

Reducing the risk of lameness and hock lesions by improving cow comfort

Katy Proudfoot, M.Sc., Ph.D

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What is 'cow comfort'?

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Lying time



4

Use of lying space



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Cow preference

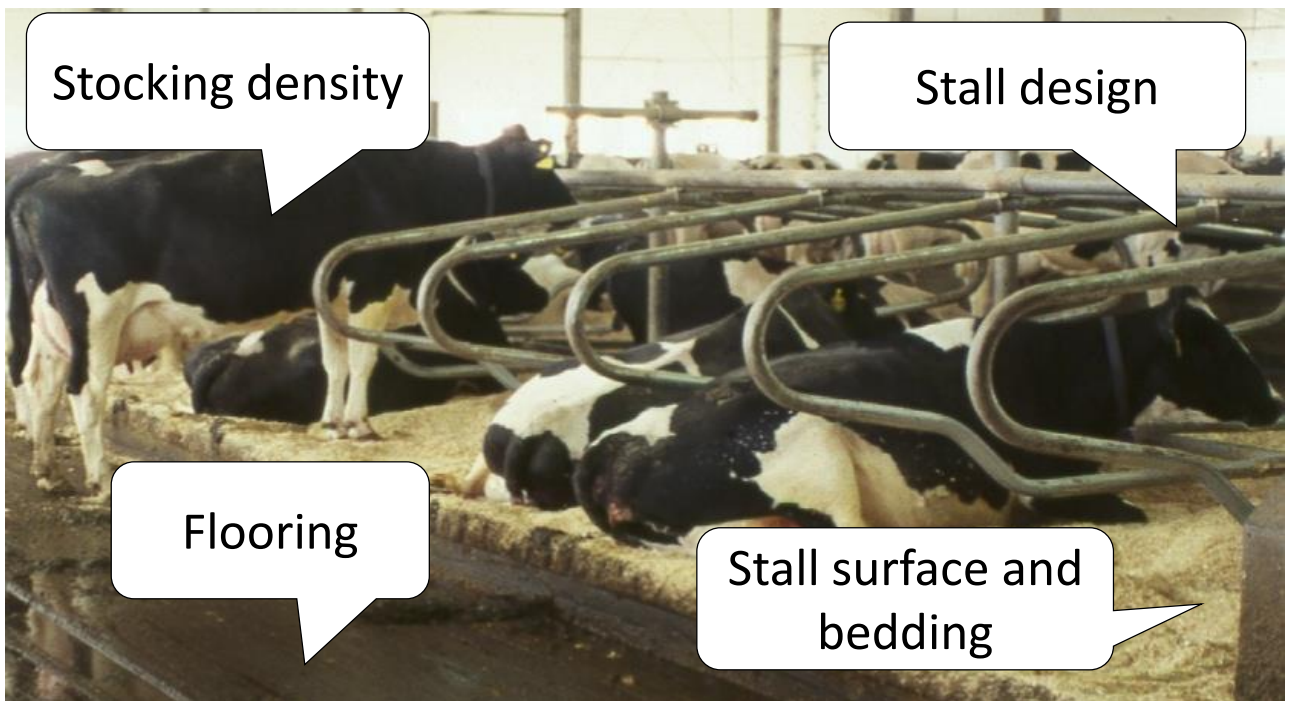


I'll take
this one,
thanks!

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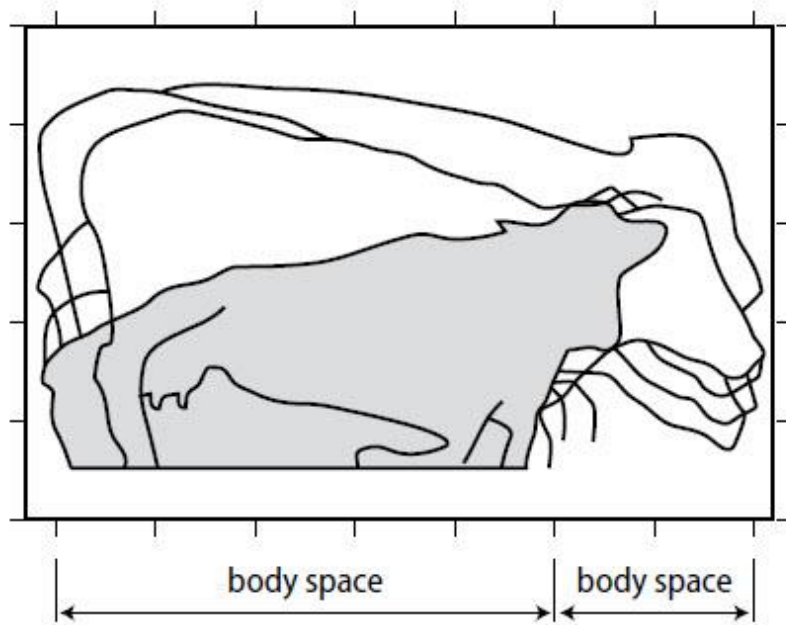
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Source: Irish and Merrill.

