Mapping the global use of welfare indicators for dairy cows

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Introduction

- Consumers are becoming increasingly concerned about the welfare of animals that produce their food

- In response, many organisations are including welfare indicators in their assessment schemes – some solely assess welfare (e.g. RSPCA)

Welfare assessment

- For an assessment scheme to be credible, it must be able to accurately assess welfare

- In recent years a lot of research has been done to determine how to assess welfare

- Welfare is multi-faceted: best way to measures is to assess a range of attributes and present single or combined score

Added value from this data

- Use individual data to assess the effects of housing systems on animals e.g. pasture vs housed cows

- Also has the potential to be used to assess the genetic merit of animals to achieve good standards of welfare

- Need a lot of comparable/standardized data

Aim

- This is a very long-range plan

But what is being measured, by whom and how?

- The ICAR Functional Traits Working Group set up a survey exercise in 2019 to ask this question
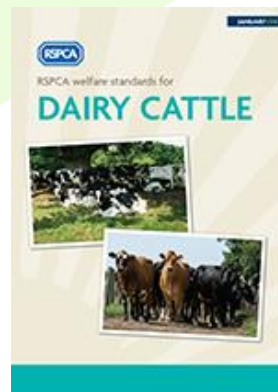
Welfare indicators surveys

- 'Pre-survey' to find key contact persons
- Three surveys created:
  1. Disease traits
  2. Body condition score, injuries and cleanliness
  3. Temperament, behaviour and other traits
- Name and role of respondent (could remain anonymous)
- Section on purpose of scheme, training of assessors, size of scheme etc
- List of traits and scales used

