Pre-slaughter cattle handling and stress in mobile slaughter

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Commercial slaughter

- Largely industrialised, efficient plants
- Up to thousands of cattle or pigs and tens of thousands of broilers per day
- Official control to secure animal welfare and public health
- Small-scale alternatives

Ralph Orlowski, 2005
Animal welfare at slaughter

- Sometimes inappropriate facilities and demanding working conditions – difficult to drive animals and handle hassle and balking properly
- Inadequate stunning is likely to cause considerable suffering
- Many welfare risks, large variations between slaughter plants, stockpersons and animals – sometimes poor conditions
Study aim

- Investigate cattle handling and stress-related behaviour at a Swedish mobile slaughter plant, comparing with a large-scale stationary plant
Material

- 298 + 298 cattle slaughtered at mobile and stationary plants during 1 year
- Driveway 2.4–5.7 and 7.3 m, respectively
- At mobile plant, animals handled by farm and/or plant staff
- Penetrating captive-bolt stunning, followed by hoisting and thoracic sticking
The mobile plant

- Operated by a Swedish company since 2015
- Two slaughter teams
- Capacity for 30-35 large cattle per day, 3 days per week
- Farms all over Sweden, 1.2% of all large cattle slaughtered in 2017
Recordings of handling

- Direct observations by one person of number of activity bouts in driveway:
  - Touching, patting or hitting hind or front part
  - Restraining, pulling or pushing
  - Tail twisting, kicking, pricking, hitting with gate, electric prodding
  - Yelling, whistling, making noise by hitting rails
- Use of hand or driving tool (typically a stick or paddle, occasionally an electric prod)
- Time in driveway, in stun box and stun-to-stick
Recordings of stress behaviour

- Direct observations by one person of number of behaviour bouts in driveway:
  - Tiptoeing, running, backing, turning
  - Slipping, falling
  - Kicking, charging, struggling
  - Freezing
  - Vocalising
  - Eliminating
Driving time

- Longer if backing or turning around in the driveway

![Box plots showing time in driveway with and without backing or turning.](image)
Driving time in mobile slaughter

- Longer if left alone in inspection pen before being driven
Driving time

- Longer if perceived as 'hesitant' vs. 'calm'
Driving time in mobile slaughter

- More variable if handled by plant staff
Re-shooting

- Higher percentage of animals (10%) at mobile plant than at stationary (2.7%)
Stun-to-stick time

- Considerably longer at mobile plant than at stationary
Conclusions regarding mobile plant

- Potential for improved animal welfare and meat quality, through avoided animal transports and less handling
- Calm pre-slaughter handling important for efficient driving to stunning
- Adequate stunning and quick sticking may be difficult to achieve, likely due to interior constraints
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Thanks for your attention!

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