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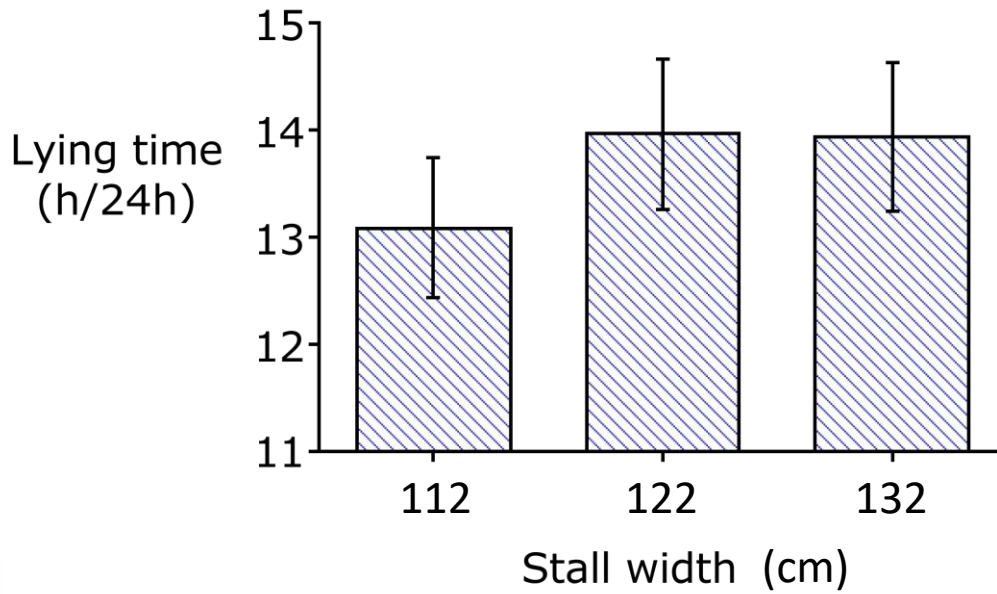
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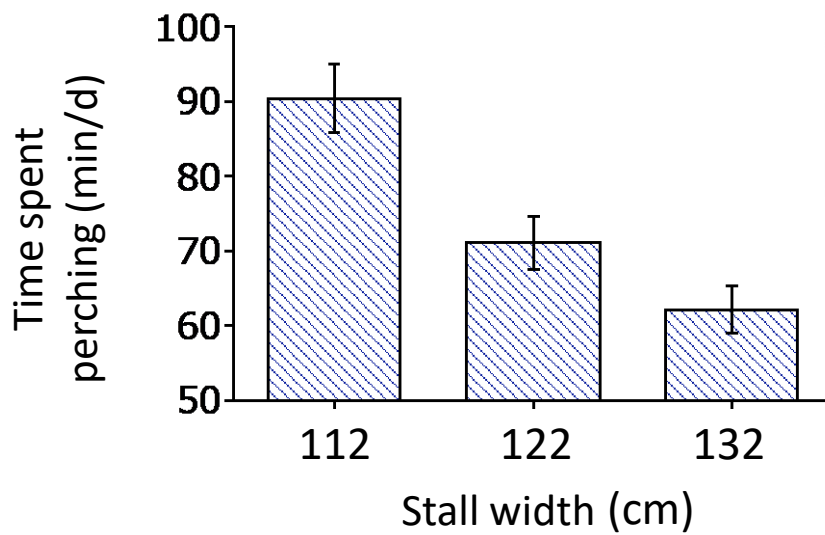
What does the cow do when the stall is too restrictive?

