

# **Auditing Animal Welfare: Practical Improvements in Slaughter Plants**

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**Colorado  
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# Numerical Scoring System for Cattle Minimum Acceptable Percentages of Animals

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Stunned with one captive bolt or gun shot	95%
Insensible	100%
Electric prod – Acceptable (Max %)	25%
Electric Prod – Excellent (Max %)	5%
Falling down	1%
Vocalizing	3%
Vocalizing with head holder	5%

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# Numerical Scoring System for Pigs

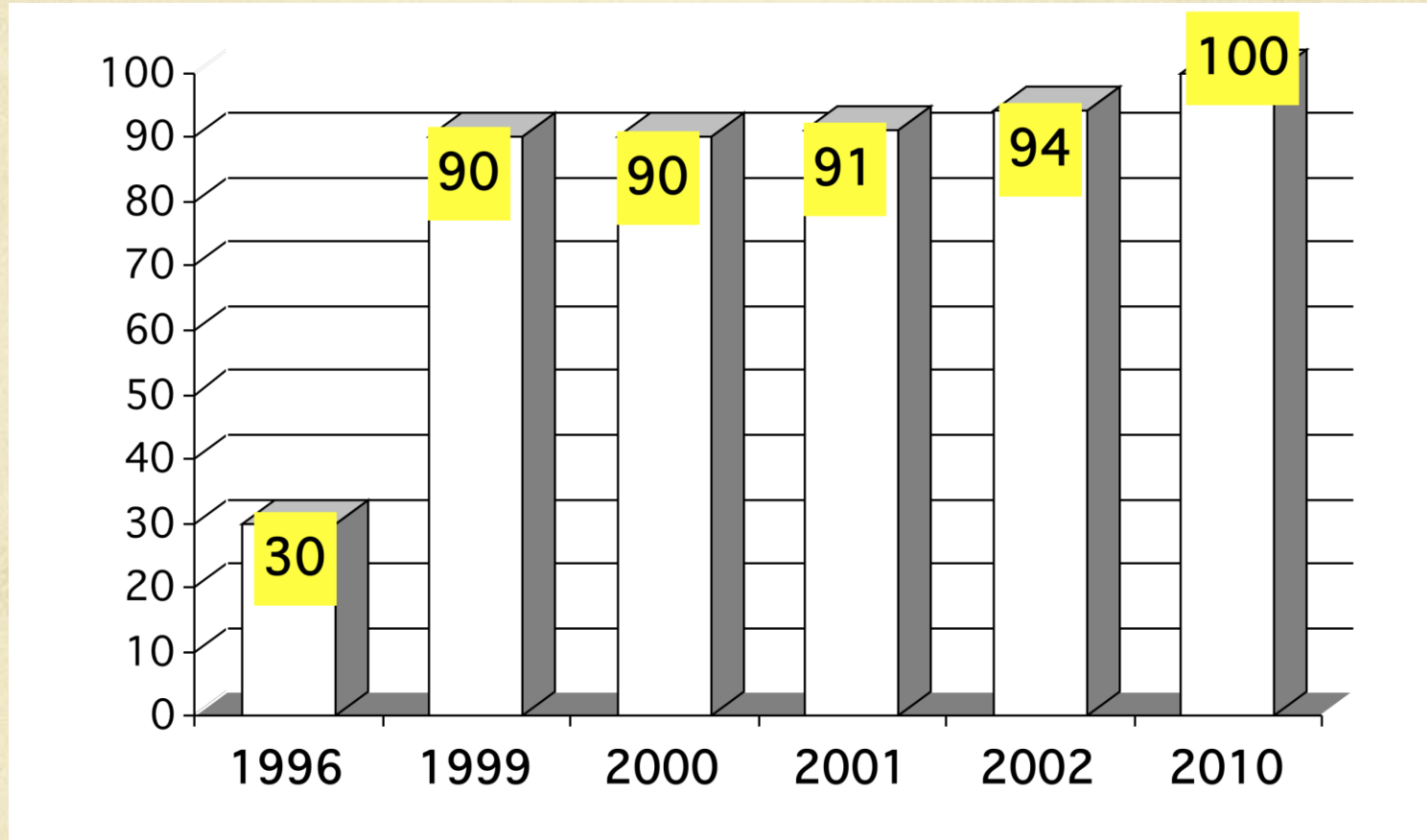
## Minimum Acceptable Percentage of Animals

