

# Cow comfort in dry lots: lameness, leg injuries and lying times on dairy farms in Texas and New Mexico



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## Introduction & Objective

Facility design and management have a dramatic impact on cow comfort. The assessment of injuries and lying behavior can determine the level of success that dry lots can achieve.

The aim was to describe the variation in lameness, leg injuries and lying behavior among dry lots in Texas and New Mexico.

## Methods



Swollen knee

We evaluated 1 pen of high producing multiparous cows from each of 35 (predominantly Holstein) herds. Cows were evaluated for:

- **Lameness (all cows):** 5-point scale where 1 and 2= non-lame, 3= moderately lame, and  $\geq 4$  severely lame.
- **Knee injuries (all cows):** Swollen carpal joints (yes/no).
- **Hock injuries (n= 40):** 5-point scale; categorized as 1=healthy, 2=minor hair loss, and 3, 4 and 5=moderate-to-severe hock injury.
- **Lying time (n=40):** Electronic data loggers recorded lying behavior at 1-min intervals for 3 d.

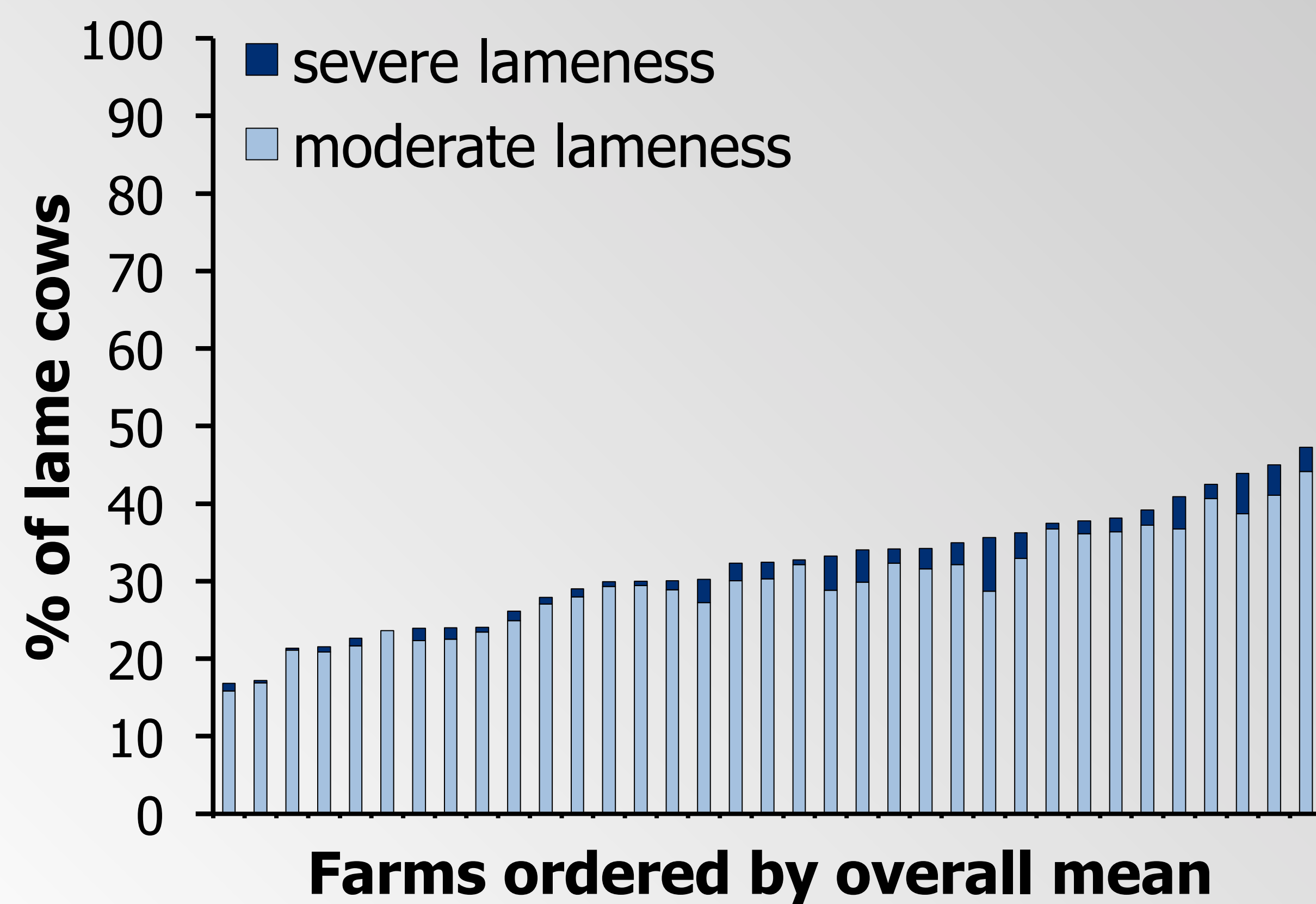
**Statistical analysis:** The analysis was descriptive. Means are presented  $\pm$  SD.