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Tucker et al., 2004

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Tucker et al., 2004

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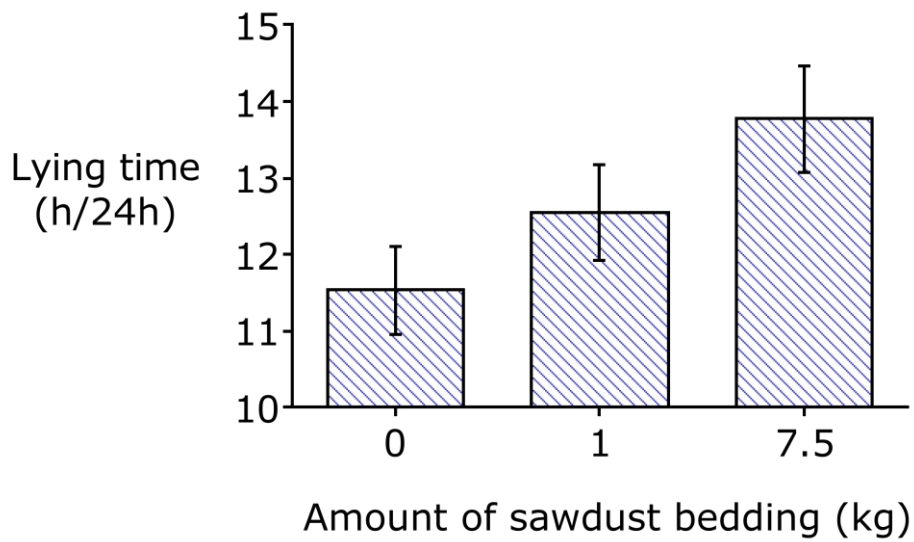
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OR



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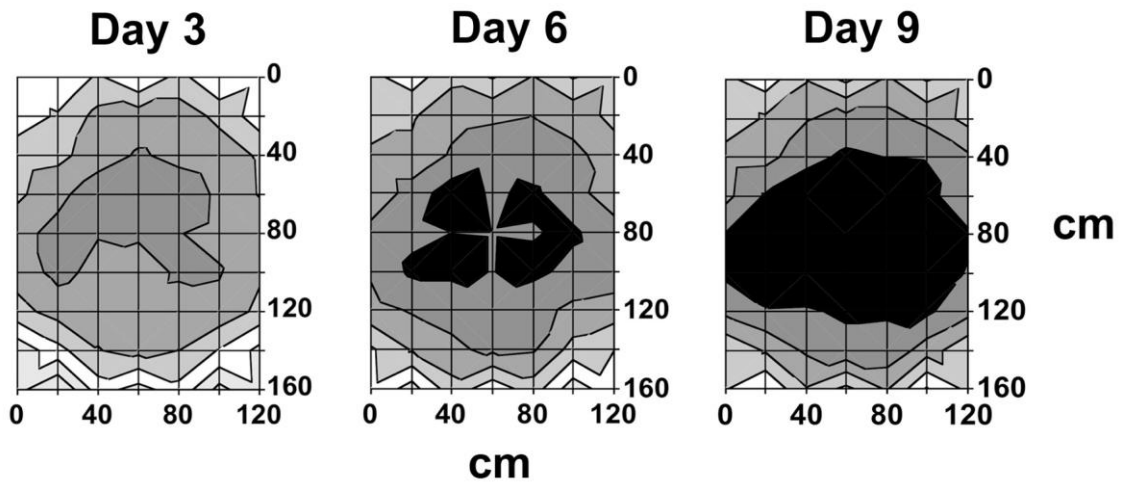
Tucker & Weary, 2004

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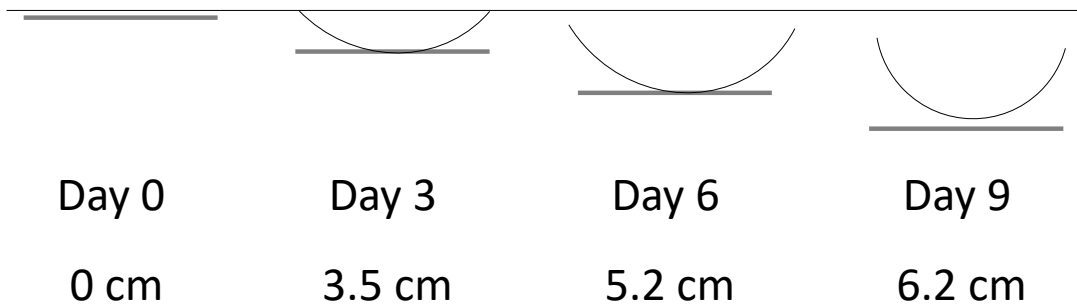
■ 8-10 cm ■ 6-8 cm ■ 4-6 cm ■ 2-4 cm □ 0-2 cm □ (-2)-0 cm □ (-4)-(-2)cm