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Correct electric stunner placement	99%
No hot wanding with electric stunner	99%
Insensible	100%
Electric Prod - Acceptable (Max %)	25%
Electric Prod – Excellent (Max %)	5%
Vocalization in the restrainer or in CO <sub>2</sub> gondata	5%
Falling down	1%
CO <sub>2</sub> – Omit stun scores	



# Percentage of Beef Plants That Stunned 95% or More Cattle with the First Shot



USDA  
survey prior to  
industry wide  
auditing

McDonald's  
Audits  
started

Continued auditing  
by major customers  
Continuous auditing maintains  
good performance



# 2010 Percentage of Animals Falling Scores

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**32 Beef Plants**

**22 Pork Plants**

- In all 54 plants, worst falling score 2% of the animals
  - 0% falls in 94% of beef plants and 86% of pork plants
  - Score a fall if the body touches the floor during handling. Includes stun box and unloading area.
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# 2010 Percentage of Cattle Vocalizing Scores in 32 plants

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- 2010 – Worst plant 5% of the cattle vocalizing in the stun box or ritual slaughter restrainer
  - 1996 worst plants 7.7% and 32%
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# Common Distractions That Cause Animals to Refuse to Move

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- Air blowing towards animals – Very common problem
- Reflections on wet floors or shiny metal
- Visible people – In front of the animals
- Change in flooring – such as concrete to metal
- Dark chute entrance
- Visible moving equipment up ahead
- Hose on the floor

