



# DOES PROVIDING BEDDING CHANGE THE LATENCY AND DURATION OF CATTLE LYING BEHAVIOUR DURING LONG-DISTANCE TRANSPORT REST STOPS?

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## BACKGROUND

- Recently changed Canadian transport regulations<sup>1</sup> require:
  - Maximum transport duration for weaned cattle: 36 h
  - Unload, feed, water, and rest for at least 8 h
- Average transport duration of cattle loads moving from western to eastern Canada is 29 h before unloading for feed, water, and rest<sup>2, 3</sup>
- Mean distance loads travel:
  - To the rest station: 1,566 km (973 mi)<sup>2</sup>
  - To their final destination: 3,069 km (1,907 mi)<sup>2</sup>
- Cattle are commonly rested for ~11 h<sup>2</sup>
- Bedding is not currently provided but could potentially improve the quality of rest

## RESEARCH OBJECTIVE

To assess whether straw bedding at rest stations affects lying behaviour of cattle during long-distance transport.

## METHODS

- 75 animals (6/load, opportunistically selected) were rested in pens that were either bedded (n=38, straw, 14 cm deep) or non-bedded (n=37).
- Lying activity of each animal was recorded every 10 min for 8 h
- Independent variables: treatment, approximate animal weight/load, and space allowance in the trailer
- Linear and mixed linear regression models were fitted to assess lying latency and duration, respectively



## RESULTS

- Bedding significantly modified the effect of approximate animal weight and space allowance in the trailer on lying duration and latency, respectively
  - **Latency to lie:**
    - Among potential combinations of space allowance and bedding, two significant differences were noted.
    - With low space allowance, bedded cattle lay down sooner (Table 1)
    - Among bedded animals, animals lay down sooner with low compared to moderate space allowance (Table 1)
  - **Lying duration:**
    - Regardless of bedding, lying duration increased with approximate animal weight, but the effect was more pronounced for non-bedded animals (Fig. 1)

Table 1. Significant contrasts examining the interaction between space allowance (SA) in the trailer and bedding on latency to lie down

Space allowance in the trailer*	Bedding	Latency to lie down (min <sup>1/2</sup> )	p-value
Low	Bedded vs Non-bedded	-0.34	<0.001
Low vs Moderate	Bedded	-0.30	0.003

\*'low' SA = 3.17-3.65 m<sup>2</sup>/300 kg animal, 'moderate' SA = 3.69-4.01 m<sup>2</sup>/300 kg animal)

## RESULTS (continued)

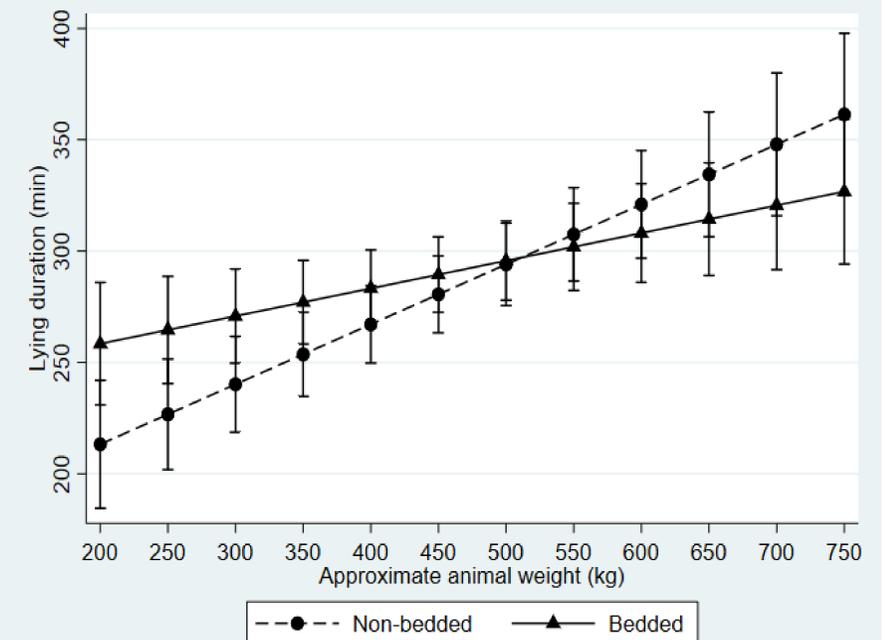


Fig 1. The impact of approximate animal weight (kg) and bedding treatment on the predicted lying duration (min) at two rest stations

## IMPLICATIONS

Bedding influences the latency and duration of cattle lying behaviour at rest stations based on cattle weight and space allowance in the trailer

## ACKNOWLEDGMENTS

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## REFERENCES

1. Government of Canada. 2019. *Canada Gazette, Part II*. Vol. 153, Number 4.
2. Flint et al., 2014. *Animals*. 4: 62-81.
3. Ross et al., 2016. *Animal Welfare*. 25: 217-225.