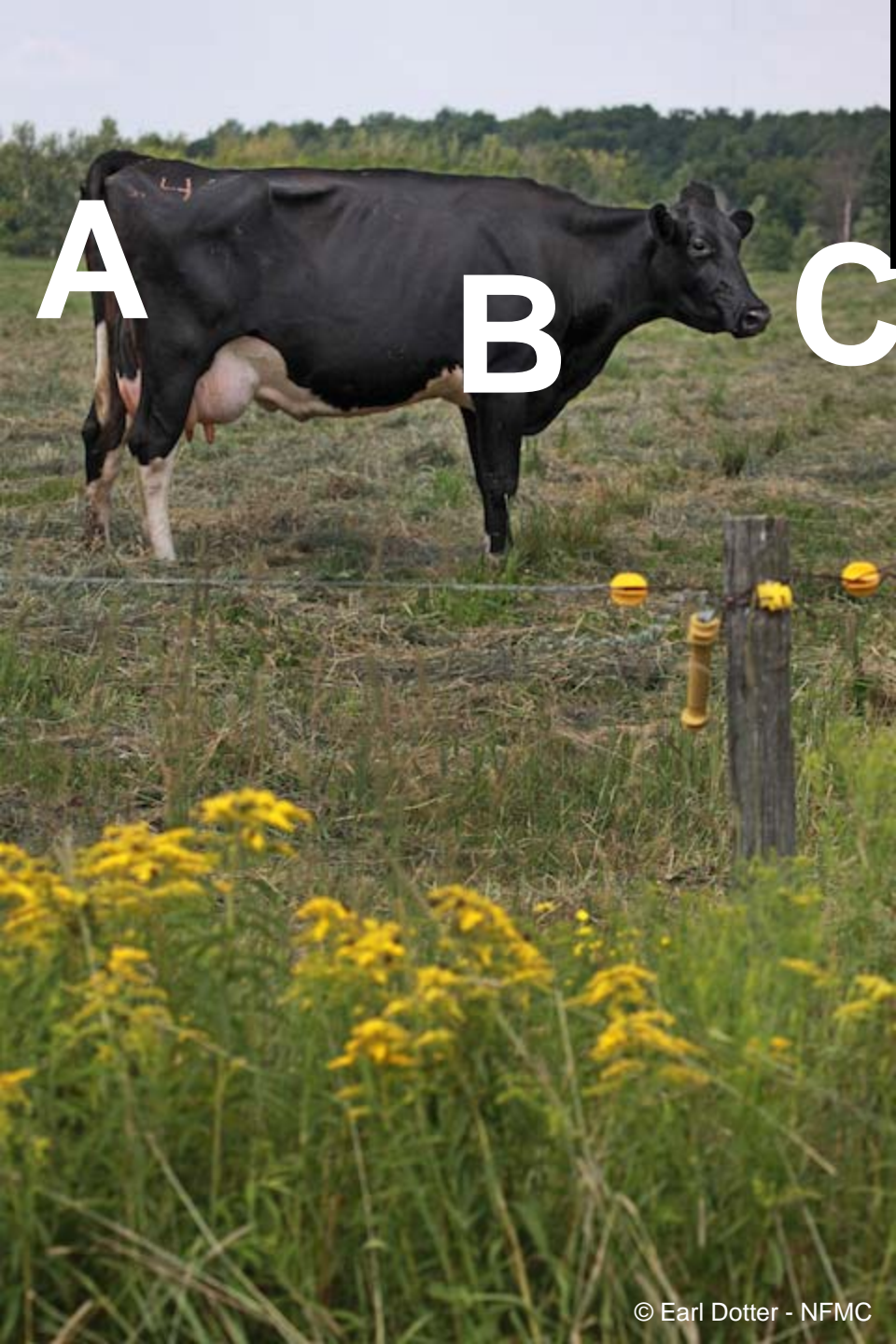


© Earl Dotter - NFMCC

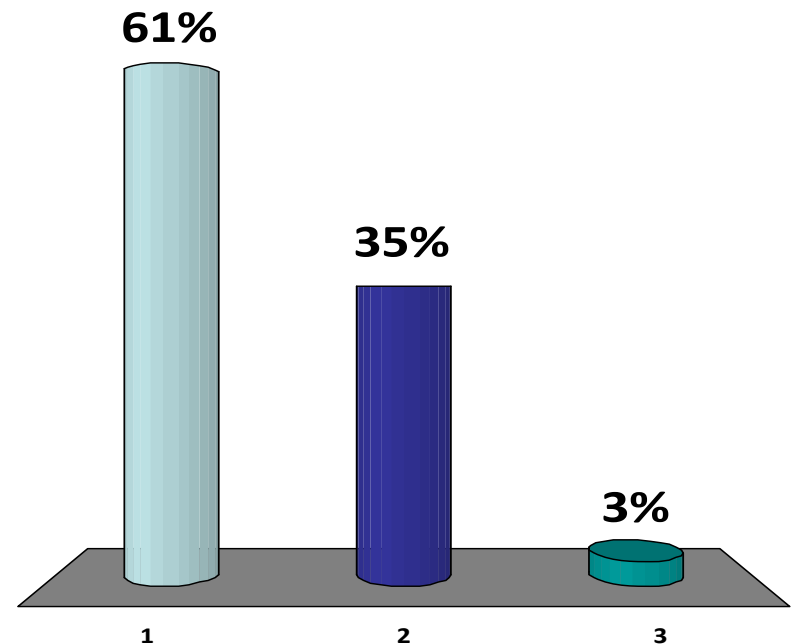
- Pinned
- Crushed
- Kicked
- Stepped on
- Bitten
- Hit in Eye with Tail