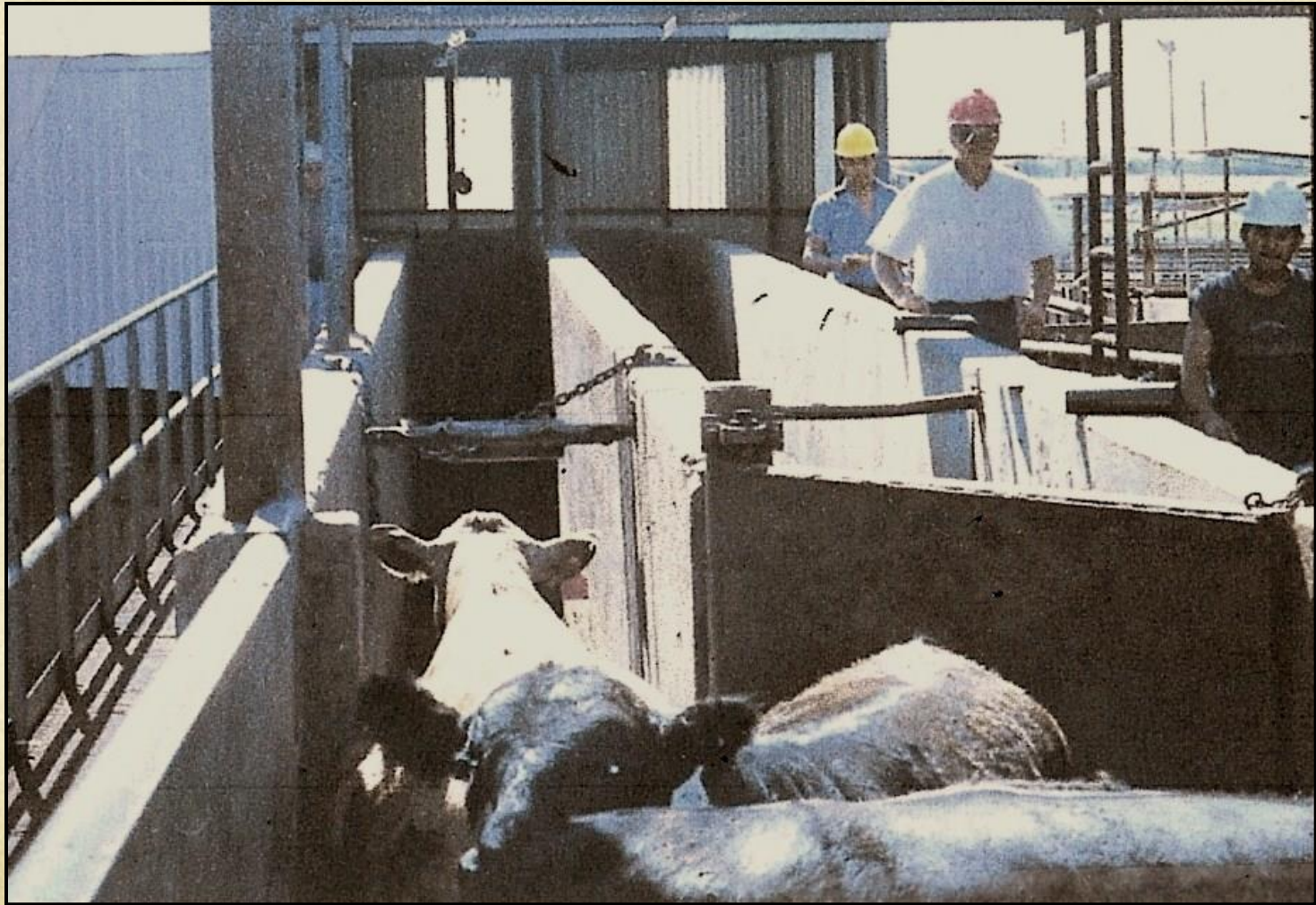
# Steps in Troubleshooting

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- People Training Issue
  - Problem with the Equipment
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**Animals going into the slaughter plant are afraid of little things people do not notice**