Typical characteristics of a dry lot from the Southwest United States

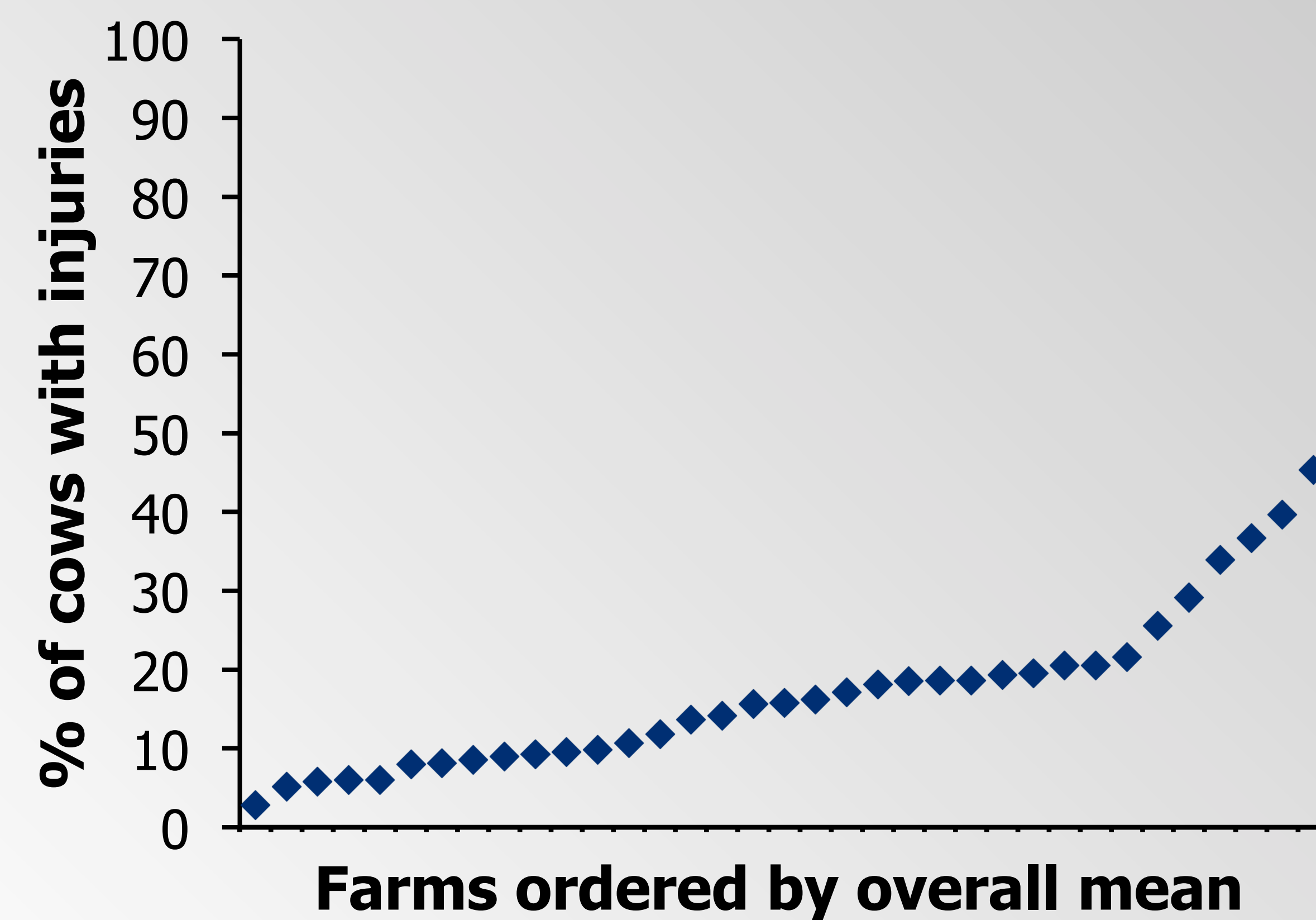
## Results

### Lameness