# Where is the Blind Spot?



- ✓ 1. A
- 2. B
- 3. C





# A Worker in the Blind Spot





# Bulls











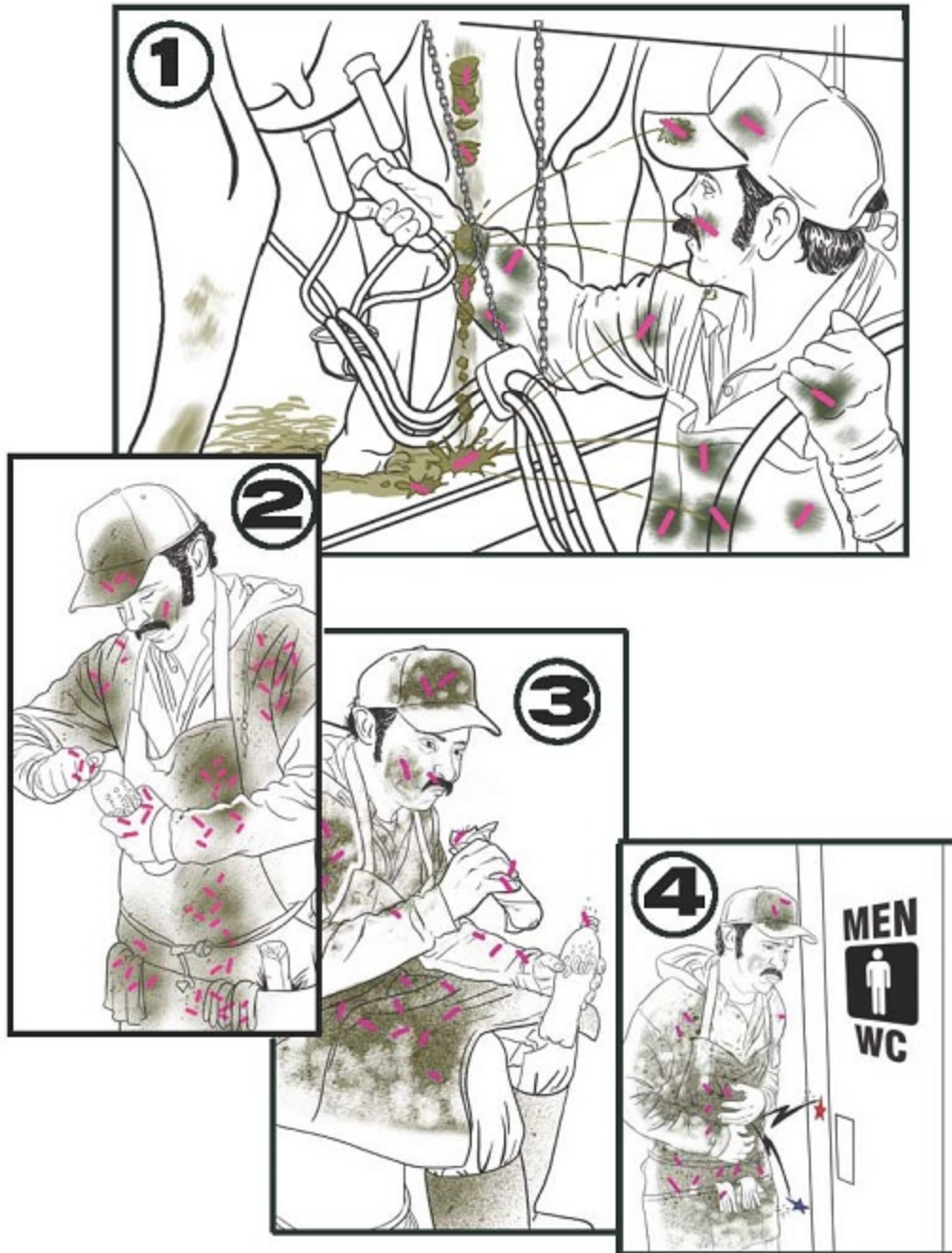
- 31% of all dairy injuries associated with livestock-handling
  - ✓ 50% associated with milking tasks in the parlor
- Animal injuries more common, machinery injuries more deadly

# Worker self-reported injuries

- back pain - part of the job
- leg/hip pain when working
- hand pain (stripping cow)
- foot bath in eye/face
- crushed by animal
- crushed by gate/skidsteer
- slip on ice
- slip in barn
- manure in eyes, dip in eyes
- sand/sawdust in eyes
- foot stomps
- cow head butt, kicks