Reflections on the  
floor make  
animals balk





# The yellow tape and shadows may stop cattle movement



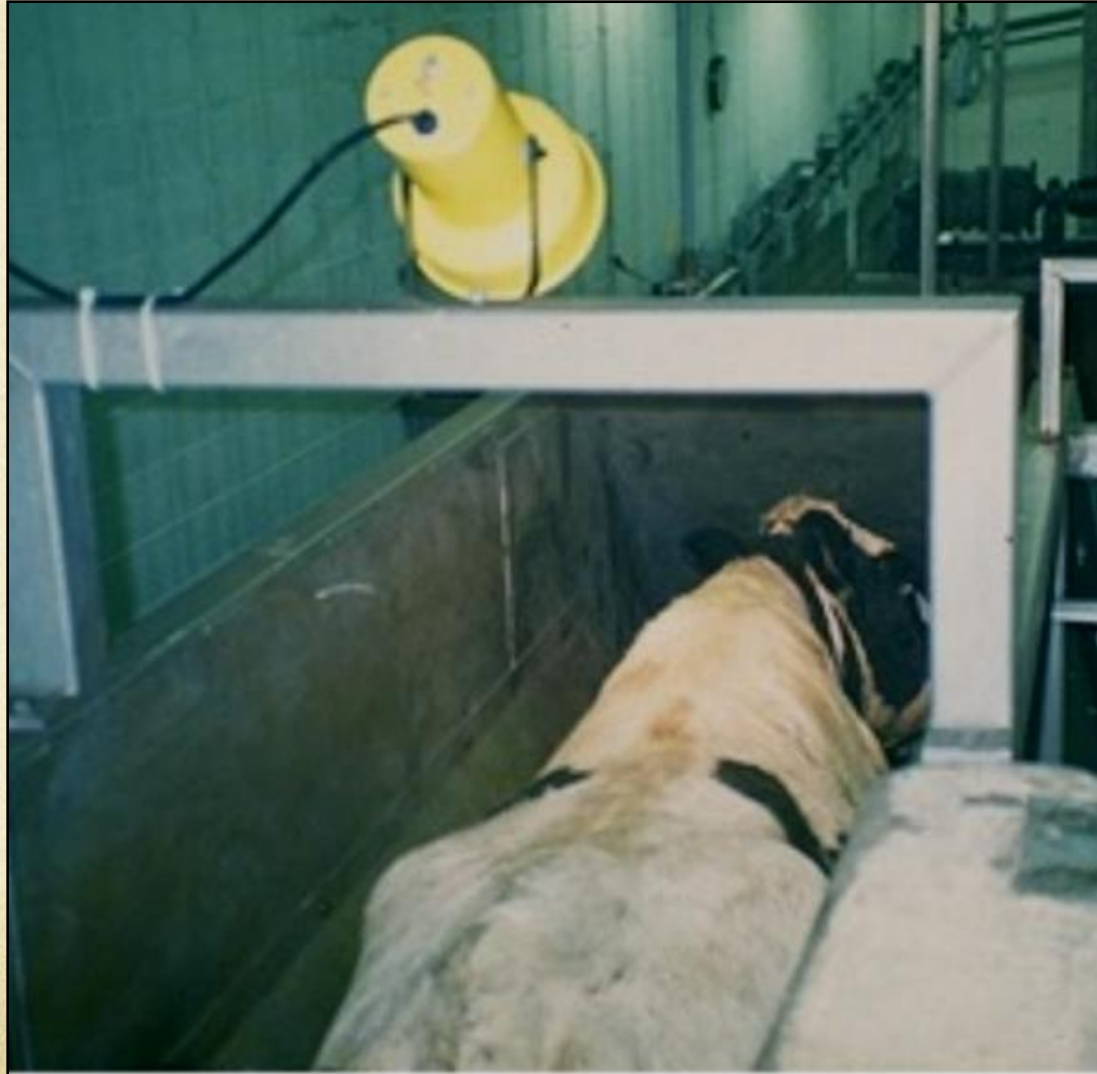


**Pig stopping at a change in flooring. Make flooring all the same**





**Animals will enter a restrainer more easily if the entrance is lighted**





**Cardboard to prevent  
cattle from seeing  
through cracks**



# Case Study Beef Plant

**They had to fix all 5 of the problems  
to improve cattle movement**