Results

- 48 respondents/schemes (some anonymous)
- ~11 national dairy organisations, 6 breeding companies, 8 research organisations…
- From 0.05 to 100% of cows in region/country, 1000 to 5M cows
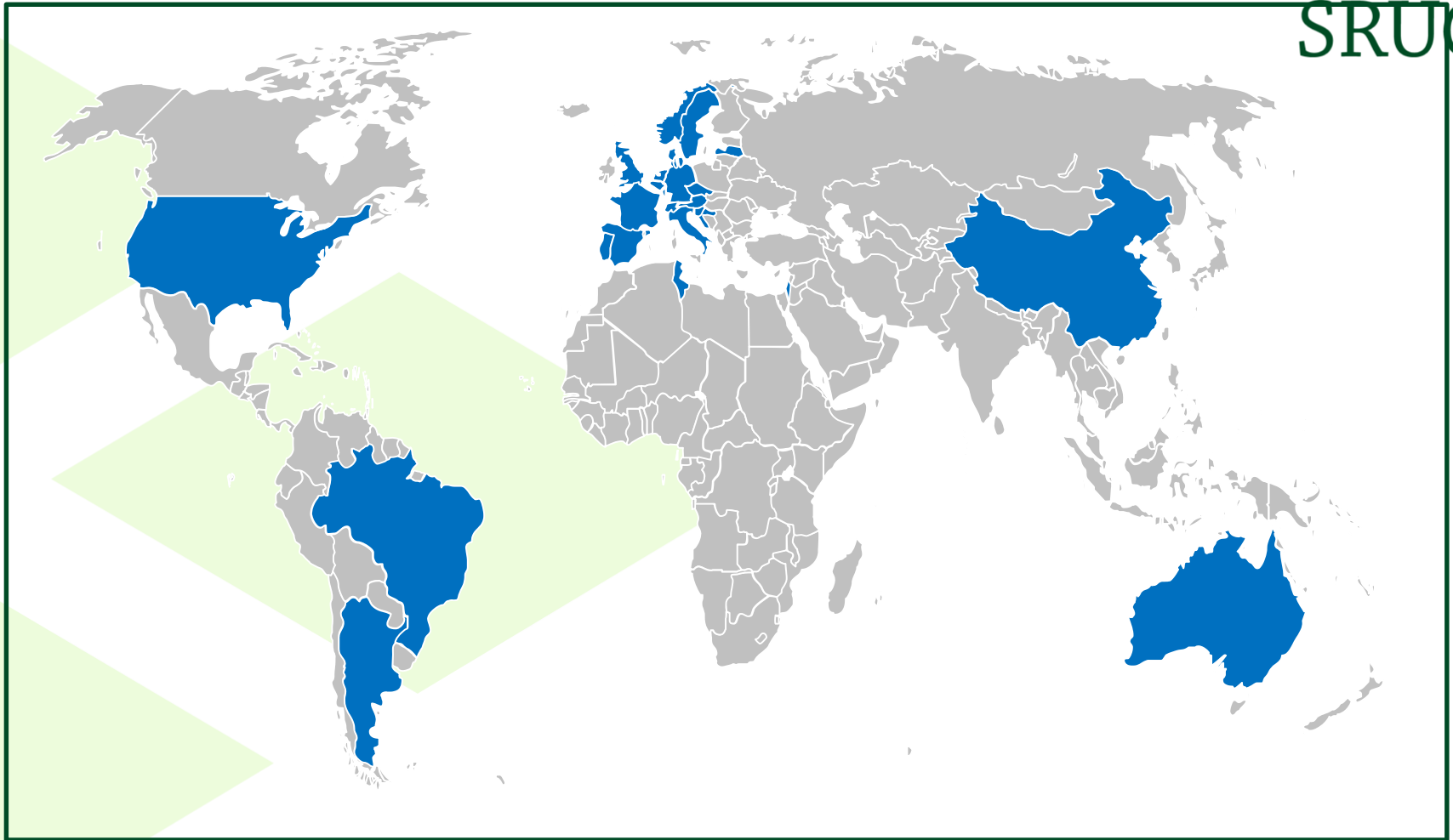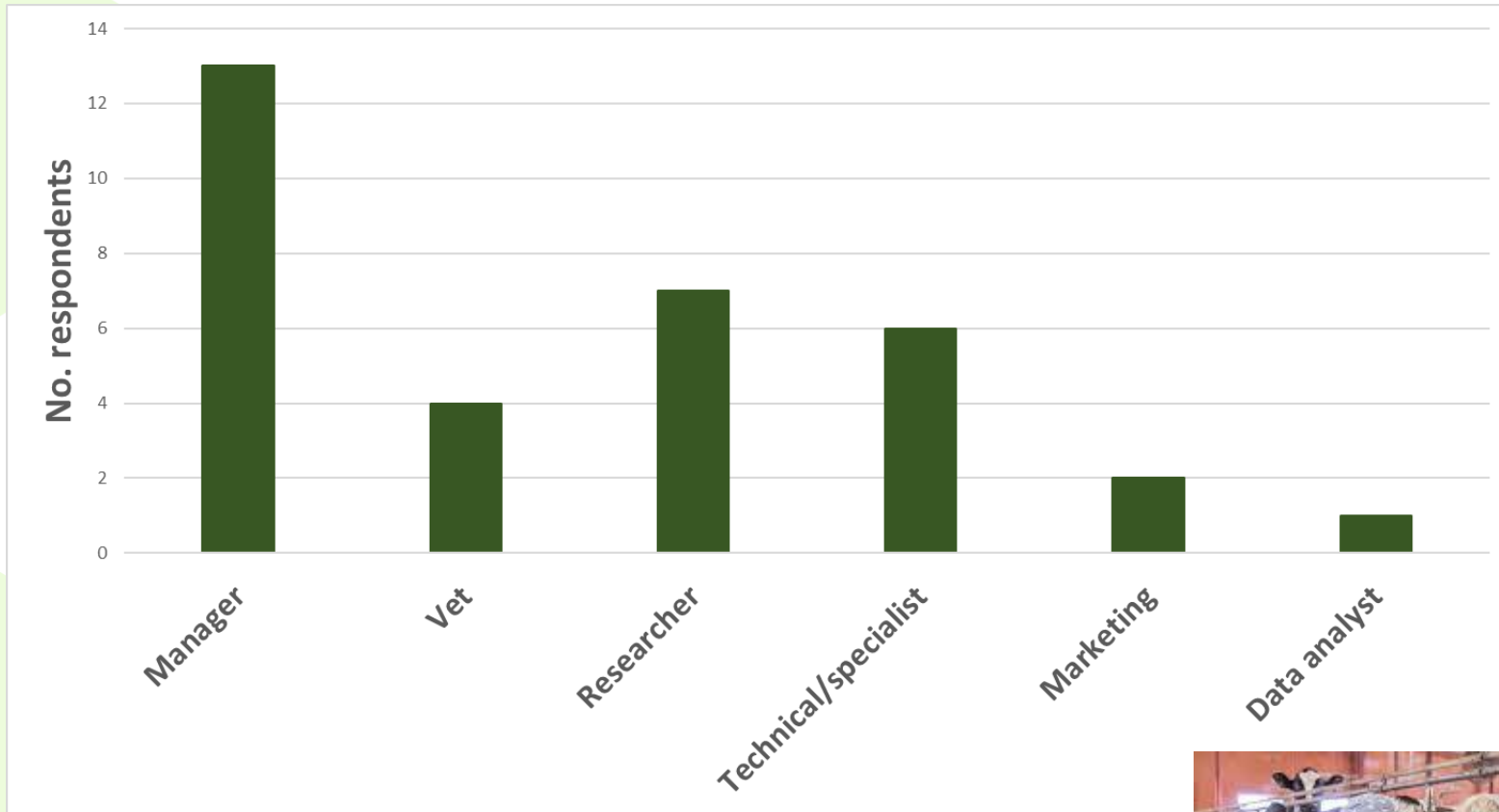
Countries: 25 represented