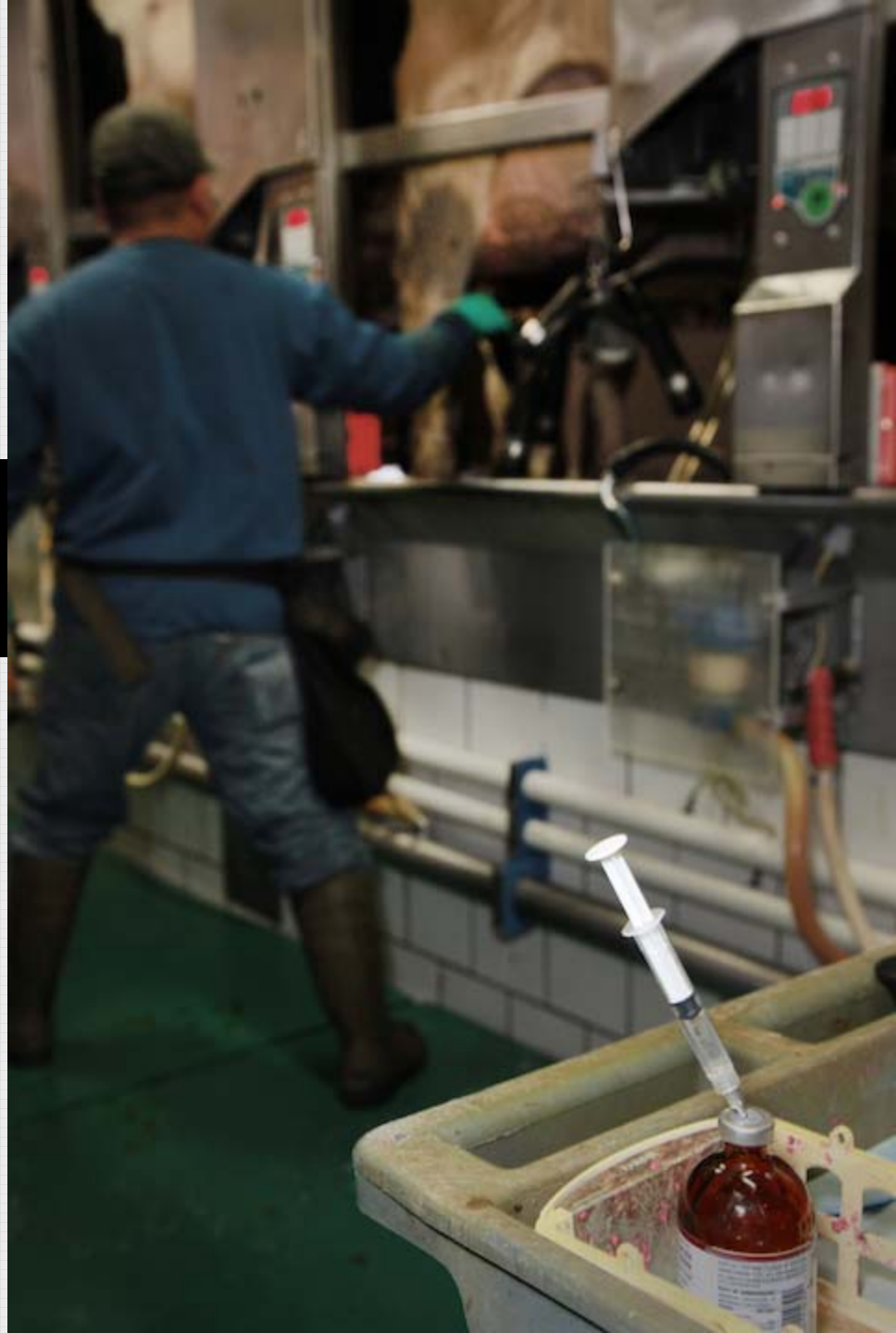






# Infectious Disease: Fecal Oral Routes of Disease Transmission

# Needlesticks







**Questions?**



# Which tractor is best equipped to protect workers?

1. A

26%

✓ 2. B

74%





# Tractor Rollovers #1 Cause of Death on Farms





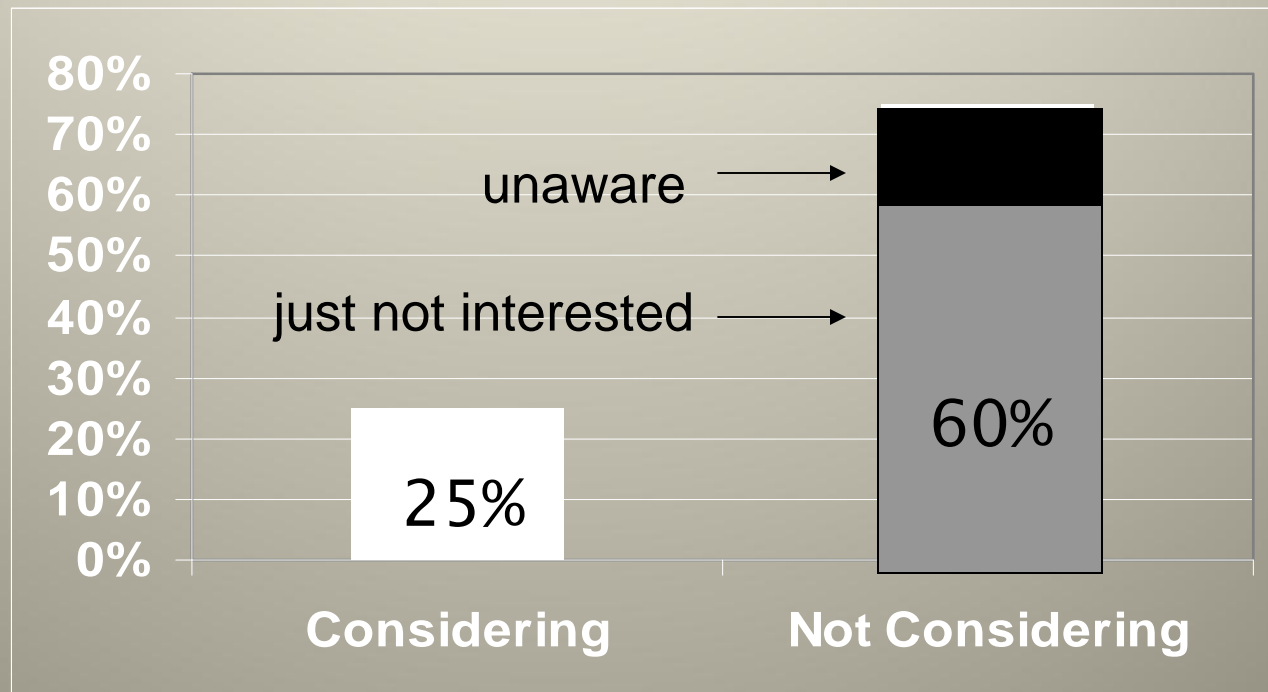
# Injuries

- Roll-Over
- Fall
- Crush
- Pull In
- Thrown Object
- Shear/Cutting Point
- Eye Injuries





# Previous Interventions Have Assumed Farmers are Unaware of Risk. In Fact, Farmers Just Aren't Interested



*Only 25% of New York Farmers Have Considered Retrofitting*

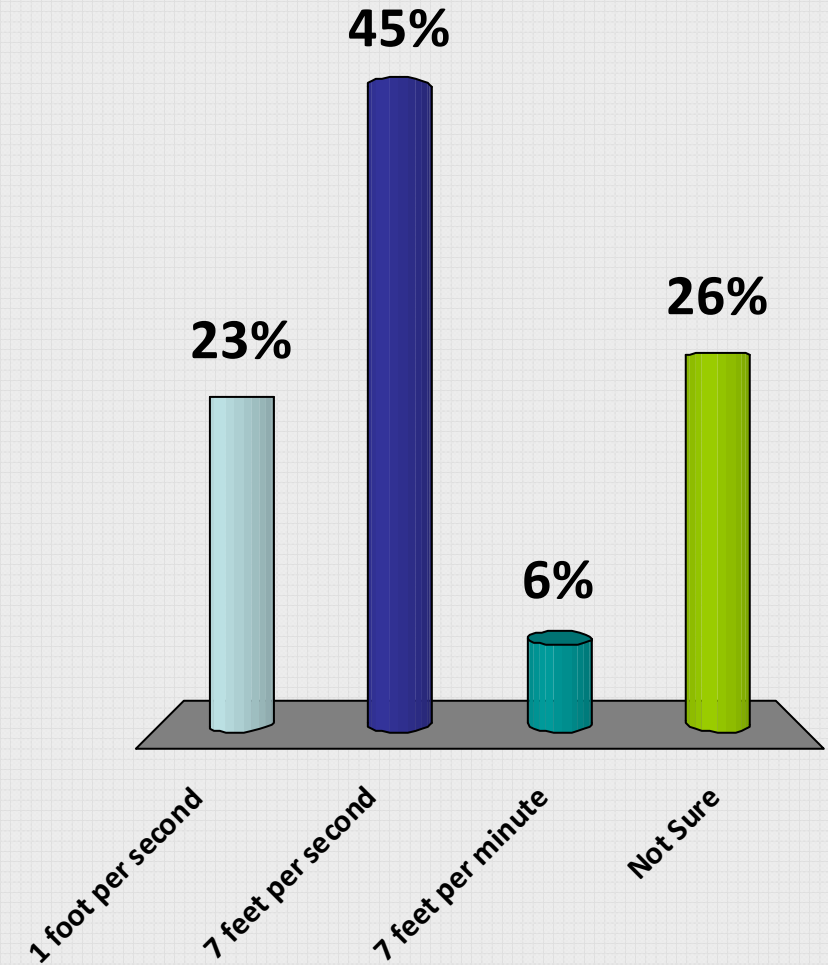
# Power Take-off





# At what rate does an arm get wrapped around a PTO

- A. 1 foot per second
- ✓ B. 7 feet per second
- C. 7 feet per minute
- D. Not Sure



A tropical beach scene with two palm trees, a hammock strung between them, and a clear blue sky. The background is slightly faded to make the text stand out.

When asked...

**90%** of farmers reported all PTO equipment was completely shielded.

All is well in paradise...



A tropical beach scene with two palm trees and a hammock. The background is a bright blue sky and a clear blue ocean. The foreground shows a sandy beach with shadows from the palm trees. A hammock is strung between the two palm trees, and a person is lying in it. The text is overlaid on the image.

When observed...

**55-60%** of PTOs was  
completely shielded.

All is not well in paradise...