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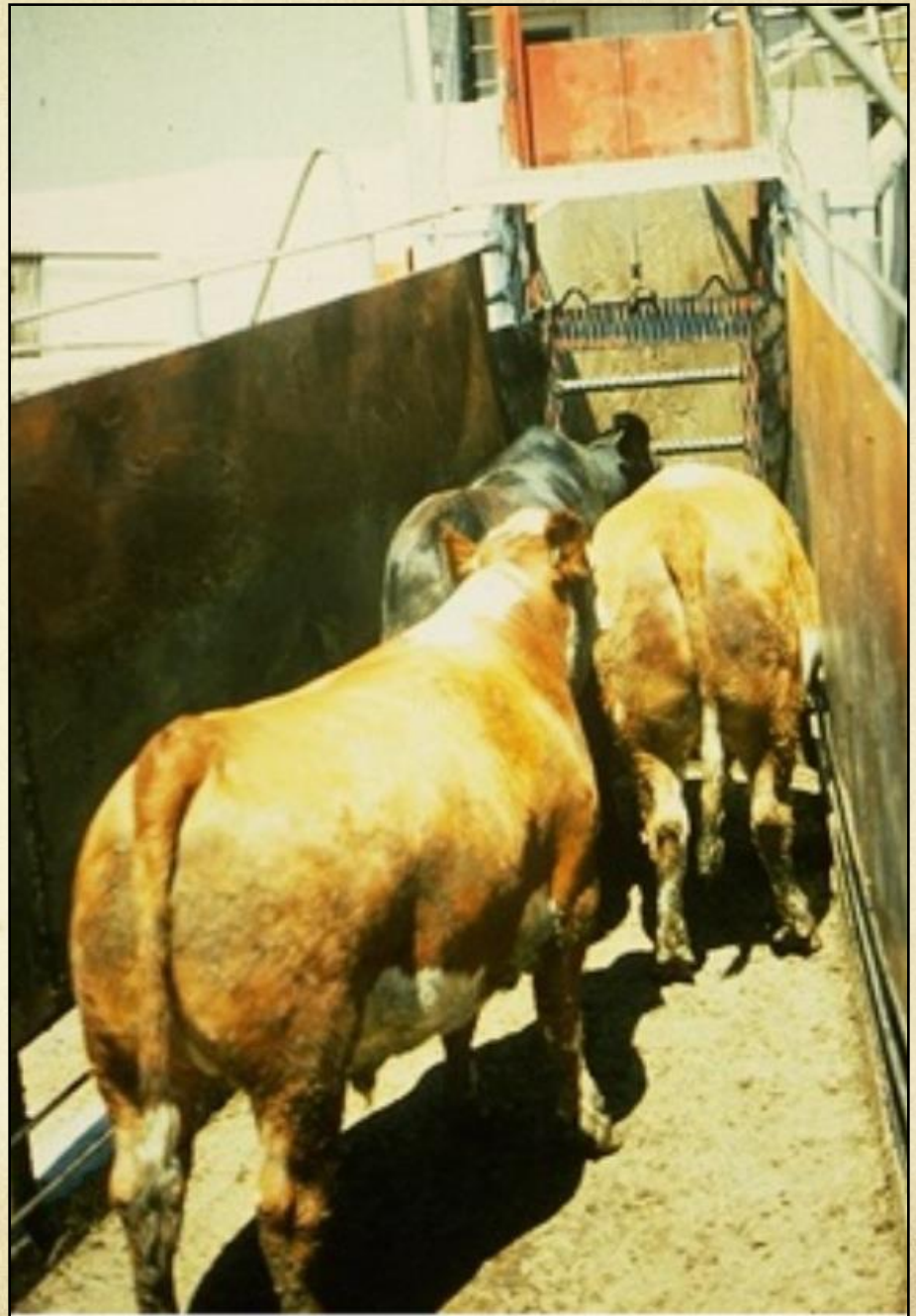
- **Blocked sunbeams with tarps**
- **Blocked view of people near the crowd pen with cardboard**
- **Blocked view of people walking in front of the restrainer with a curtain**
- **Illuminated the restrainer entrance with a portable light**
- **Stopped overloading of the crowd pen – Move smaller groups and fill half full**



