

# Bovine Emergency Response Plan

Lisa Pederson,  
North Dakota State University  
Extension Service



# The BERPers

- **Clyde Lane, University of Tennessee**
- **Lisa Pederson, North Dakota State University**
- **Jan Shearer, DVM, Iowa State University**
- **Charlie Stoltenow, North Dakota State University**
- **Dave Workman, West Virginia University**
- **Jerry Yates, West Virginia University**

# Our Plan of Attack

- **Who I am, who you are!**
- **Semi truck/trailer basics**
- **Accident demographics**
- **The Plan...**
- **Implementation**
- **Challenges**
- **Questions, your thoughts...**

# Who you are???

- **Your role**
  - **Extension**
    - County staff
    - State/area staff
  - **Veterinarian**
    - Private practitioner
    - Regulatory
  - **Emergency Services**
    - Emergency Management
    - First responder
    - Law enforcement
  - **Others....NGOs**

# Who you are???

- **Have you been a first responder to a cattle transportation accident?**
- **Have you ever been in a cattle trailer?**
  - **Semi “pot” trailer?**
  - **Semi “straight load” trailer?**
  - **Stock trailer, gooseneck or bumper hitch?**

# Semi Trailer Basics....

- Cattle "Pot"



## 402 Cattle/Calf Model

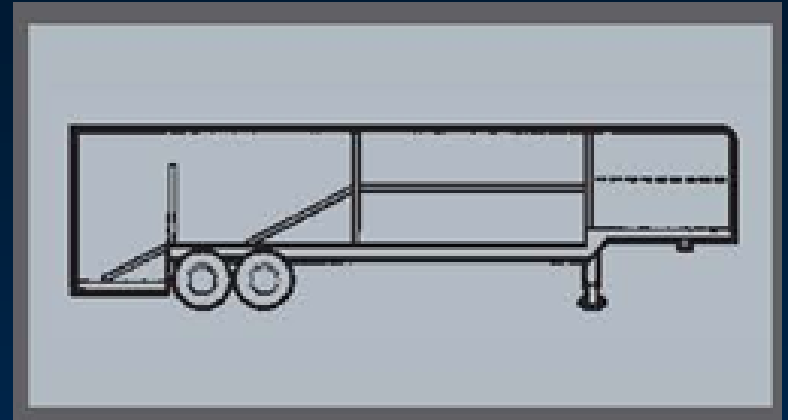


Deck Settings

Photos:  
Wilson  
Trailers

# Semi Trailer Basics....

- Straight load



Photos:  
Wilson  
Trailers

# Demographics of Cattle Transport Accidents

- Nearly always roll to right (95+% of time)
- Causes
  - Driver fatigue
  - Road conditions
  - Misloading
  - Crash/avoidance of crash with other vehicle/object
  - Driver intoxication
  - Shoulder conditions
  - Other...mechanical failure, etc.
  - Combination of any of the above





# Objectives

**Develop framework local law enforcement, first responders, and emergency management could use to more appropriately address accidents involving cattle transport vehicles**