# Chemical Hazards





# Chemicals



# Confined Space





# Manure Pit



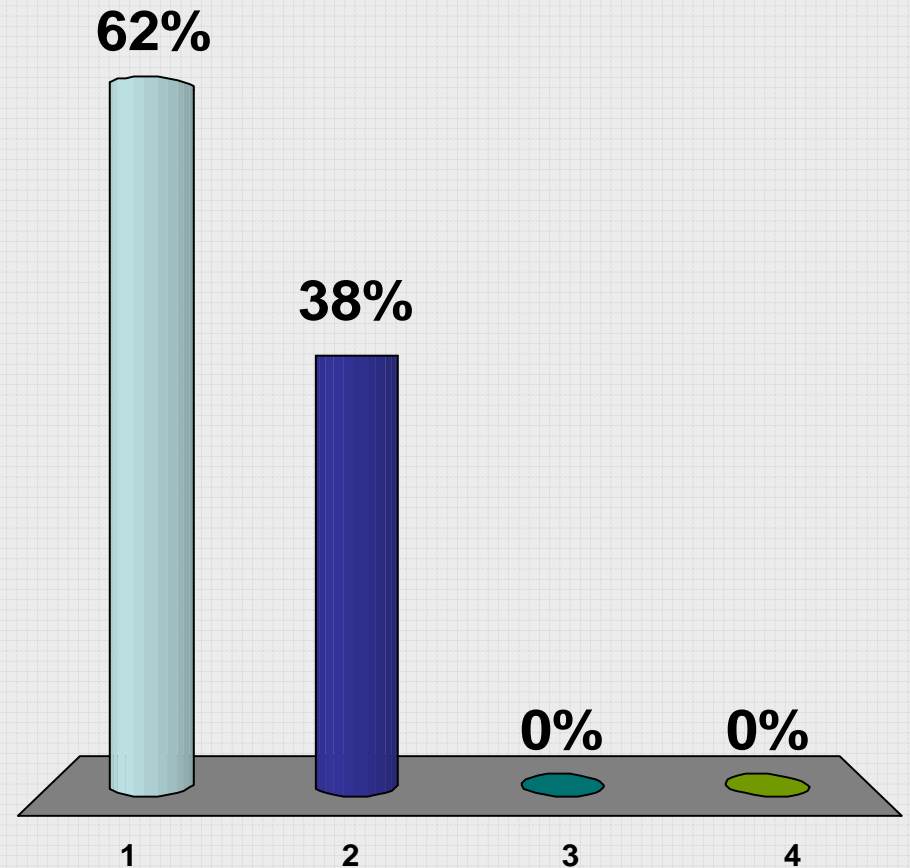
# Heat Illness





# What is the minimum height in which a fall can kill a person?

- 1. 4 feet
- ✓ 2. 12 feet
- 3. 20 feet
- 4. 30 feet





# Slips/Trips/Falls



# Wet Floors and Uneven Surfaces







# Dust



# Noise





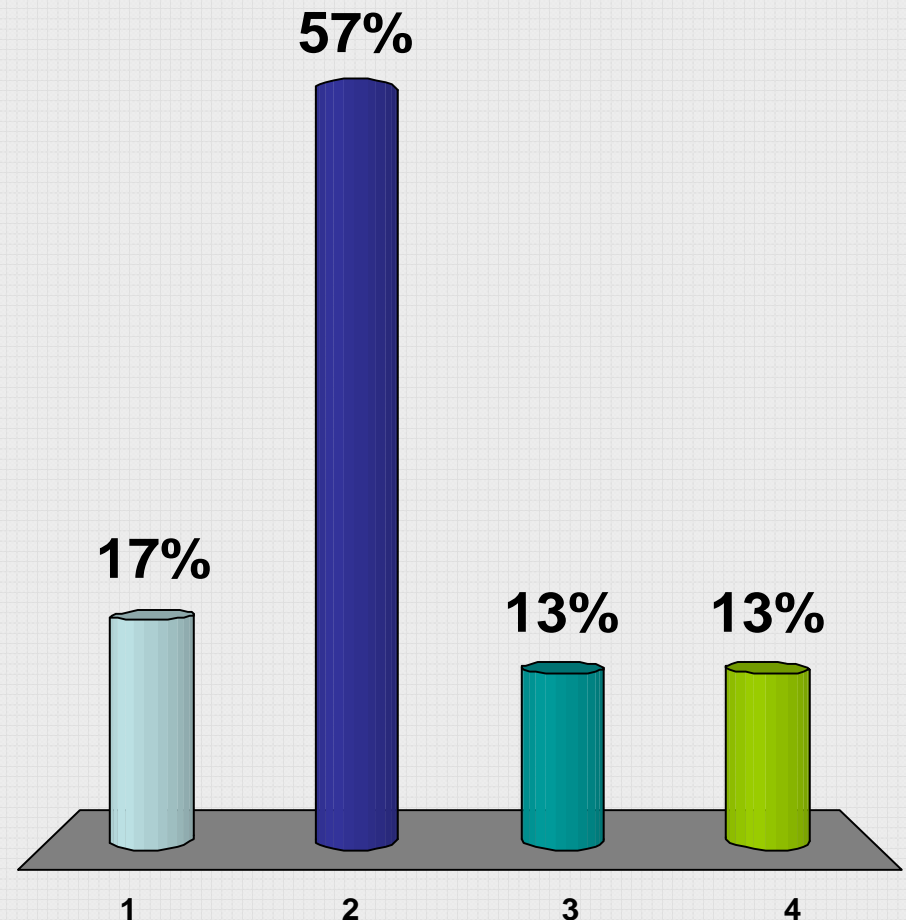


**Questions?**



# How many states require employers to provide workers' compensation equally to all workers including agricultural workers?

1. No States
- ✓ 2. 13 States
3. 30 States
4. All States



# Agricultural Exceptionalism

- Few OSHA standards to protect agricultural workers
  - Water and sanitation, 1987
  - Farming Appropriations Rider
    - Less than 10 employees, OSHA prohibited
- EPA Worker Protection Standard
- Collective bargaining
- Child labor, over time pay
- Workers' compensation

