The human component of livestock transportation: considerations for trucker and livestock welfare

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A One-Health approach to livestock transportation

Transdisciplinary actions that protect the health and welfare of animals, humans, and the environment

- Sustainable animal production
- Promotes positive human-animal interactions

Preventing or reducing occupational hazards that impact stock people

Animal health and welfare
The professional livestock hauler

- Required to deliver live and healthy animals on time
- Under pressure to drive for long periods and on irregular driving schedules

Valadez-Noriega et al., 2018, Prev. Vet. Med.; Table 1
Hauling livestock is not for the faint of heart...

- Long shifts
- Fatigue
- Sleep restrictions
- Postural fatigue
- Exposure to noise vibration
- Sedentary lifestyle
- Unhealthy diet
- Exposure to diesel exhaust fumes
- Handling for load/unload animals
Occupational challenges increase likelihood of accidents while transporting livestock

Woods and Grandin, 2008

- Single truck
- 0:00 – 09:00
- Driver error
- Fall calf run
- Yearling cattle
### Three types of drivers

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- **Operationally efficient and Not concerned with animal welfare**
- **Not operationally efficient and Not concerned with animal welfare**
- **Operationally efficient and Concerned with animal welfare**

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Pulido et al., 2018, J. Vet. Beh.; Figure 1
Driver type → Driving style → Livestock

CORNERING

Driver A

Driver B

BRAKING

Careful Driving and Animal Welfare

The effects of driver behaviour on the behaviour of livestock in transit

DEFRA; Cockram et al., 2004
Hauling livestock is an art that requires skill, experience, strategy, and finesse

• Driver experience influences profitability
  • Those with >6 years hauling livestock has lower % BW shrink
  • Increased competency with starting, stopping, and cornering
  • Better animal handling skills and increased awareness of risk factors

• Loading/unloading time increases with age

Valadez-Noriega et al., 2018; Gonzalez et al., 2012
Unlike direct animal handling, feedback to human from animal is typically absent.

Adapted from Hemsworth & Coleman, 1998
HOS vs. HOT – by the books

14 hour vehicle operation 10 hour rest 14 hour vehicle operation

28 hour riding without unloading 5 hour rest

13 hour vehicle operation 8 hour rest 13 hour vehicle operation 8 hour rest

52 hour riding without unloading

Cernicchiaro et al., 2012; Table 1

Gonzalez et al., 2012; Table 5
HOS vs. HOT scenario: short haul

Turn engine on
Drive to feedyard

30 min

Load cattle and start driving

30 min

150 air miles

Start HOS

2.5 hours

Start loading cattle

5 hours

Stop HOS

2.5 hours

150 air miles

Arrive at plant

1 h

Arrive at rest area
Turn off engine

30 min

Unload cattle
Drive to rest area

TLAAS = Transporting Livestock Across America Safely Act

12.5 Hour work day
HOS vs. HOT scenario: long haul

19 hours of cattle riding on the truck

- Start loading cattle
- 30 min
- Cattle are loaded and start driving
- 2.5 hours
- 150 air miles
- 13 hours
- Stop
- HOS
- Arrive at feedyard
- Unload cattle
- Drive to rest area
- 30 min
- 30 min
- Arrive at rest area
- Turn engine off
- 150 air miles
- 2.5 hours

But...I’ve been working nonstop for 20 hours!
For each transportation event, the trucker works the longest shift

- Clobenzorex hydrochloride
  - Anorexigenic amphetamine
  - Causes insomnia and suppresses appetite
  - Improve cognitive performance and driving performance
  - Combat fatigue

- Reported rates of drug consumption to stay awake
  - 30-900 mg in a 24 and 72 h period
  - 77% of truckers affirmed to consume drugs
  - True side effects unknown as the side effects of these drugs have only been studied in doses lower than those reported

Valadez-Noriega et al., 2018
HOS vs. HOT – personal vs. professional ethics

14 hour vehicle operation 10 hour rest 14 hour vehicle operation
28 hour riding without unloading

2 hours into the break, the trucker gets busted by DOT giving animals food/water. Rest clock restarts.

Trucker has to make a choice
Do what’s right by the animal? vs.
Do what’s right by the law?
We can make whatever laws we want, but...

- People are the wild care in welfare

- The truckers must be invested in the policy changes designed to improve animal welfare during transportation
  - Effective implementation
  - Documented improvement in animal welfare
  - History of circumventing policy with the intent of promoting AW

- Need for more truck washout stations at convenient locations
  - Slows pace of commerce
  - Adds 200-300 miles to the next load
  - Some feedlots have washouts on site, but restrict access
Other considerations

• Pre-employment personality testing may identify best candidates for position

• Younger generation of drivers may be relying more on chemicals than conditioning

• Occupations in which drug abuse is common and part of being successful should be re-evaluated
  • What is the **REAL** cost of cheap livestock transportation?
    • Drug use may be contributing to driving accidents
    • Impact of drug use on euthanasia
  • Team driving ROI
Thanks and Gig ‘em!

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28-hour law

- Revised from original version from 1873

- <28 hr consecutive travel without unloading
  - Rests must be >5 consecutive hr
  - Feed + water at end of 28hr
    - 36hr with owner approval

“Little attention was given to the class of men who handled the stock.”

“The man who could make the most noise and wield the “prodpole” most dexterously was considered the most valuable, no thought being given to the comfort of the animals”
28-hour law – Justification for revision

• Transportation companies were responsible for providing and maintaining feeding, watering, and resting facilities at strategic locations

• Poor construction, maintenance, and suitability of resting facilities
  • **Fencing**: Insufficient height and strength
  • **Water troughs**: Either not provided, inaccessible by animals, or used for wallowing and not subsequently cleaned
  • **Feeding racks**: occasionally absent
  • **Truck drivers**: variable livestock handling skills and resources responsible for corralling, loading, and unloading animals

**People are the wild card in welfare**