A simple fix in this facility would be?



Cattle  
movement  
improved after  
solid sides were  
installed







Shadows may impede movement. Animals may refuse to walk on them

Sunny days are the worst due to shadows





# Stunning with a pneumatic powered captive bolt



Note curtain to block the vision of the next animal.  
This improves cattle entry into the restrainer.



**The crowd pen should be filled  
half full with cattle or pigs**



**A full half circle crowd pen is recommended**



# **An Animal's Eye View Through a Restrainer**

**Animals will  
refuse to move  
if they see  
people**



# Balking Scores

Low Balking Plant  
(well-trained handlers)

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High Balking Plant (facility  
problem)

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% Cattle  
Backing Up  
in the Chute

%  
Vocalizing

% Cattle  
Backing Up  
in the Chute

%  
Vocalizing

0%

1%

38%

8%

3%

2%

25%

8%

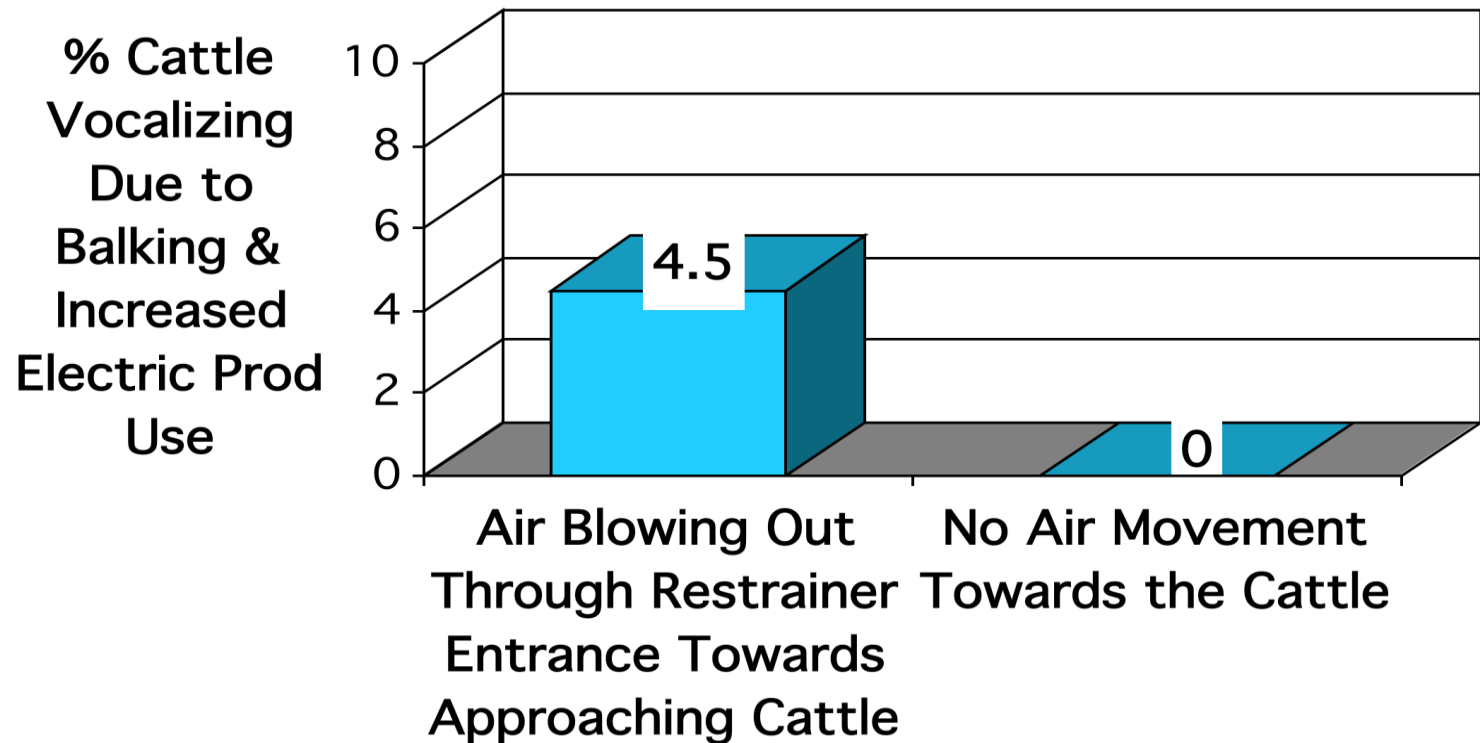
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Vocalization Score Increase Due to Increased Electric Prod Use.