**Rigid enough to cover critical needs, flexible enough to meet local needs**

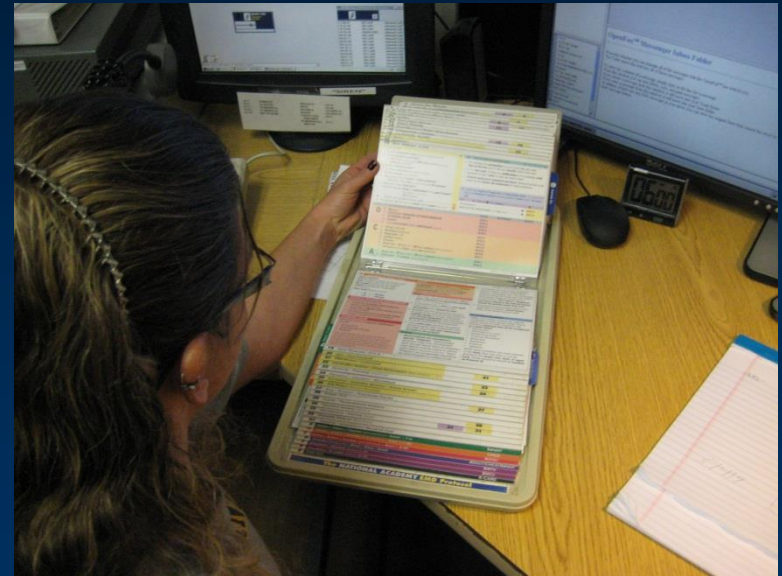
# What We've Done

## Developed Plan with sections dedicated to:

- Dispatcher Decision Tree
- Emergency Response Arrival
- Scene assessment
- Security and Containment
- Extrication of livestock
- Euthanasia
- Relocation
- Mortality disposal
- Righting of the crashed vehicle
- Debriefing

# Dispatcher Decision Tree

- Nearly all situations have a standardized decision tree-i.e. delivering a baby
  - Not livestock transport
- Developed Dispatcher Decision Tree
- Dispatcher would initiate “Emergency Information Contact List”



# Dispatcher Decision Tree

- **Dispatcher Decision Tree**
  - Type of incident
  - Type(s) of vehicles involved
  - Livestock/animals loose on scene
  - Fire involved?
  - Hazardous chemicals involved?
  - Are vehicle(s)
    - Upright and on wheels
    - Rolled, and if so, to left or right
    - Jackknifed

# Dispatcher Decision Tree

- Dispatcher reports available information to responding law enforcement and first responders
- Dispatcher would initiate “Emergency Information Contact List”



Appendix A: Emergency Contact Sheet

NAME	CONTACT PERSON	PHONE NUMBER
State Veterinarian		
Livestock Veterinarian		
Local County Extension Agent (if trained in livestock)		
Local Brand Inspector		
Local Livestock Transporter		
Local Cattle Producer		
Local Horse Breeder		
Local Pork Producer		
Local Sheep Producer		
Local Poultry Producer		
Local Bison Producer		
Livestock Holding Facilities		
Portable Corrals/Panels		
Person Trained in Euthanasia		
Dead Stock Disposal Facility		
Dead Stock Removal		
Tow Truck		
Other Resources		

- “Emergency Information Contact List”

# Emergency Response Arrival

- Calmly and quietly as possible
- Don't immediately attempt to get animals up or moving
- Don't begin livestock extraction until containment structure is in place
- Limit use of sirens, horns, and other loud noises
- Limit use of flashing lights, especially at night



# Scene Assessment

- Time to find out what you're dealing with!







# Scene Assessment

- **Only essential personnel be granted scene access**
- **Ensure basic principles of rescue operations be utilized:**
  - **Secure vehicles involved**
  - **Deal with any life threatening actions (Fire, Traffic, Loose & aggressive livestock, Water, Environmental conditions)**
  - **Don't become another victim**

# Scene Assessment

- If driver is coherent...
  - Can they assist with accident scene?
  - Ask them for a Bill of Lading, use Bill of Lading to develop “Animal Transport Incident Assessment”
    - Type and number of livestock on board?
    - Where load originated?
    - Where load is heading?
    - Who owns load?
    - Who is the insurer of the load (almost never the same as the insurer of the vehicle)?
    - Animals involved that are individually insured?



# Scene Assessment

- “Animal Transport Incident Assessment”

**Animal Transport Incident Assessment**

Responding law enforcement \_\_\_\_\_ Department \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Location of incident \_\_\_\_\_

Date/Time of incident \_\_\_\_\_

Transportation Company \_\_\_\_\_  
 Contacted  
 Phone number \_\_\_\_\_

Insurance Company \_\_\_\_\_  
 Contacted  
 Phone number \_\_\_\_\_

Driver name: \_\_\_\_\_  
 Functional  
 Non-functional

Vehicle type:  
 Farm trailer (bumper hitch)  
 Gooseneck trailer  
 Pickup with stock racks  
 Bobtail truck  
 Semi trailer (straight load)  
 Semi trailer (potbelly)