Drissler et al., 2005

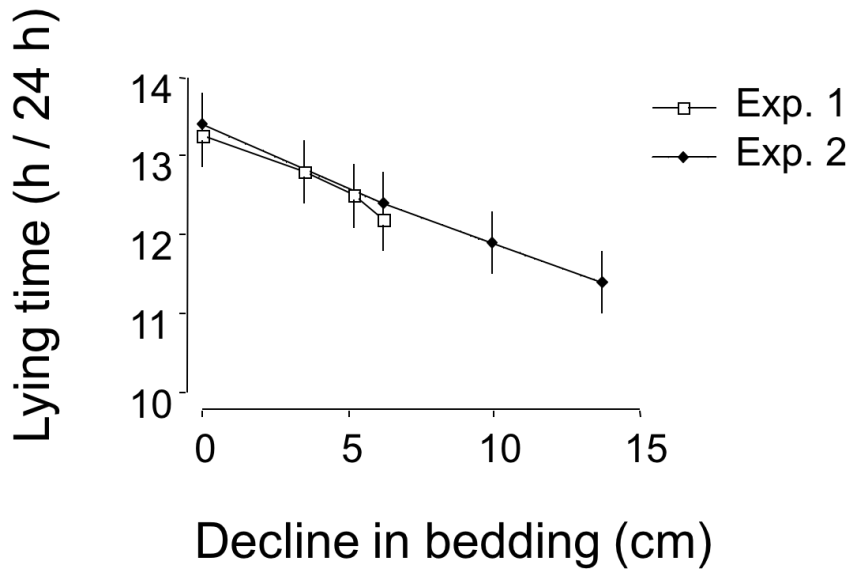
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Curb