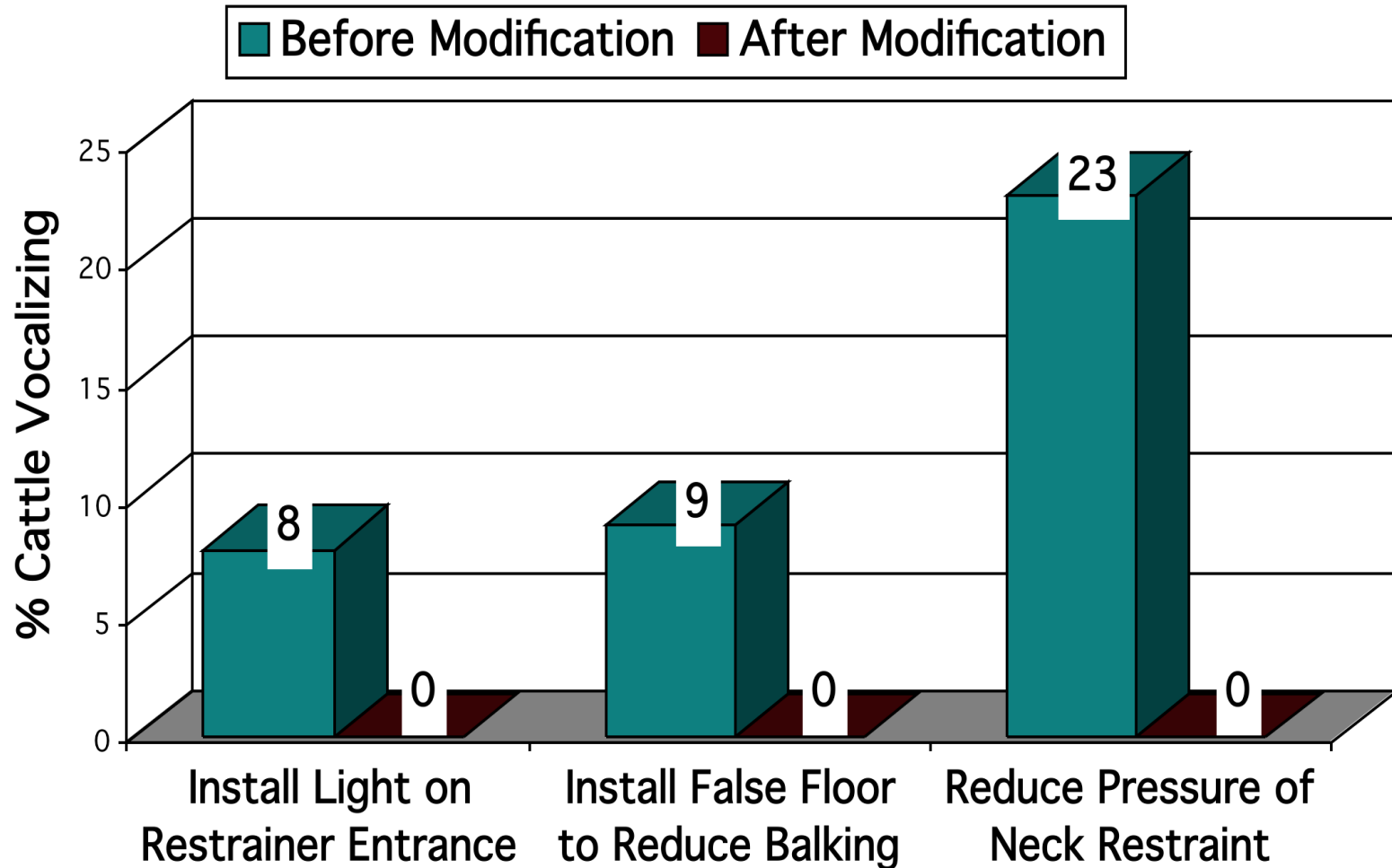


# Use Scoring to Show How Changes Made in Your Operation Improved Handling

Effect of Air Blowing into the Faces of Cattle at the Restrainer Entrance on Vocalization Score