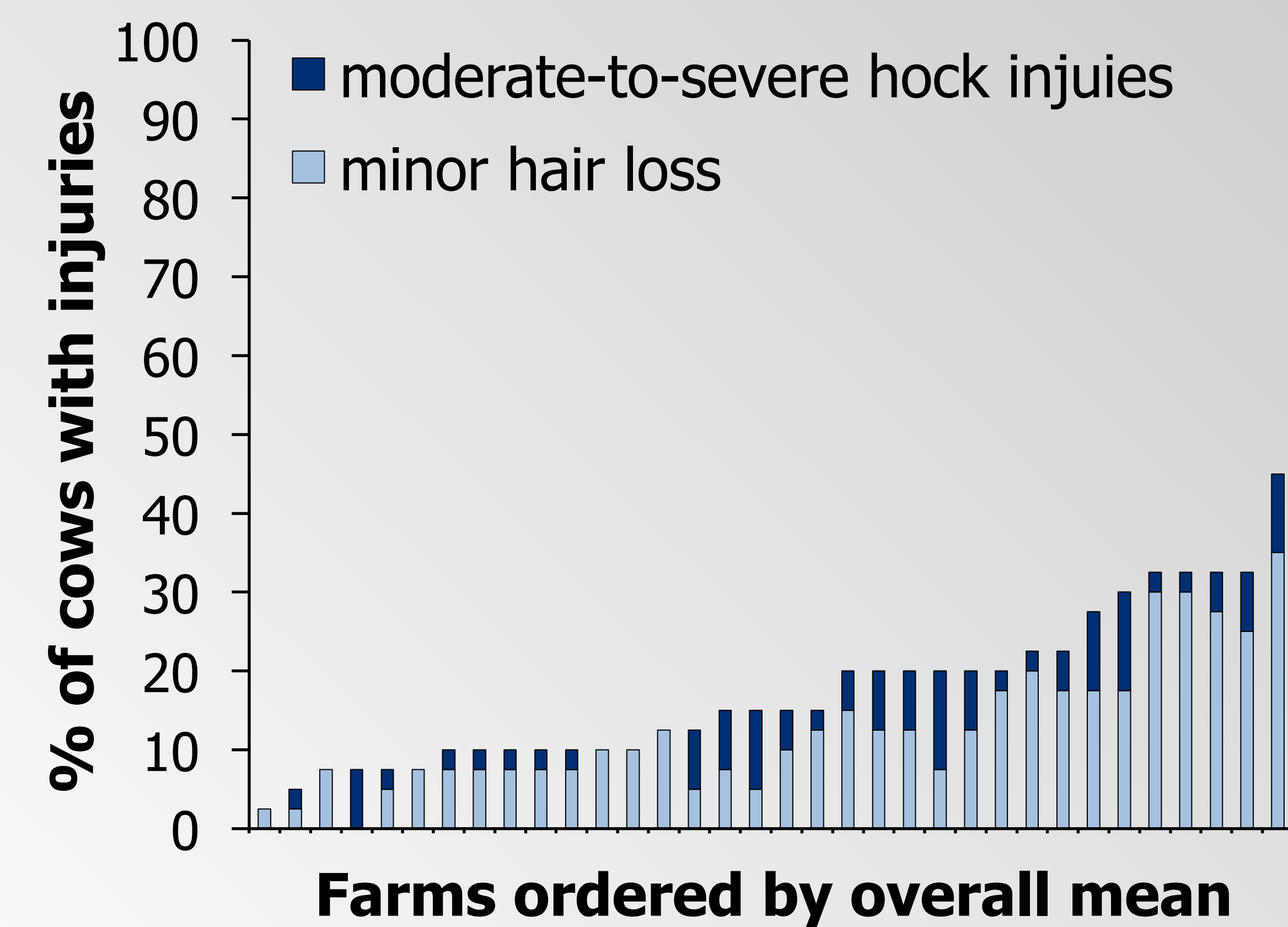
The overall prevalence lameness ( $\geq 3$ ) averaged  $31.7 \pm 7.7\%$  and severe lameness (4 & 5) was  $2.0 \pm 1.6\%$ .