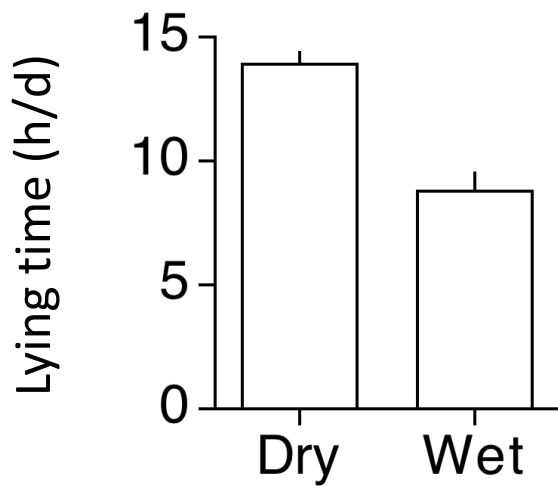


Drissler et al., 2005

22



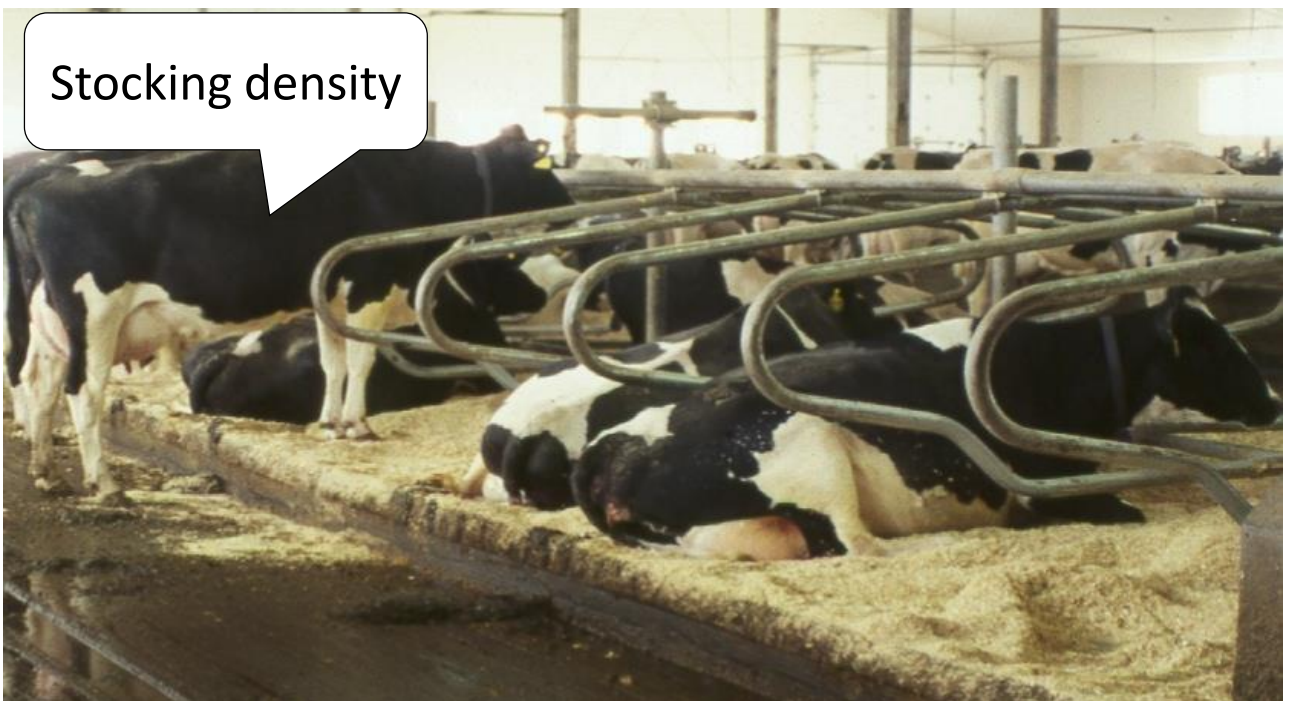
Drissler et al., 2005



Fregonesi et al., 2007

Do cows have a preference for wet or dry bedding?

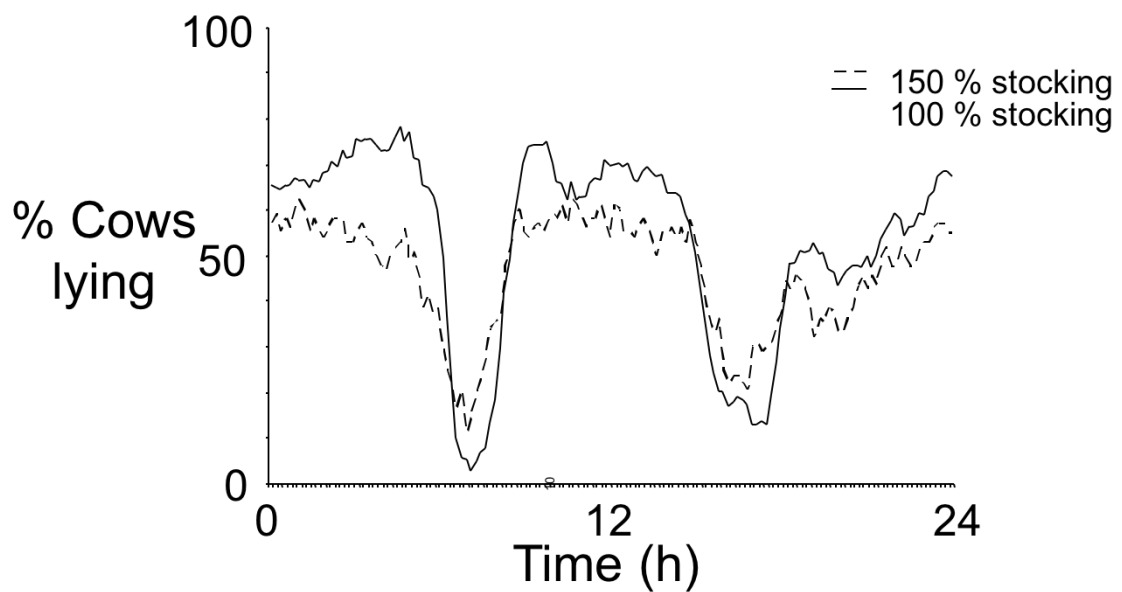
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Fregonesi et al., 2007

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Cow preference?