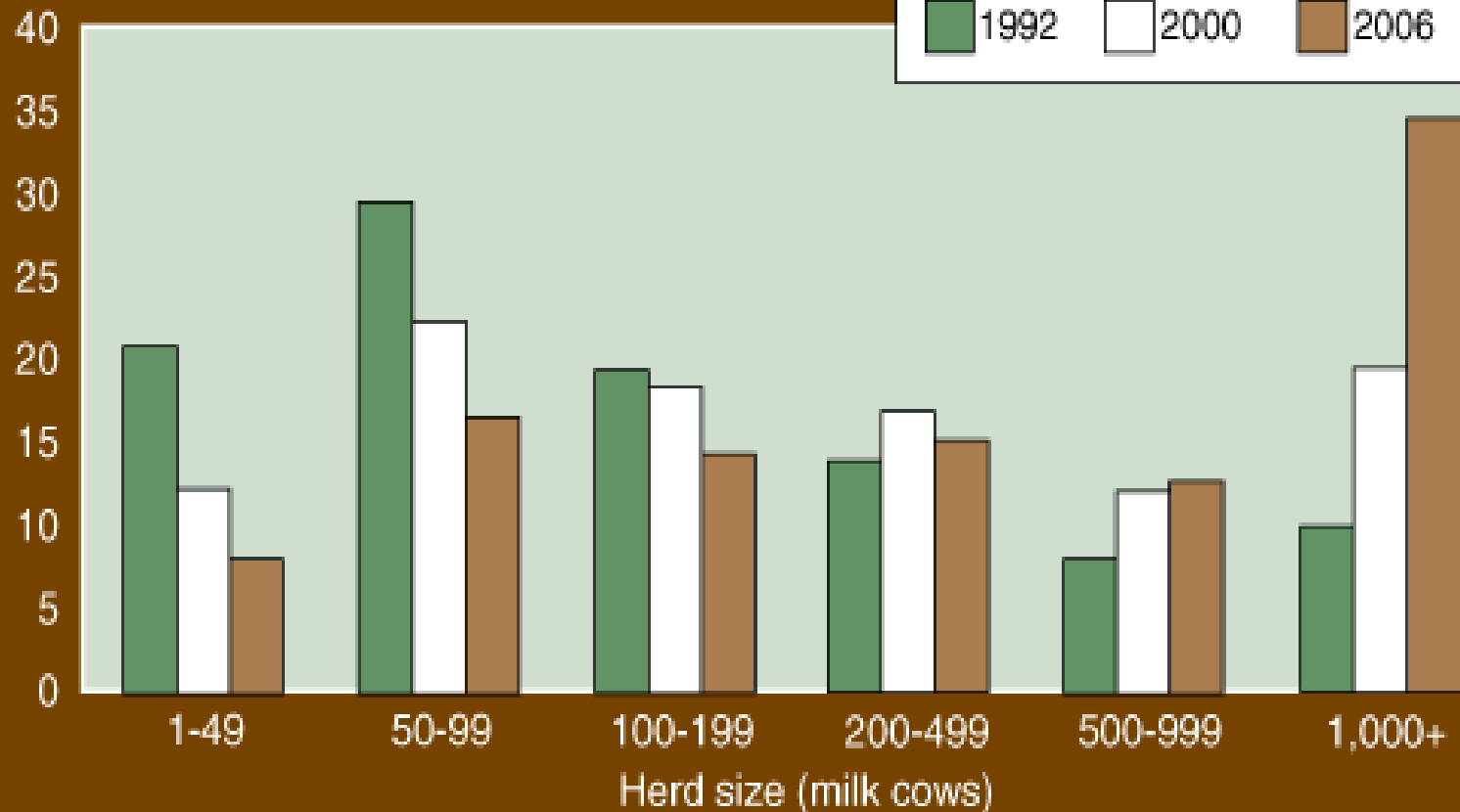




# Changing Dairy Industry

## Milk production is shifting to large dairy farms

Percent of all U.S. milk cows



Source: 1992 Census of Agriculture, and USDA, National Agricultural Statistics Service surveys for 2000 and 2006.

# US Dairy Industry

- Number of dairy farms declining
- Increasing size and productivity
  - Immigrant Labor
- ½ of Dairy Farms Use Immigrant Labor
- 41% of Dairy Workforce – Immigrant
- 62% of US Milk Supply – Farms Using Immigrant Labor



# Pennsylvania Dairy

- Agriculture #1 Industry in Pennsylvania
  - Dairy 1/3
- 7,100 dairy farms
- 535,000 dairy cows
- 60,000 jobs
- \$2 billion farm income, \$6 billion economic revenue

# Pennsylvania Dairy

- Total Dairy Farms Shrinking
  - Costs
  - Marcellus Shale Drilling Impact
- Total Milk Production Declining
- Demand and Market Growing
- Increase Herd Sizes and Increase Production
- IMMIGRANT LABOR



# Who Does the Work of Food Production?



# Immigrant Dairy Workers

- ~ 40% of hired dairy workforce
- 87% male
- 16 – 45 years old
- 88.5% from Mexico
- 80% speak no English
- Limited formal education

