Assessing dairy cow welfare

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The University of Nottingham

Dairy Research Ireland
funded by Irish Dairy Farmers

Study

ACCEPTED MANUSCRIPT

Assessing dairy cow welfare during the grazing and housing periods on spring-calving, pasture-based dairy farms

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Abstract

The different periods characterizing spring-calving, pasture-based dairy systems common in Ireland have seldom been the focus of large-scale dairy cow welfare research. Thus, the aim of this study was to devise and conduct an animal-based welfare assessment during both the grazing and housing periods

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Why investigate welfare?

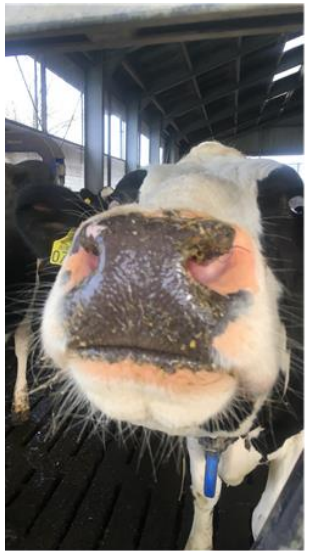
- Pasture-based system – assume good welfare?

What is welfare status of Irish cows?

Need to know, so we know where to improve

Strategies to improve - future research

Why good welfare important?



- Ethical
- Cow productivity
- Image?

Study

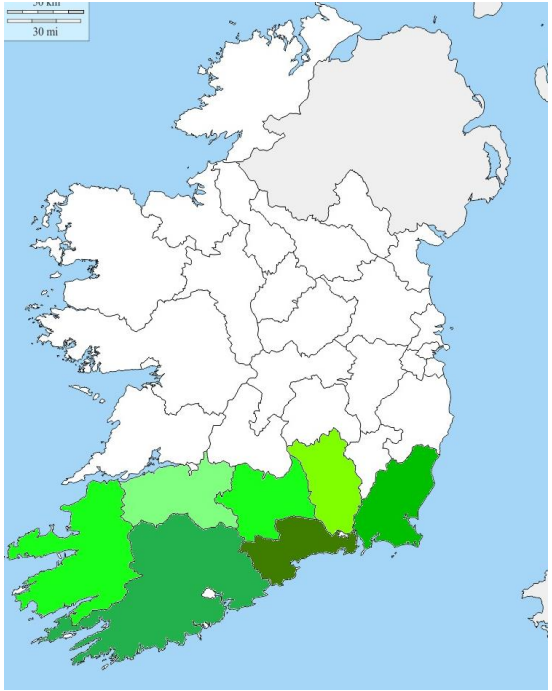
Aim:

- Assess welfare of cows on Irish dairy farms
  - Housed vs grazing periods?

Study

- Visited 82 dairy farms
  - Grazing visit (April – September)
  - Housing visit (October – February)

- Conducted on-farm welfare assessment
  - Measured welfare indicators



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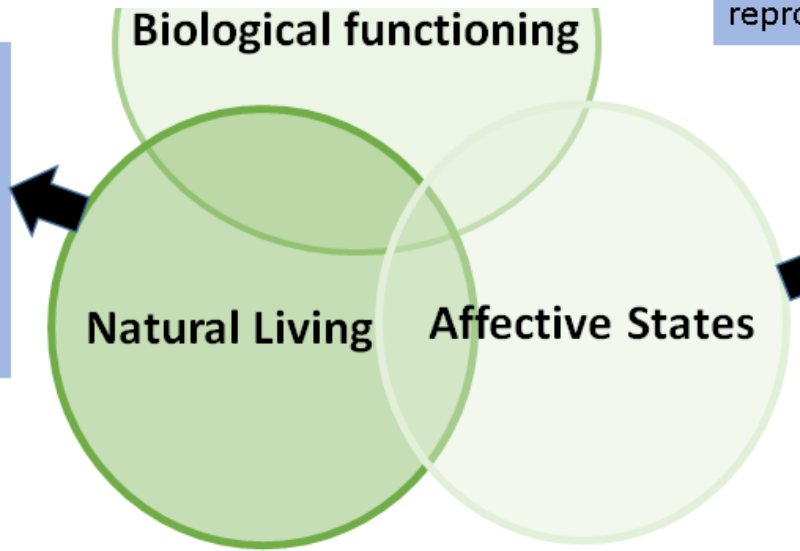
What is good welfare?

"healthy, comfortable, well-nourished, safe, able to express innate behaviour, and… is not suffering from unpleasant states such as pain, fear and distress"

World Organisation for Animal Health, 2008

Is the animal functioning well?

(disease, injury, poor growth rates, reproductive problems)



Is the animal able to live a reasonably natural life?

(express natural behaviour)

Is the animal feeling well?

(suffering pain, fear, hunger)

Fraser et al., 1997

How assess welfare?

