How to measure animal welfare both in a scientific and practical way?

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Overview

• Selection of measures (indicators)
  • Scientifically sound
• Selection of method to take the measure
  • Feasible in practice
Welfare – multidimensional concept

Selection of measures

Freedom from hunger and thirst
Freedom from discomfort
Freedom to express normal behaviour
Freedom from pain, injury or disease
Freedom from fear and distress

Absence of prolonged hunger
Thermal comfort
Comfort around resting
Ease of movement
No painful management procedures
No disease
No injuries
Positive emotional state
Good human-animal relationship
Expressing other behaviour
Expressing social behaviour
Absence of prolonged thirst

Good feeding
Good housing
Good health
Appropriate behaviour

Farm Animal Welfare Council
Welfare Quality®
Welfare – multidimensional concept

- Freedom from hunger and thirst
- Freedom from discomfort
- Freedom to express normal behaviour
- Freedom from pain, injury or disease
- Freedom from fear and distress

Selection of measures

FARM ANIMAL WELFARE COUNCIL
WELFARE QUALITY®
Selection of measures

• Select measures from all dimensions for an overall assessment

• Can have programmes focusing on specific welfare problems

The PURPOSE of the welfare assessment
Measures should be.....

• **Valid** - really say something about the welfare of an animal

• **Robust** - to different conditions and with good inter-observer reliability

Same as any good diagnostic test

Transparent and trustworthy system
- Euro NCAP car safety scoring
- Hotel quality star system
Measures should be.....

- Animal-based (taken on the animal)
Measures should be.....

- Animal-based (taken on the animal)
- Outcomes not inputs

Selection of measures

Risk assessment

Welfare assessment

(INPUT)

- Resources available (resource-based measures)
- Management practices (management-based measures)

Animal tries to cope

(OUTCOME)

- Response of animal (Animal-based measures)
- Indicate the animal’s welfare (welfare indicator)

(EFSA, 2009)
Selection of method to take the measure

• Where most can be done to make the assessment as practical as possible.

Measure: **body condition**

Can be many different reasons why the animal has poor body condition (sick, insufficient food, old).
Many different ways to quantify body condition

• Weigh the animal
• Girth diameter
• Score it
• Body composition (e.g. fat)
Many different ways to quantify how lame an animal is

- Lameness score
- Pressure pad walking
- Motion capture system
Other examples

• Injury scoring
• Pain scale, painful mutilations
• Abnormal behaviour
• Fear of humans
• Shivering or panting
• Disease

Most important is that it is standardized

Yes/no
Categories
Visual analog scale or other continuous scale
Welfare is a characteristic of the individual, but the measure may be at group level

- Proportion of animals
- Representative sample (automatic recording?)
Benchmarking

- Track changes over time
- Compare between animal units, housing systems, regions etc
- Assess consequences of specific interventions.

Already benchmarking several measures related to production, health and product quality. Can broaden this to cover other welfare outcome measures.

Health and WELFARE surveillance Databases (lead to new knowledge)
In Conclusion

- Consensus among researchers on validity and robustness of several welfare outcome measures

Some widely recorded, but not usually considered in animal welfare context

Some only now starting to be recorded in quality assurance schemes

Ready to be put in the toolbox

Researchers working on new measures

But lack of consensus on standardised methods of recording when we take measures out of the toolbox to implement them.