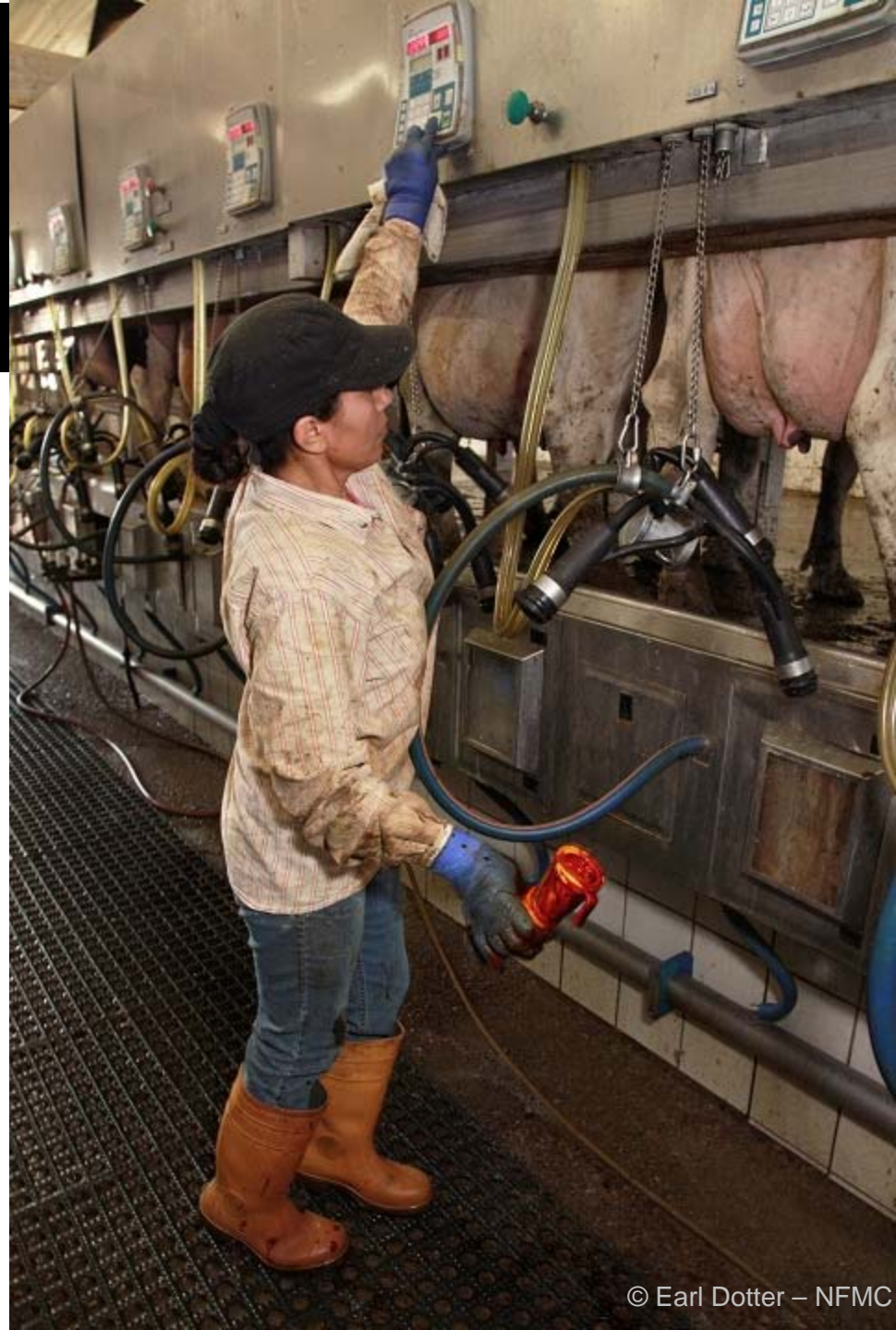




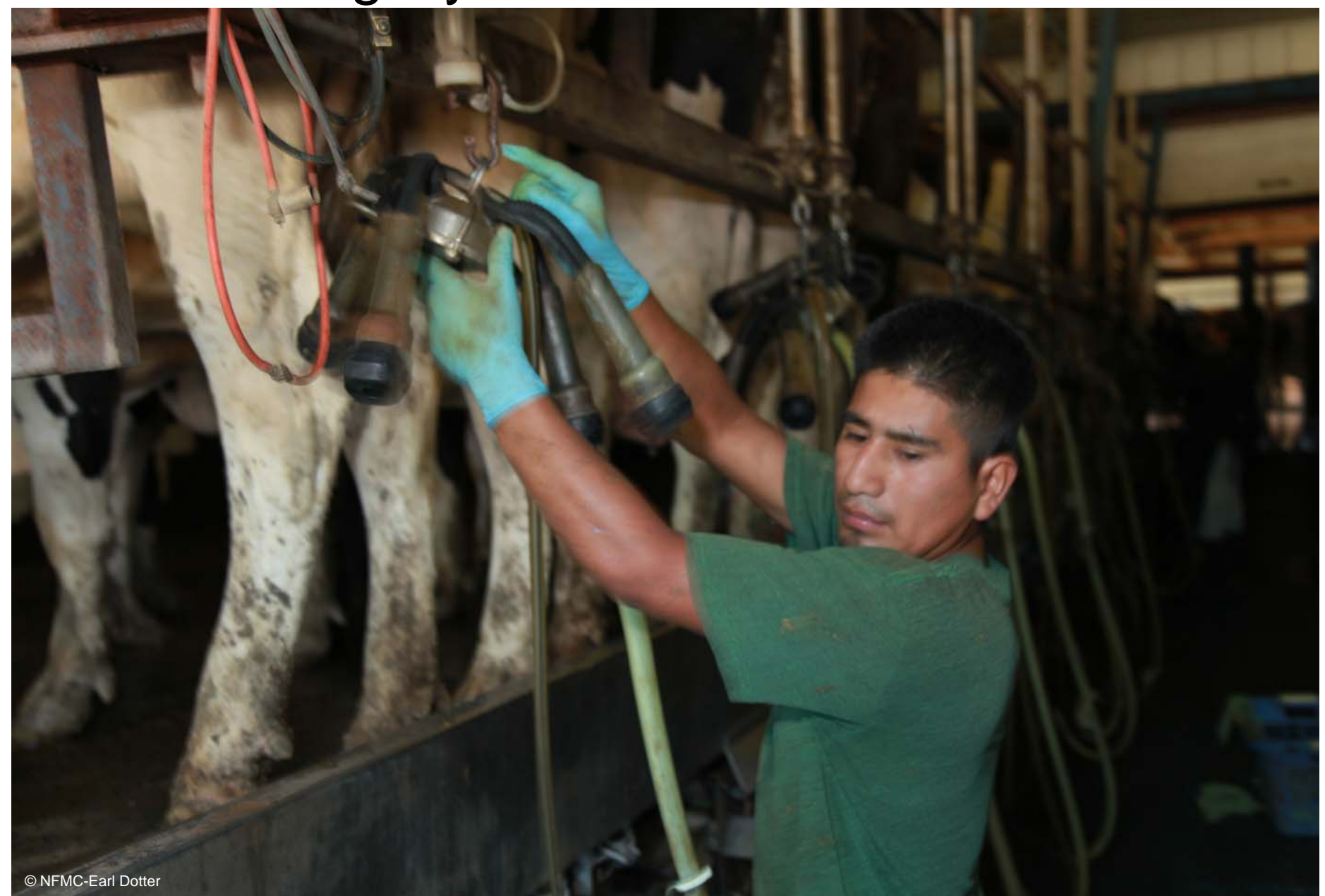
# Immigrant Dairy Workers

- Limited job training
- Milkers and pushers
- Work nearly 60 hrs/ week
- Earn \$10/ hour
- 2<sup>nd</sup>/3<sup>rd</sup> or rotating shifts

Harrison et al. (2009a); Dyk et al. (2007).



~50% legally authorized to work in the US





# Needs Assessment: Farm Owners



- Interested in Health and Safety
- Limited Health and Safety Experience
- Both Worker and Manager – Normalization of Risk
- OSHA Local Emphasis Program

# Challenges...

- Safety is low priority
- Safety is time-consuming
- Safety is expensive
- High risk tolerance
- Many issues to address





# Needs Assessment: Immigrant Workers

- Interested in Health and Safety
- No Health and Safety Training
- No knowledge of Workers' Rights
- No understanding of Workers' Compensation
- Injury experiences