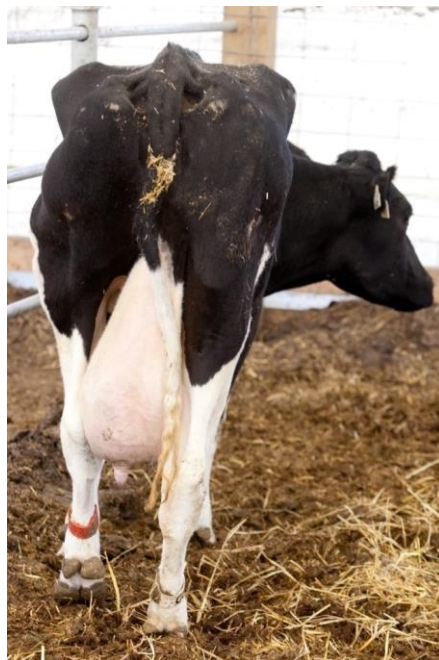
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What is the role of cow comfort in improving **lameness** and **hock/knee** lesions?

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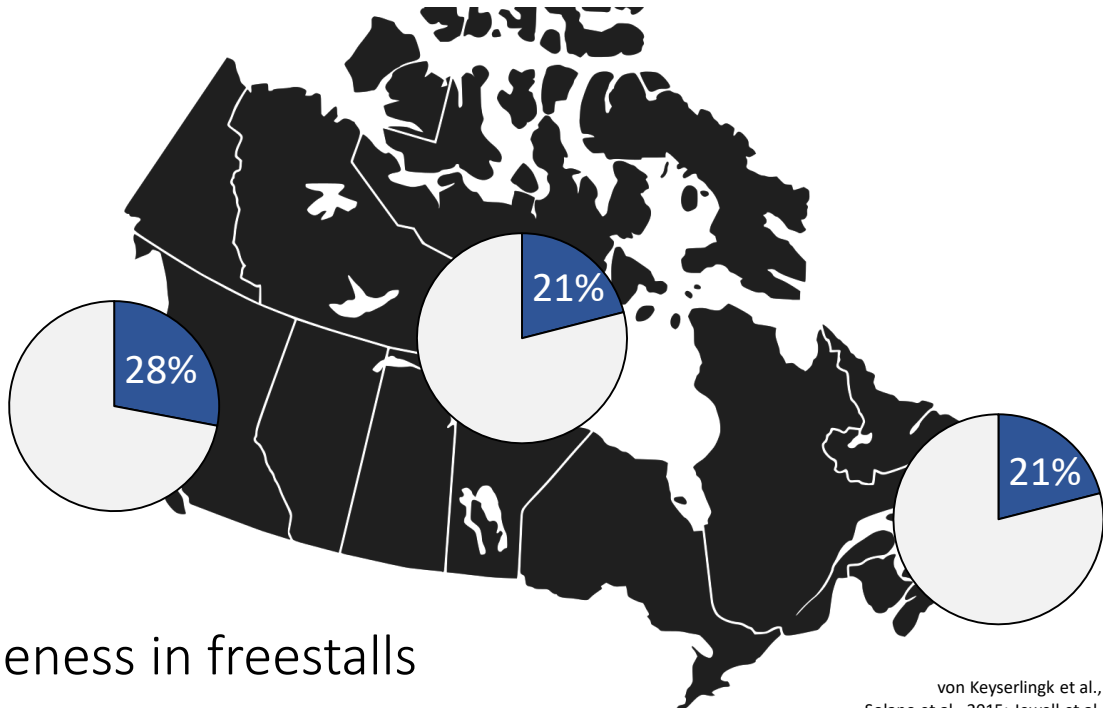
Lameness

Considered one of
the most important
animal welfare
concerns in the dairy
industry