- 2 ways:
  - Animal-based indicators
  - Resource-based

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Welfare indicators measured

- Mobility
- Body Condition
- Nasal Discharge
- Ocular Discharge
- Skin Damage
- Tail Injury
- Avoidance Behaviour

Mobility

Score 0

Score 1

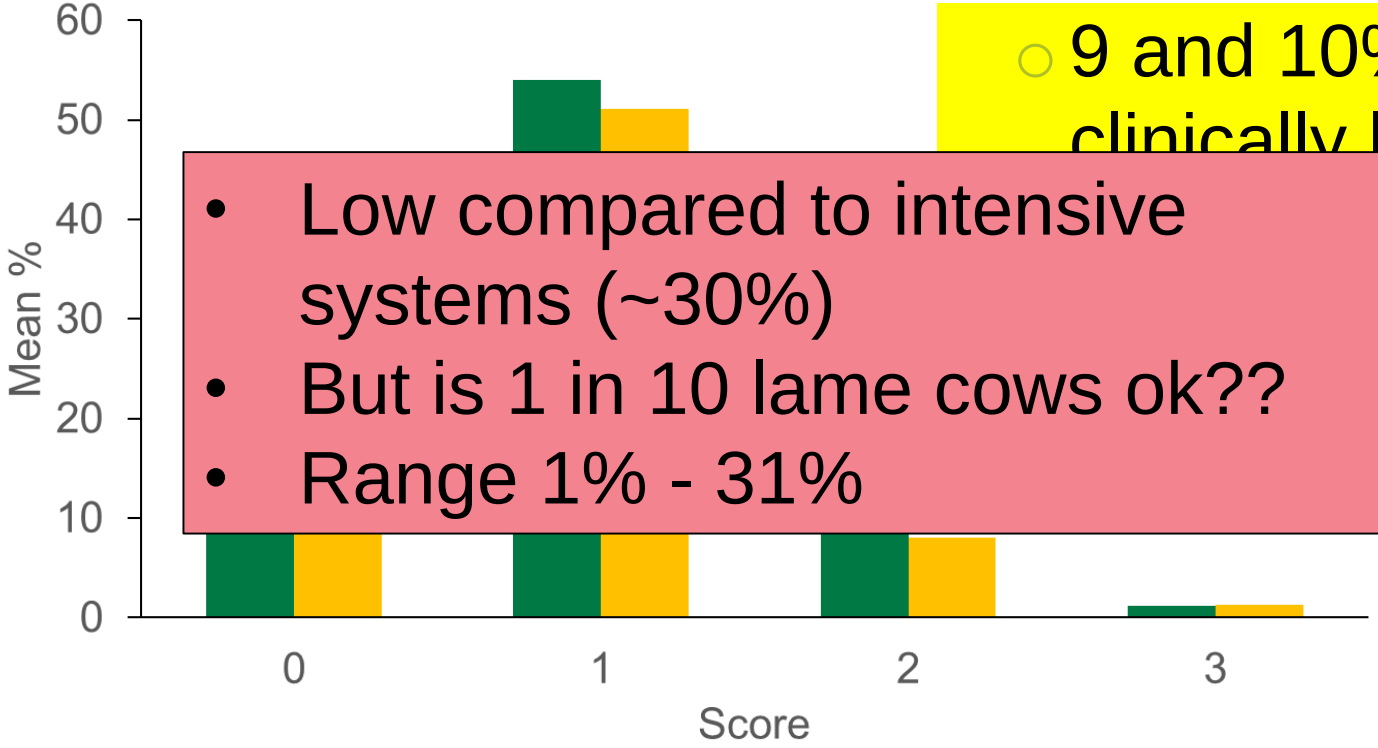
Not lame

Score 2

Score 3

Lame

Results - Lameness



- 9 and 10% clinically lame

- Low compared to intensive systems (~30%)
- But is 1 in 10 lame cows ok??
- Range 1% - 31%