# *Seguridad en las lecherías*

## **Immigrant Dairy Worker Health and Safety Project**





# Popular Education in Practice



***Promotores de Salud:*** members of the community receive and provide training to other community members

**Participatory Training:**  
practical, meaningful, and relevant training for workers and others



# Seguridad en las Lecherías | Safety in Dairy

## Lesson

**1**

INTRODUCTION: STAYING SAFE WHEN WORKING ON A DAIRY FARM

**2**

STAYING SAFE AND HEALTHY WHILE WORKING WITH CATTLE

**3**

WORKING SAFELY WITH EQUIPMENT AND MACHINERY

**4**

WORKERS' RIGHTS AND RESPONSIBILITIES RELATED TO SAFETY AND HEALTH ON THE FARM

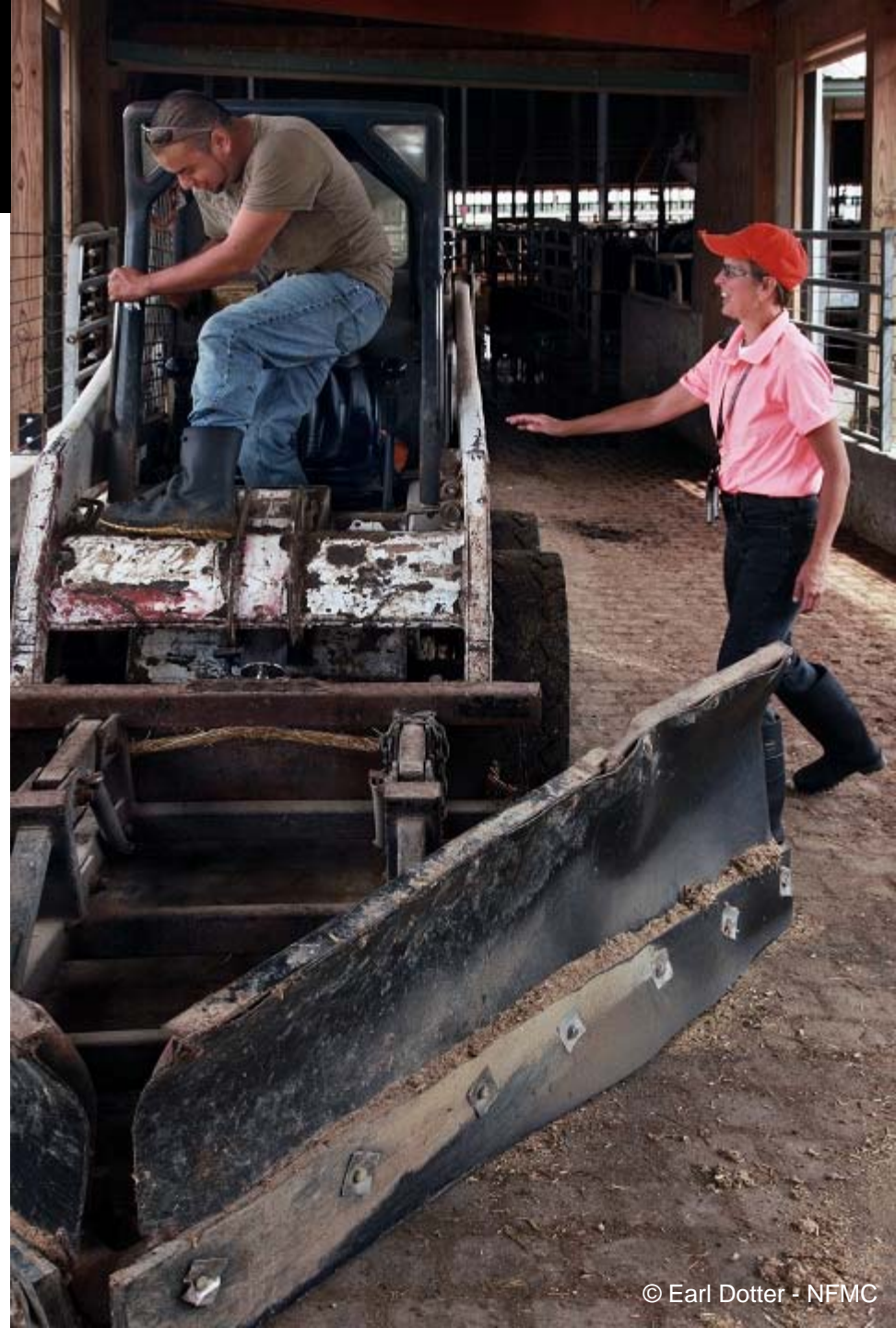
**5**

WORKING SAFELY WITH CHEMICALS AND CONFINED SPACES



# Agricultural Consulting Services

- Identifies farm hazards that can cause injury, illness and death
- Educates farmers on safety and health regulatory compliance
- Trains workers to assist in regulatory compliance and promote safe work practices







**Questions?**



# Surveillance Study

## Injury Types Most Common During Farm Work

Injuries reported fell into several major categories:

Struck	28%
Roll over	19%
Falls	18%
Entanglement	12%
Run over	5%

## Major Injury Sources During Farm Work

Of the community reported injuries:

Tractor related incidents	27%
Animal involvement, mostly horses and cows	22%
Falls from farm structures (barns, silos, haylofts)	9%

# NYCAMH Farm Emergency Response Program

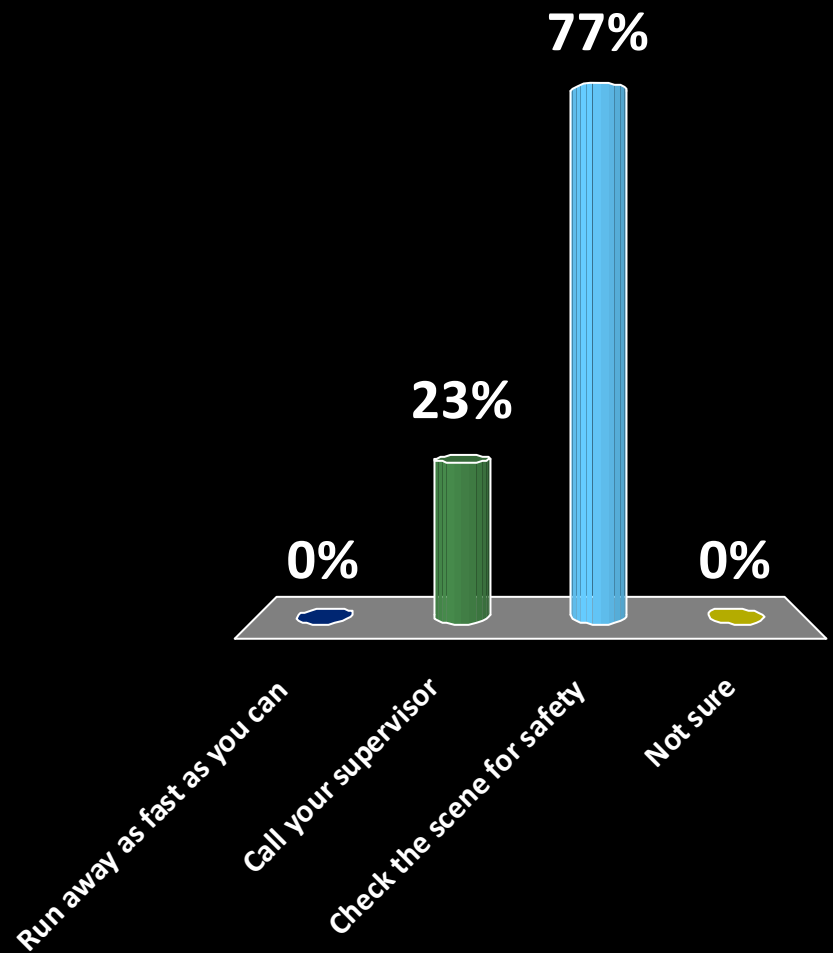


**What if your loved one was injured on the farm?  
Would you know what to do in an emergency?**



# What is the first thing you should do in an emergency?

- A. Run away as fast as you can
- B. Call your supervisor
- ✓ C. Check the scene for safety
- D. Not sure



# American Heart Association Heartsaver Certification

## First aid

- Splinting
- Bleeding
- Shock
- Spinal injuries
- Bites, stings and allergic reactions
- Choking
- Stroke
- Cardiac arrest
- Diabetic emergencies
- Heat emergencies
- Cold emergencies
- Poisoning
- Fainting
- Epi-pen
- Epilepsy



Demonstrating the “head tilt chin lift,” or,  
“la maniobra de inclinación de la cabeza  
y elevación del mentón”