Figure 1. Global map showing (known) participating countries highlighted in blue

Respondent positions

All traits

| Welfare Indicator	No. scoring
Body condition score	28
Lameness in loose-housed cows	24
Diarrhoea	18
Temperament	16
Skin alterations, swellings or injuries	16
Lameness in tie-stalls	16
Existing records	16
Cleanliness	15
Claw trimmer data	13
Hampered respiration	11
Vulval discharge	9
Cow comfort indices	8
Approach distance	8
Quality of movement from lying to standing	7
Time to lie down	6
Ocular discharge	6
Nasal discharge	6
Hair condition	6
Coughing	6
Polledness	5
Ectoparasites	4
Agonistic/aggressive	4
Qualitative Behavioural Analysis	3

Top 5

- Lameness in loose-housed cows
- Body condition score
- Cleanliness
- Lameness in tie-stalls
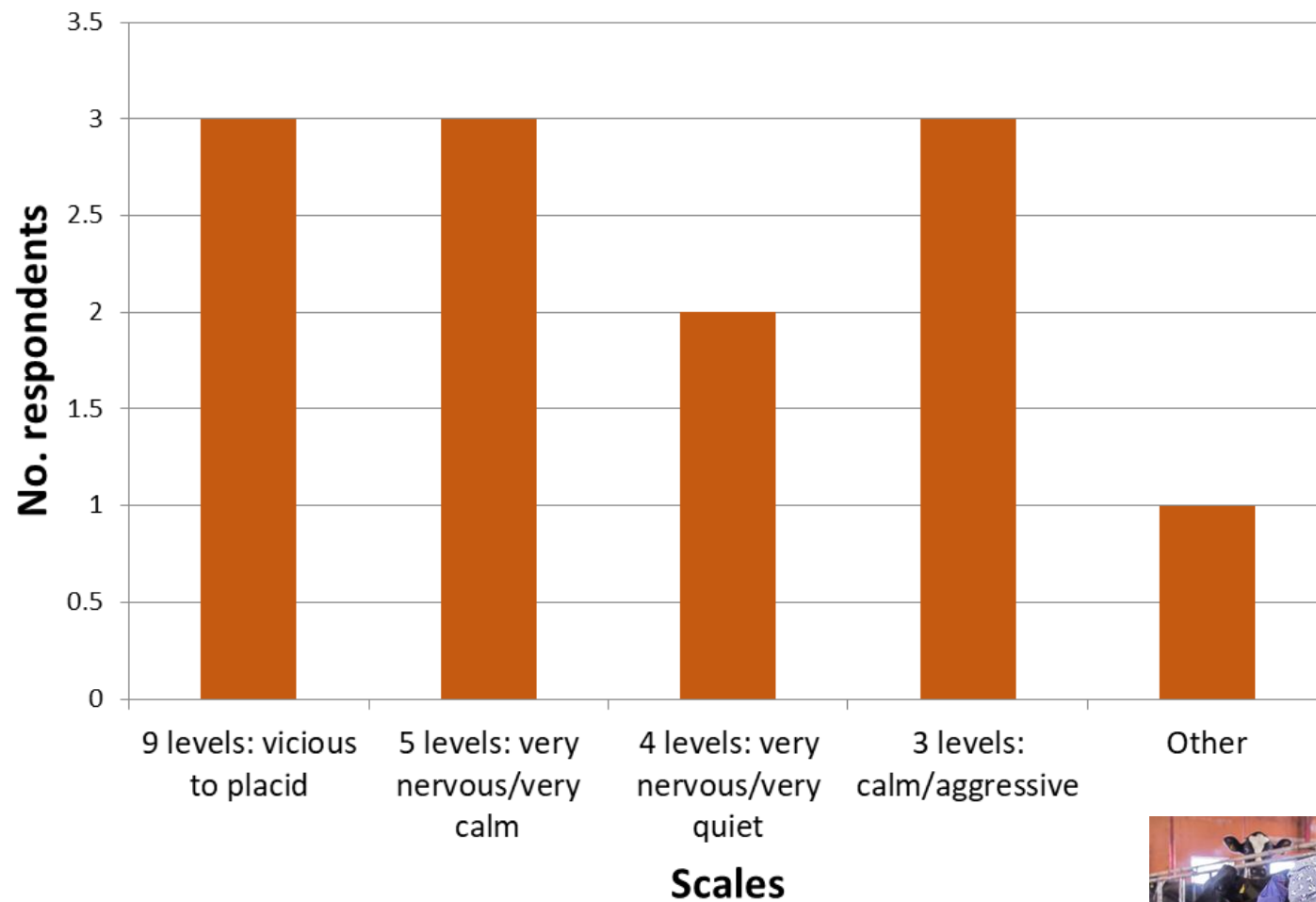- Diarrhoea
- Temperament