Vehicle condition:  
 Operable  
 Non-operable

Vehicle accident result:  
 Upright  
 On-side     Left     Right

Accident site:  
 Urban  
 Rural  
 On road  
 Shoulder  
 Ditch  
 Other

Animal type:  
 Cattle  
 Horses  
 Pigs  
 Sheep  
 Poultry  
 Deer  
 Bison  
 Llama  
 Ostrich/Emu  
 Other

Emergency Contact \_\_\_\_\_  
Comments: \_\_\_\_\_

Age group:  
 Young  
 Intermediate  
 Mature

Quantity  
 Known             Number \_\_\_\_\_  
 Unknown         Estimate \_\_\_\_\_

Classification  
 Slaughter  
 Feeder  
 Replacement  
 Bio-security concern (sealed trucks, etc.)

Destination  
 Farm  
 Slaughter plant  
 Auction market  
 Feedlot  
 Other

Scene Security Status  
 Contained  
 Number Tied \_\_\_\_\_  
 Number Loose \_\_\_\_\_

Escaped

Health Status  
 Uninjured \_\_\_\_\_  
 Injured \_\_\_\_\_  
 Dead \_\_\_\_\_  
 Unknown \_\_\_\_\_

Extrication  
 Yes  
 No

Support required  
 Live animal transport/relocation  
 Personnel  
 Veterinarian  
 Euthanasia specialist  
 County Extension Agent

Equipment  
 Fencing  
 Gates  
 Lighting  
 Tow truck

# Scene Assessment

- **Assess scene conditions**
  - **Physical limitations**
  - **Potential onsite assets**
    - **Roadway fencing**
    - **Alleys**
    - **Other vehicles**
    - **Livestock trailers**
  - **Are all animals contained, or are some loose? If loose:**
    - **Are they secure?**
    - **Do any need to be euthanized?**
    - **Threat to human life?**

# Scene Assessment

- Remember human safety is more important than livestock safety
- Prioritize needs
- Understand stock type, ownership, management control, and insurance implications
  - Never trust any animal!
    - Shoot the dog!
  - Remember different species and different classes of livestock can be on the same load
    - Humans?, Motorized vehicles?

# Scene Assessment

- **Build a comprehensive account of all animals encountered**
  - **Special circumstances and conditions can apply to:**
    - **International origin animals**
    - **Specific pathogen free or other “health certified” animals**
    - **Slaughter only**
- **Every effort needs to be made to secure the services of a licensed veterinarian to make animal health related decisions at the scene**



# **Security and Containment**

- **A must for safety of first responders, public, and livestock**
- **Keep livestock contained to the scene**
- **Keep those who don't need to be involved with the scene out**
  - **General public, media**
- **Public Information Officer (PIO) should be designated for these types of incidents before they are needed...be prepared!**

**Is a PIO Important?**  
**What do we say about accident?**  
**Are we talking the same  
language?**



# Security and Containment

- Scene should be blocked from public view
- Prior to any animal extraction, containment structure must be in place!
  - Several documented cases of death or severe injury to general public or first responders because this rule was not followed.

# **Security and Containment**

- **Containment plans should include list of local entities that can provide livestock handling equipment that can be used to erect containment facilities**
  - **Should be included in “Emergency Contact Sheet”**
- **Use available data (Animal Transport Incident Assessment Form, Bill of Lading, etc.) to determine size of containment structure**
  - **Evaluate potential onsite limitations and assets for use in containment**

# Security and Containment

- **Loose animals on the scene**
  - Provide a challenge
  - Consider closing roadway
  - If meet euthanasia criteria, euthanize immediately
  - Injured livestock should be contained as soon as feasible
  - Utilize
    - Natural containment that is available
    - Relationships with local community to develop site specific capture plan
  - Aggressive animals should euthanized
    - Use large caliber rifle, aiming for chest, considering distance, other safety issues