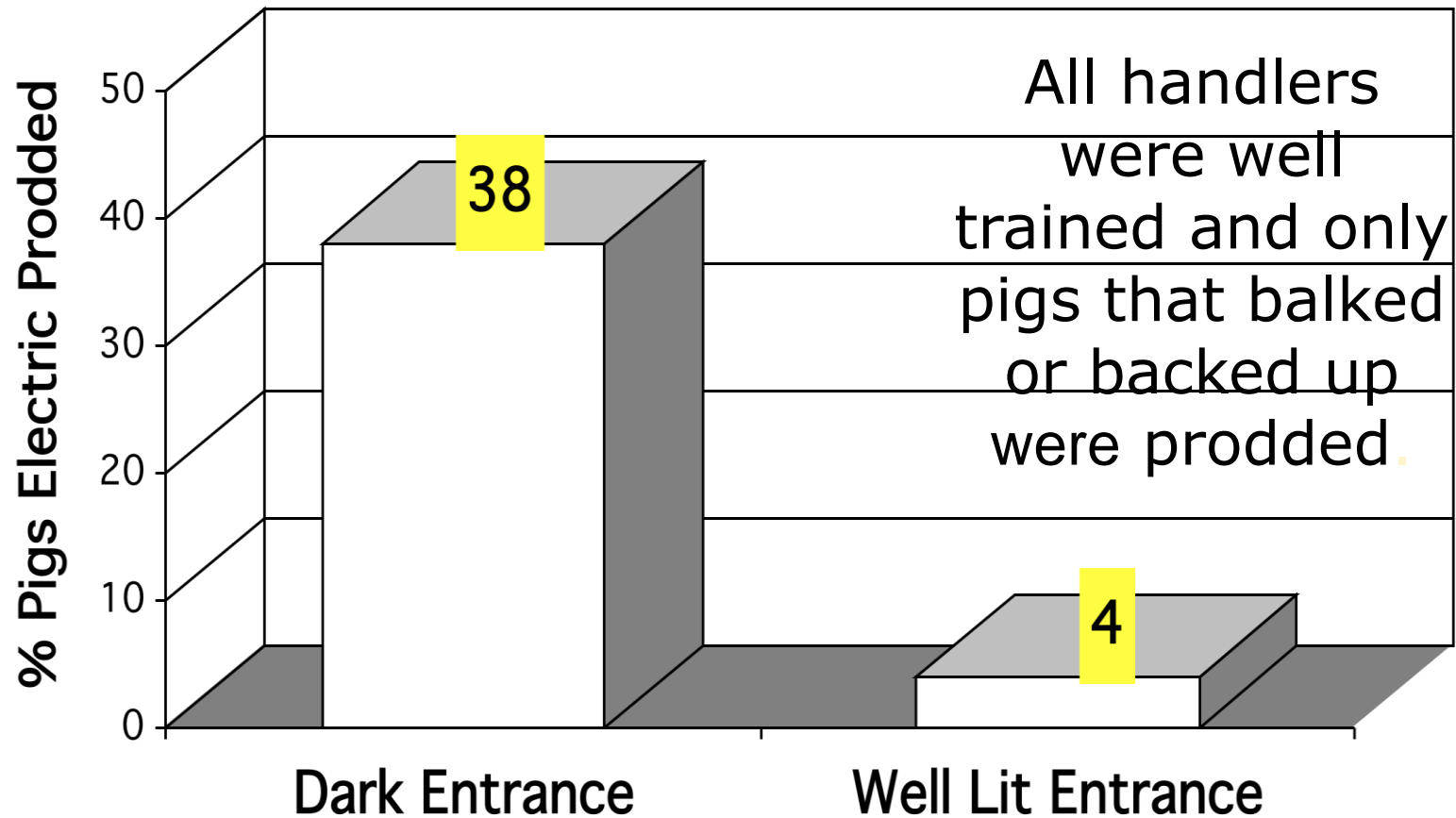


# Reduction in Cattle Vocalizations After Equipment Modifications





# Electric Prod Use on Pigs Was Reduced By Adding Lighting at the Restrainer Entrance





**Cartridge Fired Stunner  
Must Keep Cartridges Dry  
Store them in the Office**



# Common Stunning Problems

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## *Cartridge Fired Captive Bolt*

- Poor maintenance and cleaning
  - Damp cartridges
  - Using undersized gun or cartridges
  - Slick, slippery stun box floor causes the animal to get agitated
  - Agitated animals
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# Correcting Stunning Problems

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## *Pneumatic Captive Bolt*

- Poor maintenance and cleaning
- Low air pressure – Compressor is too small
- Ergonomic problems on heavy pneumatic stunners
- Agitated animals
- Slick stun box floor – Diamond plate steel floor wears out quickly and the animal keeps slipping



# **A Non-Slip Floor in the Stun Box is Essential**

**Rods should be welded  
to the floor in a stun box  
with a steel floor**

# Procedure for Small Plants

After head only electric stunning, apply electrode to the heart to prevent return to sensibility



Vogel et al., 2010



# Correct Placement Head to Body Cardiac Arrest Stunner



# Major Causes of Return to Sensibility After Electric Stunning

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- Wrong placement – Brain not in current path
- Low amperage
- Dehydrated animals – Applies to all species
- Stun to bleed interval too short (head only)
- Poor bleeding methods – Correct by using a large knife to create a larger blood stream





Sensible bovine with righting reflex. This is a serious welfare problem.

- Stiff neck
- Head raised



# Righting Reflex in a Fully Sensible Pig. This is a Serious Animal Welfare Problem



**Sensible pig has an arched back**



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