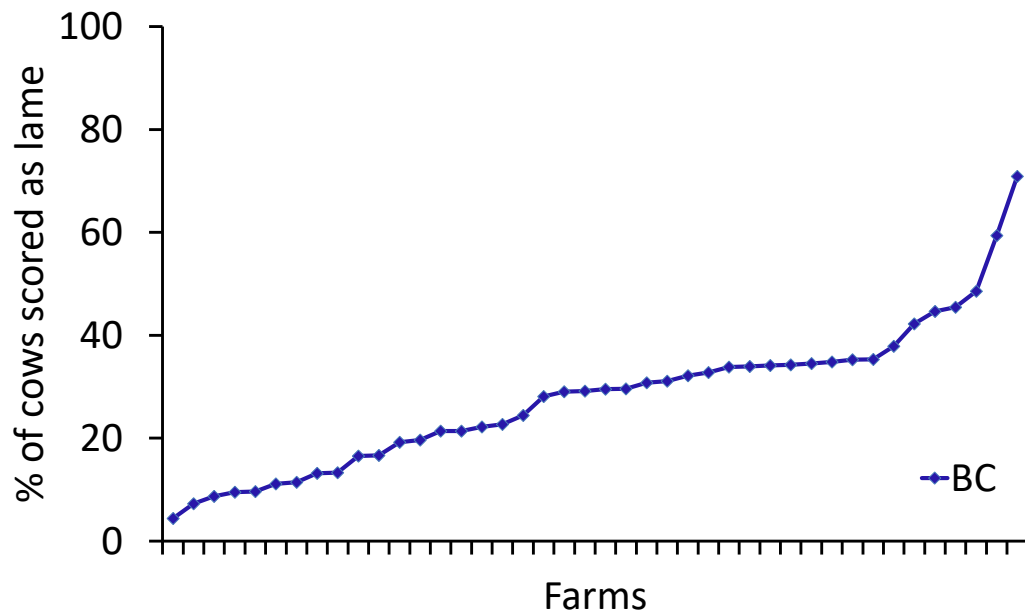
Ventura et al., 2015

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Lameness in freestalls

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von Keyserlingk et al., 2012

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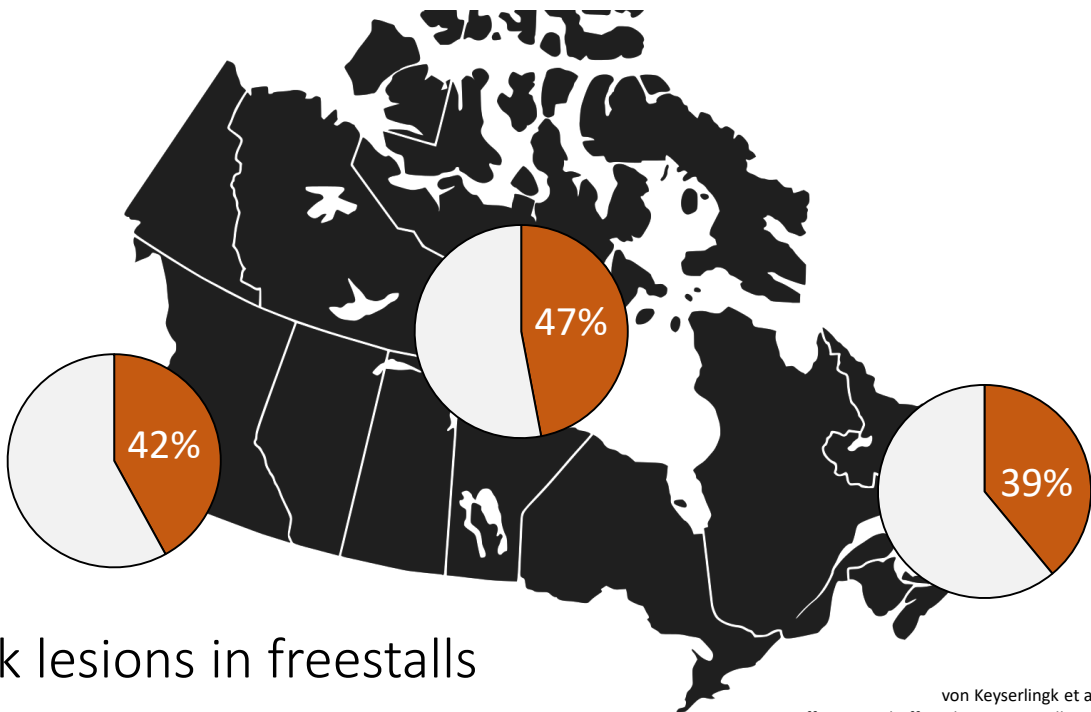
Hock and knee lesions