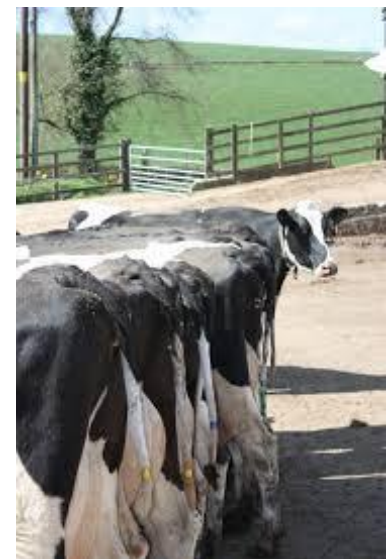# Scales for lameness
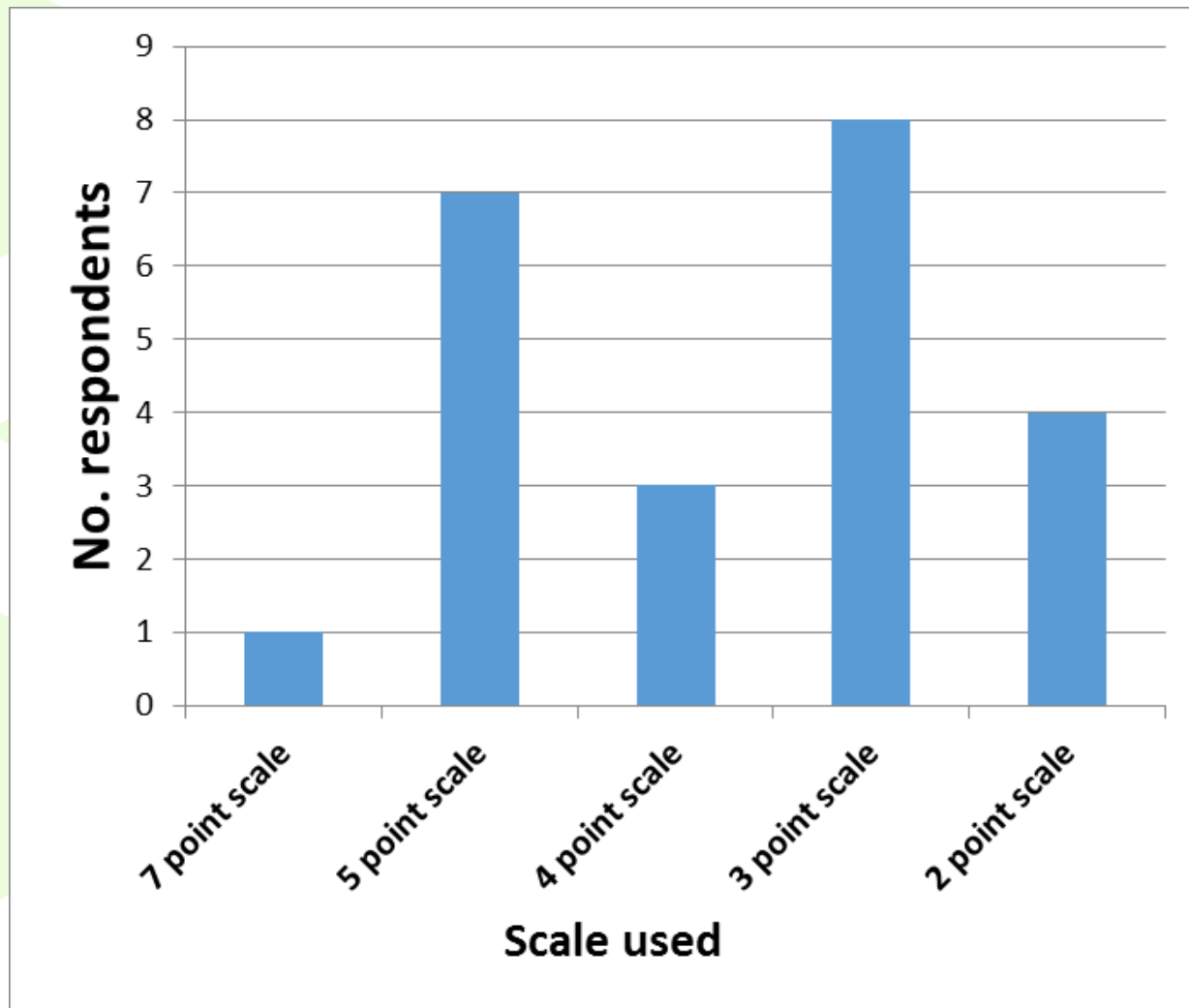
Scales for body condition score
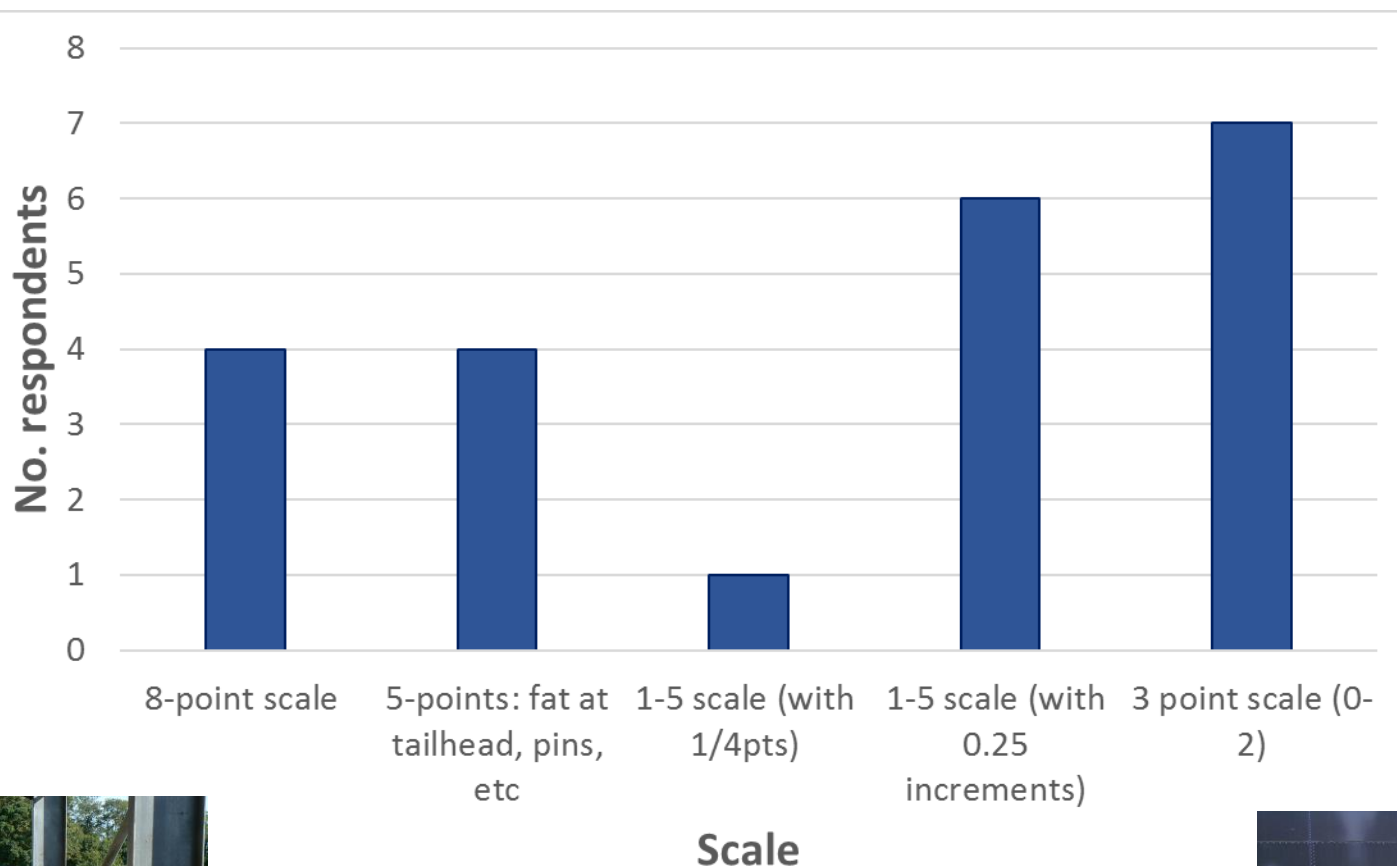
Temperament

Scales used for diarrhoea

Scale	No. respondents
0-1 (presence/absence)	13
0-5 score (after A.Pelzer)	1
Noted as cow needing further care	1
Documentation of diagnosis	1

Conclusions

- Large number of welfare traits recorded
- National or 'public' good organisations better represented than private organisations in the data?
- Indicators that currently form part of the breeding/herd improvement set best represented
- Possibility for coordination across scales in some traits

Acknowledgements

- We would like to thank the survey respondents
- Members of the ICAR Functional Traits WG

Photo: Karin Alvesen

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Where to next?

- What would harmonisation offer organisations that took it up?

- Are the scales compatible?

Welfare indicators surveys

- An iterative process amongst Functional traits Working Group, other ICAR members and welfare assessment experts was used to compile lists of what measures are currently used

- Referenced existing schemes such as Welfare Quality, national schemes etc

Conclusions

- More respondents from national organisations: fewer retailers

- More established measures have more scales used

- A large number of welfare indicators being measured by many organisations

- Wide range of scales used, but potential for coordination in some