# Limitations

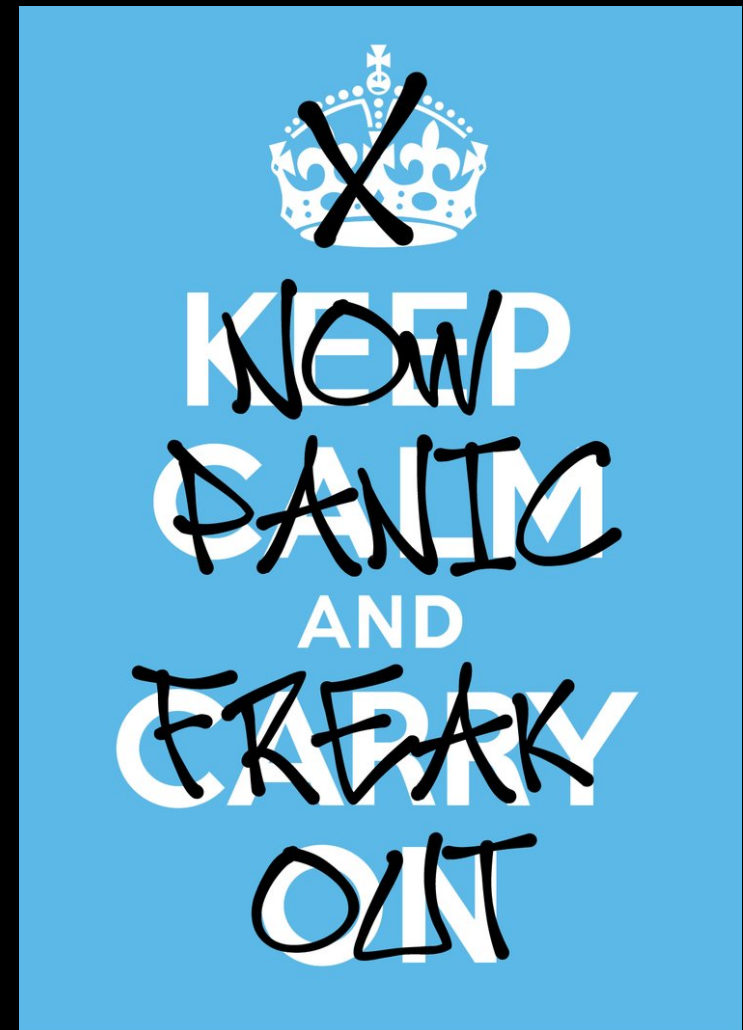
- Video-based training
- Time commitment
- Language appropriateness
- Not farm-specific emergencies
- 126-page student workbook!



[www.e-sanidad.com](http://www.e-sanidad.com)

# Spanish-speaking dairy workers in an emergency

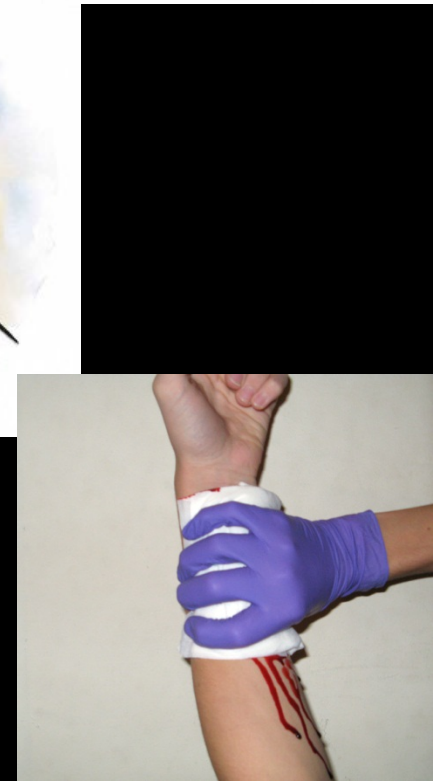
- Where am I, anyway?
- Work for “Mr. Bill”
- Farm information?
- Emergency numbers?
- Language, literacy, culture, comfort level





# First Aid Basics

- Being prepared
- Scene safety
- Calling for help
- Staying calm
- Hygiene
- Helping the victim



# Handouts

- Wallet cards in protective sleeve
- Contact and emergency information cards

**En una emergencia,  
¡llame al 911!**



**La seguridad es lo primero:  
¡Siempre revise el  
sitio!**



## **Emergency Information**

Fire: \_\_\_\_\_ Ambulance: \_\_\_\_\_

Police: \_\_\_\_\_ Neighbor: \_\_\_\_\_

I am calling from:

Family/Farm Name: \_\_\_\_\_

Street/Road Address: \_\_\_\_\_

This Phone Number: \_\_\_\_\_

I need Fire-Ambulance-Police-Other for a:

### **What to Tell Dispatcher**

1. Nature of the emergency
2. Number of victim(s)
3. Condition of the victim(s)
4. Location of the accident scene
5. Will someone meet EMS at entrance
6. Type of aid given (CPR, bandaging, etc.)
7. Special conditions (mud, fallen trees, etc.)

### **Directions to our Farm**

Provide specific miles & road names.  
Mention visible landmarks

\_\_\_\_\_  
\_\_\_\_\_

Do not hang up the phone  
until the dispatcher tells you to

Poison Control: \_\_\_\_\_ Electric: \_\_\_\_\_

Gas: \_\_\_\_\_ Other: \_\_\_\_\_



# Pilot testing

- Focus groups
- Trial and error
- Feedback
- Evaluation



# Results

- Training less than 1 hour vs. 3 hours
- 17 sessions to date
- 95 Spanish-speaking dairy workers trained
- Preliminary test analysis – they are learning!!

Pre/Post Test Results

n=20

paired t-test analysis

Average difference (pre vs. post)	t	P-value	
17.5	5.72	<0.0001	



# Reinforcing the Basics

- Diverse dairy worker population
- Adjust based on background & educational attainment
- Choose words carefully
- Basic first aid training = more comfortable (and safe) in an emergency

# Migrant Clinicians Network

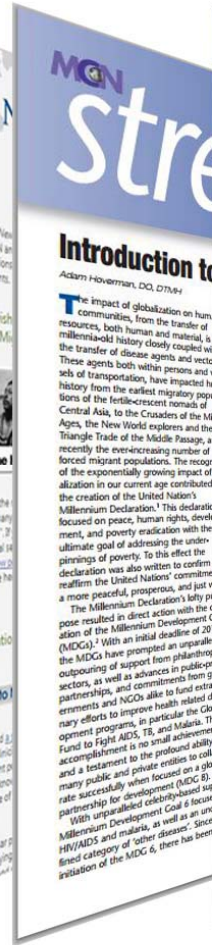
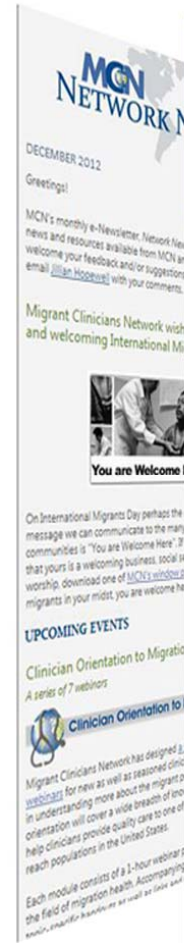
- 10,000 constituents
- Mission: To be force for health justice for the mobile poor
- Founded in 1984
- Oldest clinical network serving the mobile poor
- MCN's primary constituents
  - Federally funded Migrant & Community Health Centers
  - State and local health departments



Photo © Alan Pogue



Resources,  
Training,  
Technical  
Assistance,  
and  
Information  
from MCN



www.migrantclinician.org

# FARMWORKER CLINICAL CARE RESOURCE

For Occupational Health



Search Our Agricultural Health Care Topics

**SEARCH**

## — HEALTH CARE TOPICS —



Common Farmworker  
Health Conditions  
and Diagnostic Tools



Farmworker Patient  
Education and  
Prevention Tools



Patient Farm Type



Information By U.S.  
Region



Farmworker  
Demographics and  
Cultural Resources



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NYCAMH is a program of Bassett Healthcare Network. This project is funded by the National Institutes of  
Occupational Safety and Health contract #R01 OH009484-01.





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