### Knee injuries



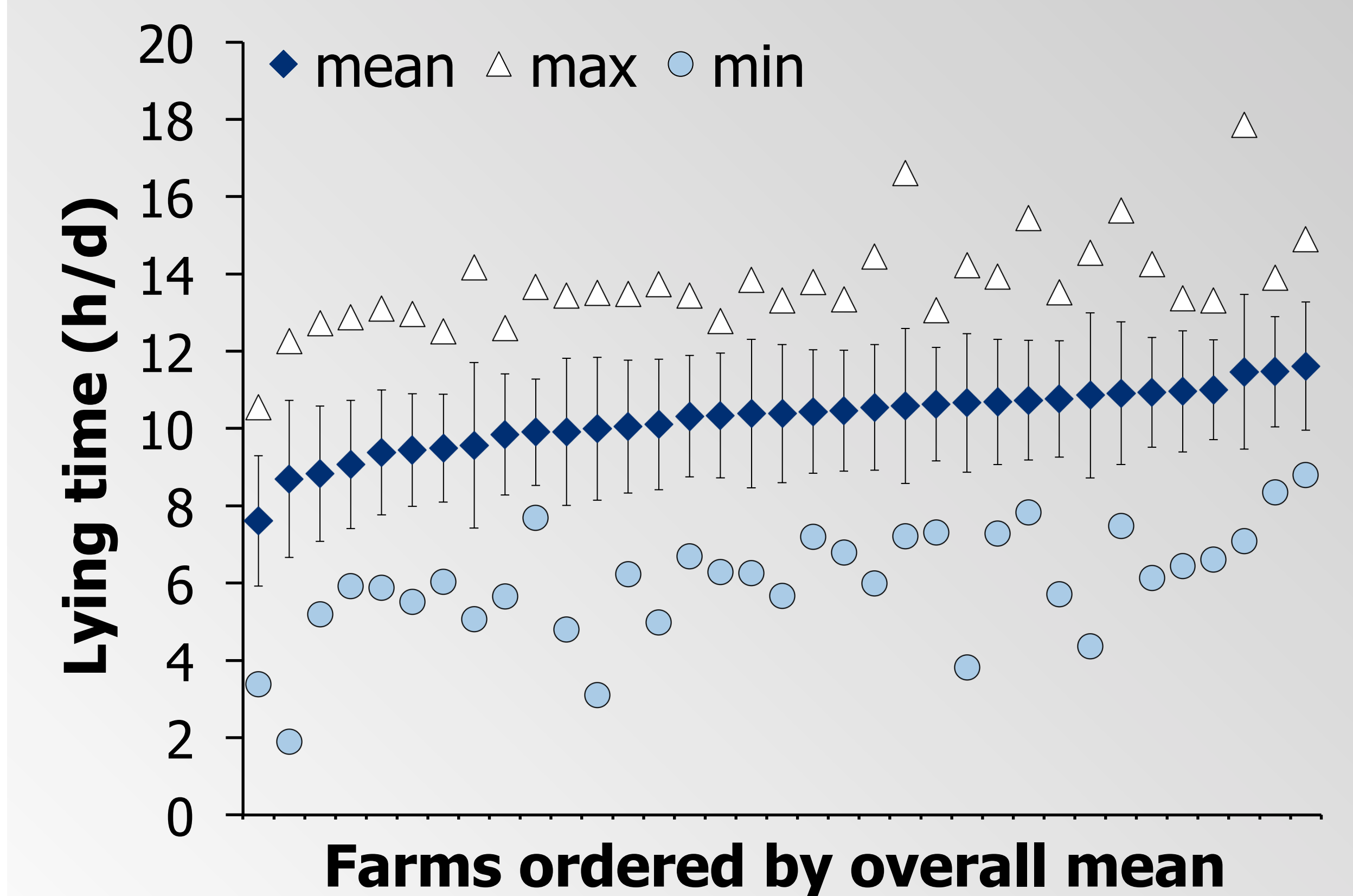
Prevalence of swollen knees averaged  $16.8 \pm 10.2\%$ .

### Hock injuries



The overall prevalence of hock injuries ( $\geq 2$ ) was  $18.2 \pm 11.0\%$  and moderate-to-severe injuries (3, 4, and 5) was  $4.7 \pm 3.7\%$ .

### Lying time



Lying times averaged  $10.2 \pm 0.8\text{h/d}$ ; cows within farms varied from 1.9 to 17.9 h/d.

## Conclusions

These results show considerable variation in lameness, knee and hock injuries, with relatively little variation among farms on lying time. These results indicate that some dry lots dairies can be managed with very low levels of these injuries, illustrating opportunities for improvements on other farms. Follow-up research will attempt to identify key management and design differences that are predictive of success.