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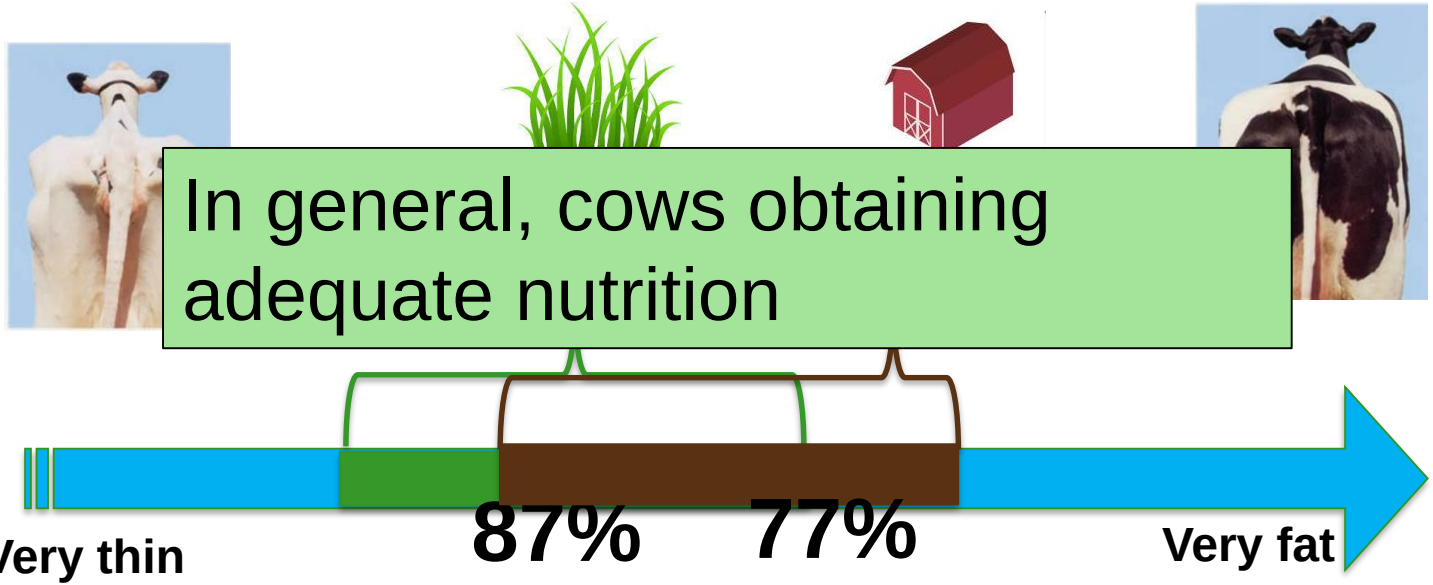
Body Condition Score



Ocular discharge




Score

In general, ocular health is good

Score 3

~ 1%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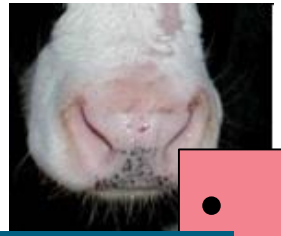
Nasal discharge




- ≥ Welfare Quality “warning threshold”
  Compromised health

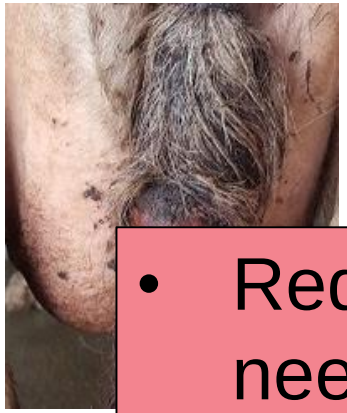
ore 3

Warning: 5%

7%

5%

Tail Injury



- Reduction in tail injuries needed

Lacerations

2-3%

Breaks

9%

Docks

7.5%

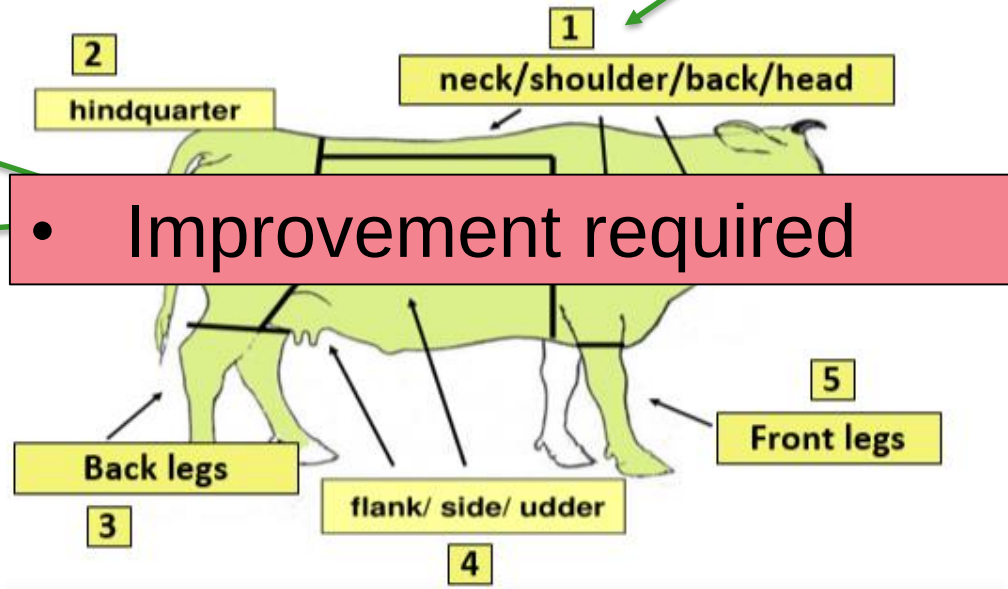
n Damage

66%

26%

32%

- Improvement required



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Avoidance behaviour

- Less contact with humans – less comfortable around them

42%

- Improvement required?

Conclusion

- Irish farms perform favourably in:
  - Meeting body condition targets
  - Ocular health
  - **Lameness**
- Improvements are needed in:
  - Skin damage during housing
  - Reduction in tail injuries
  - Nasal health
  - Avoidance behaviour?

Thank you!

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WALSH SCHOLARS

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