**Security and containment need to be developed and well practiced far in advance of an actual event!**

# Extrication of Livestock

- **Human safety is always more important than livestock safety.**
- **Determine best location to open trailer**
  - **Dependent upon how trailer lies**
- **When opening trailer exercise full caution to be sure livestock and humans are not injured**
  - **Not cutting through metal into livestock**
  - **Cut in a fashion so livestock do not have to exit the trailer on metal**















# Extrication of Livestock

- Rescuers should avoid entering the trailer when possible
- Avoid off loading livestock onto pavement or concrete
- Cover lines with sand or soil
- Use of driving aids should be prudent and judicious
- Livestock that are being off loaded from wrecked trailer will be scared and agitated

# **Extrication of Livestock**

- **Typically livestock will exit the trailer at a rapid pace**
  - **Imperative containment facility is secure and stout**
- **Livestock will generally off load themselves if given a chance to settle down**
- **Off load as many livestock as possible before entering the trailer**
- **Employ humane euthanasia only when mobile animals have been off loaded**

# Humane Euthanasia

**The objective in humane euthanasia is:**

- a “good death” whereby life is ended without pain or distress to the animal
- Requires techniques that induce immediate loss of consciousness followed by cardiac and respiratory arrest which results in loss of brain function and death

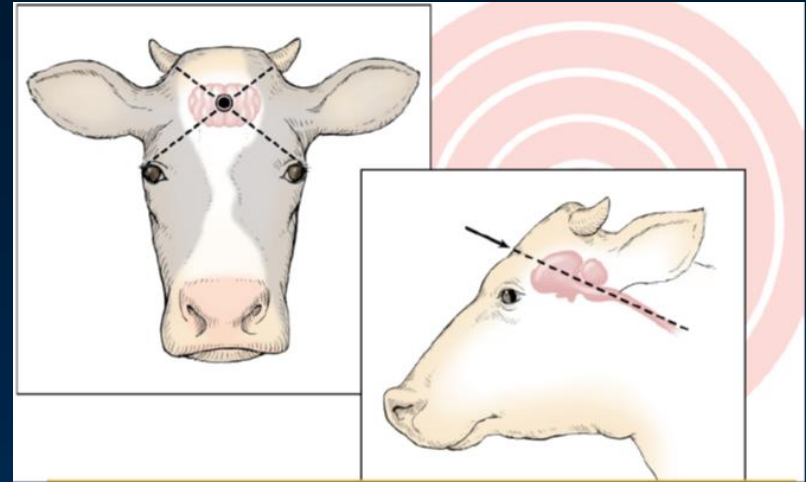
# Euthanasia of Beef and Dairy Cattle

- **Euthanasia Methods for Cattle**
  - *Barbiturates and barbituric acid derivative-generally not the best option for accidents*
  - *Gunshot*
  - *Penetrating Captive Bolt with Adjunctive Methods*
    - Penetrating and non-penetrating captive bolt with adjunctive methods appropriate for calves



# Euthanasia

- Euthanasia training
- Considerations
  - Human safety
  - Animal welfare
  - Restraint
  - Practicality: captive bolt vs firearm vs pharmaceutical. Situational Safety needs to be evaluated
  - Skill
  - Cost
  - Aesthetics
  - Diagnostics



Jan Shearer, DVM, Iowa State University, OIE

# Relocation of animals

- **Preplanning is paramount to the successful animal relocation**
  - **Relationships need to be developed prior to needing a place to relocate animals!!!**
  - **Acceptable entities willing to house relocated animals should be detailed on Emergency Contact Sheet**
  - **Owners/managers of relocation facilities need to be alerted surviving livestock may be relocated to their facility when dispatcher takes initial call**

# Relocation of animals

- **All relocation facilities must have at a minimum**
  - **Basic animal handling equipment available for treatment of injured animals**
  - **Ability to isolate the relocated animals from existing herds**
- **Relocated animals need to be isolated/ quarantined**
- **The following types of facilities may meet the criteria for a relocation facility**
  - **Fairgrounds or other livestock show event locations**
  - **Auction markets, Buying stations**
  - **Cattle operations**