Painful conditions
that are often
associated with
lameness



Solano et al., 2015

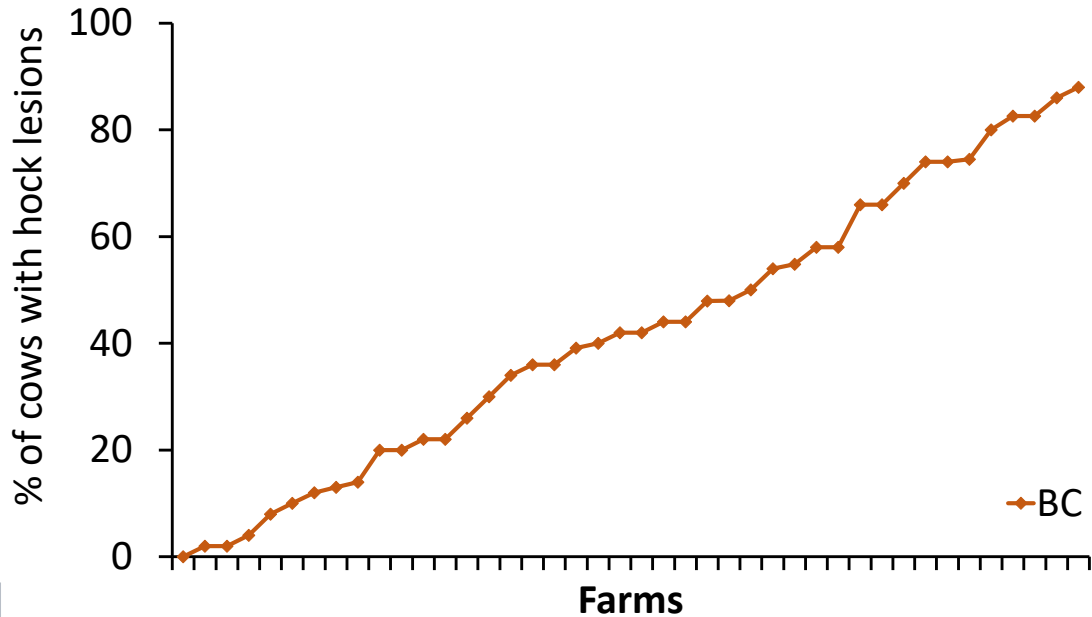
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Hock lesions in freestalls

von Keyserlingk et al., 2012;
Zaffino Heyerhoff et al., 2014; Jewell et al., 2019

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von Keyserlingk et al., 2012



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Herd-level risk factors for
lameness in freestalls
and tiestalls

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↑ Higher risk of lameness in freestalls:



Stalls that are too small for the cows



Stalls with no lunge space

Higginson-Cutler et al., 2017

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↑ Higher risk of lameness in freestalls:

Slippery floors



Cows waiting in holding area for ≥ 3 hr/day



Solano et al., 2015; Jewell et al., 2019

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↓ **Lower** risk of lameness in freestalls:

Deep bedding ($\geq 2\text{cm}$)
and/or sand stalls



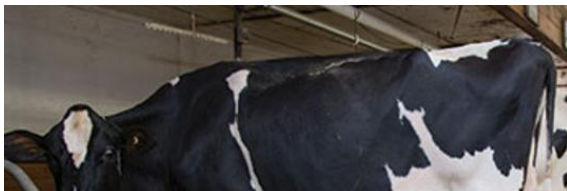
Access to pasture in
the dry period



Chapinal et al. 2013; Solano et al., 2015; Jewell et al., 2019

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Lameness in **tiestalls** in the Maritimes



Higher when
stalls are wet vs. dry



Lower when dry
cows/heifers housed
on a deep bedded pack



Jewell et al., 2019

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Herd-level risk factors for hock/knee lesions in freestalls and tiestalls

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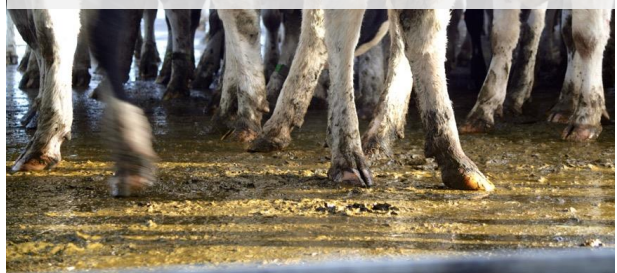


Higher risk of hock/knee lesions

Mattress or concrete stall base



Cows slipping or falling en route to milking



Zaffino Heyerhoff et al., 2014; Jewel et al., 2019

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Lower risk of hock lesions



Deep bedding



Rubber flooring at
feed bunk

Barrientos et al., 2012; Zaffino Heyerhoff et al., 2014

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What if lameness or hock/knee lesions are a problem on my/my client's farm?

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Making changes to your freestalls after a cow comfort assessment can reduce lameness



Chapinal et al., 2014; Morabito et al., 2017

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Thank you!

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