# Relocation of animals

- **Feeding management for these animals needs to be basic**
  - **Good quality hay**
  - **Lots of fresh, clean water**
- **Health management and follow up care needs to be turned over to Veterinarian ASAP**

# Relocation of animals

- **Transportation of livestock from accident scene to a relocation facility**
  - Using pick up and stock trailer
  - NOT a semi truck and trailer
- **Identify transportation in advance, detail on “Emergency Call List”**
- **Keep loads consistent until transportable animals are relocated**
  - Avoid situations create animals being left alone
- **Load density should meet industry standards and adjusted to individual animal/accident circumstances**
  - Don’t leave individual animals alone

# Relocation of animals

- **Do not try and load livestock into trailers on pavement or concrete**
  - If only option, cover roadway with sand or soil.
- **If livestock need to cross lines on a highway**
  - Cover lines with sand or soil
- **Drivers should drive carefully**
  - Realizing they are hauling scared, and probably injured livestock.
  - Precautions should include: reasonable speed, taking corners easily, and stopping gently

# Mortality disposal

- Plan ahead-detail facilities in Emergency Contact Sheet
- Know state and local regulations
- Develop plan to handle mortalities far in advance of an actual incident
  - Detail options for domestic and international origins
  - Possible options for disposal include:
    - Landfill
    - Composting
    - Burning
    - Burial
    - Rendering?
- Final disposition of mortalities needs to occur ASAP





# Mortality disposal

- **Animal mortalities should be handled with same dignity and respect as human mortalities**
  - **Critical that visual barriers be used**
  - **Maintain carcass integrity to every extent possible**
    - **Various equipment can be used to help extract animals**
      - **Heavy tarps, straps, Ag. (grain elevator, baler), mine/conveyor belts**
- **Loading**
  - **Appropriate heavy machinery needs to be available**
    - **Local/State highway departments**
    - **Consider using local private machinery**
      - **Disinfect afterwards, detail contact info in Emer. List**
      - **Heavy tarps, straps, Ag. (grain elevator, baler), mine/conveyor belts**

# Righting of Vehicle

- **Use trained professional**
- **Detail contact info in Emergency Contact List**
- **Can save the value of the vehicle**
- **Safety of humans should be assured**
- **Vehicle should not be righted with livestock-dead or alive-inside**
  - **Dangerous to livestock & emergency workers**

# Debriefing

- **Method used by first responders/those helping with the accident to:**
  - **Relieve stresses the first responders may or may not recognize**
- **Formal and Informal Debriefings**
  - **Formal debriefings conducted by trained facilitator**
    - **Opportunities for engaging in the spiritual and the humanistic directions with formal session**
  - **Informal debriefings**
    - **Responders engage in conversation with a group of colleagues**
      - **Talk about incident with those involved**
  - **Both formal and informal debriefings are useful**

# Debriefing

## – Planning a debriefing session

- Conduct within 24 hours of incident
- Only persons actually involved in the incident are invited
- Counselors, clergy, or trained emergency medical personnel conduct the session
- No judgment or finger pointing
- Good points or bad points regarding the incident are encouraged
- What goes on the road stays on the road!
  - Debriefing happenings stay confidential
- All should be allowed to express their feelings, emotions, or thoughts.

# In Summary...

- Preparedness is the first line of defense
- A little planning goes a long way
- Any time you come upon a livestock transport incident, don't be surprised at what you'll find...
  - Prepare for the worst, plan for the best
  - PREVENTION, PREVENTION, PREVENTION
- An accident scene is not the place to build your team...

# Opportunities

- **Develop list of assets**
- **Think about where these might occur in your community**
- **Train, train, and train**
  - **Designing and erecting containment structures**
  - **Humane euthanasia**
  - **Animal handling**
- **Build your team**
- **Prepare for these events before you need to know what you are doing!**



**Be Prepared for Anything...  
Don't be Winner of the Not My Job Award**

# Acknowledgements

- **Funding provided by:**
  - **The Beef Check Off**
  - **USDA-NIFA: Smith-Lever Special Needs Grant**
  - **Participating Universities**
- **Ontario Farm Animal Council**