

Module 9

Assessing Welfare in Practice



This lecture was first developed for **World Animal Protection** by Dr David Main (University of Bristol) in 2003. It was revised by **World Animal Protection** scientific advisors in 2012 using updates provided by Dr Caroline Hewson.

Free online resources

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This module will teach you

Why you carry out welfare assessments

How you carry out welfare assessments in different contexts

- ▣ **Group level: herd health planning for farm clients**
- ▣ **Group level: quality assurance schemes, slaughterhouse, laboratory**
- ▣ **Individual level: clinical examination**

Why carry out welfare assessments?

To meet standards of care (Grandin, 2010a)

- ✦ Because animals are sentient
- ✦ Not suffering, but functioning well, feeling well and can perform important species-typical behaviours
- ✦ To prevent ‘bad’ becoming normal

Types of standards

- ✦ International – OIE
- ✦ National legislation/guidelines
- ✦ Private standards

1 Quality assurance schemes

Voluntary schemes that establish standards in areas that consumers value, eg welfare

Regular, independent checks to ensure standards are met

1 Quality assurance schemes

Internal, eg

- ❖ UK – Freedom Foods
- ❖ Chile – beef (Schnettler et al., 2009)
- ❖ McDonald's suppliers – abattoirs, farmers

Enabling export, eg

- ❖ Brazil (Vieira, 2006)
- ❖ Namibia – Farm Assured Namibian Meat Scheme



2 Benchmarking

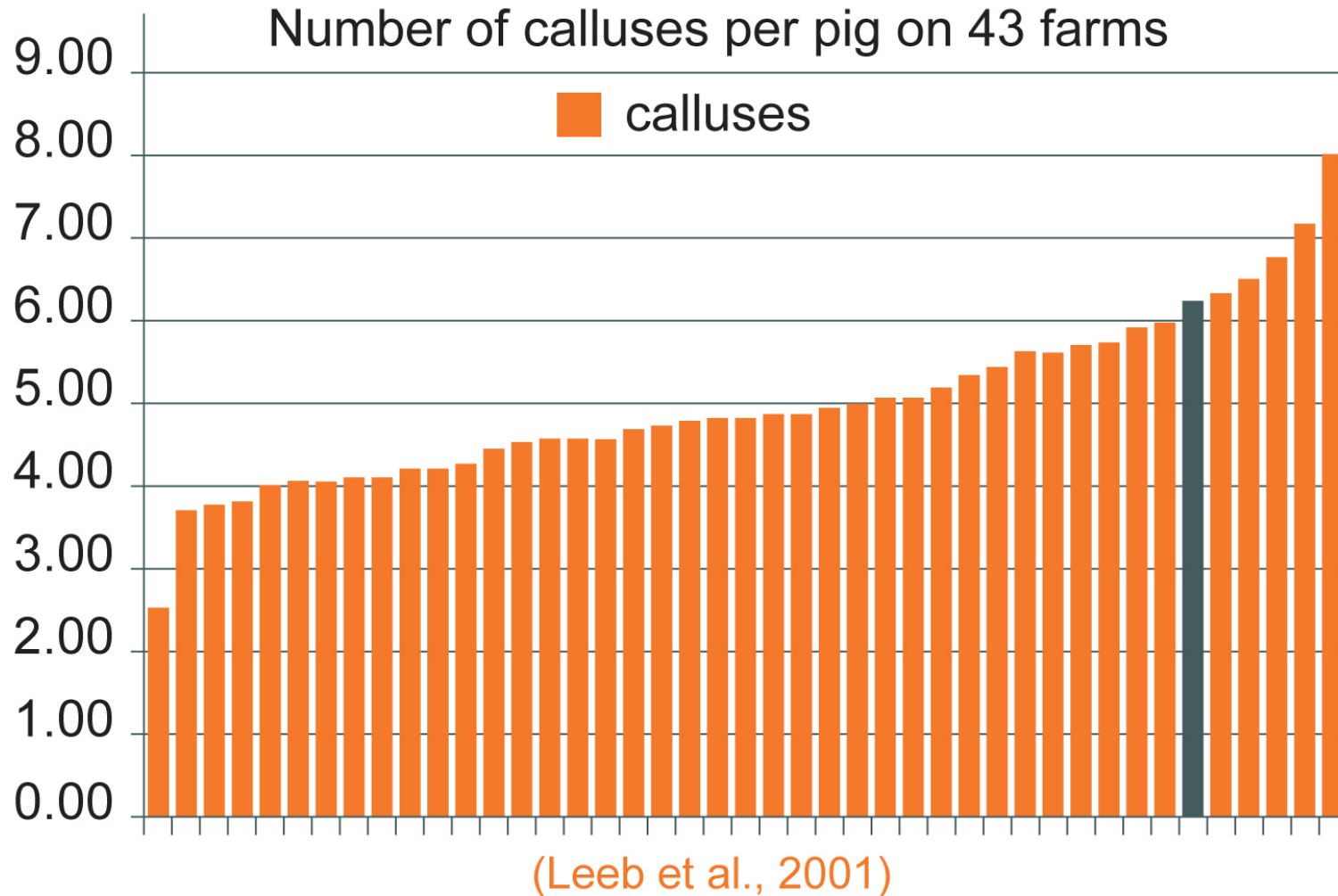
Welfare assessment of farm

**Compare with welfare on farms
in the same area**

Produce farm-specific priorities for action

Identify farm strengths and weaknesses

2 Benchmarking: calluses in sows



2 Benchmarking: benefits

Feedback to farmers motivates them

Encourage farmers by:

- ❖ Competing between farms over results
- ❖ Having an incentive system
- ❖ Showing them they can get a better price for animal products if criteria are met

2 Benchmarking: benefits

Educate farmers

- ✦ Raise awareness of their own performance
- ✦ Make aware of husbandry solutions to problems

Enforce

- ✦ Define minimum welfare performance
- ✦ Can be used to pass/fail farms
- ✦ Alternatively, farmer must produce and implement an action plan for a certification scheme

3 Veterinary practices helping their clients

Farm planning

Incorporate into herd health scheme

Help the farmer to plan for times when the animals may be at high risk of suffering, and specify when to intervene so as to prevent suffering (Goddard, 2011)

Individual animals

Good clinical practice

4 Veterinary practices' own standards

Practice Standards Schemes

Standards of care, eg

- ⌘ Humane handling of animals
- ⌘ Hospitalisation
- ⌘ Surgery (eg gentle tissue handling and intubation/extubation; audits)

How to assess welfare

Group context

- ⌘ Veterinary practice: farm planning
- ⌘ Quality assurance schemes: on-farm
- ⌘ Quality assurance schemes: slaughterhouse
- ⌘ The impact of proposed research on laboratory animals

Individual level

- ⌘ Veterinary practice: clinical examination

Welfare inputs and outputs

**WELFARE
INPUTS**

Management



Environment



Animal

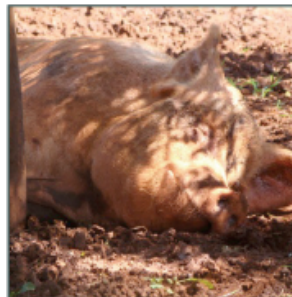


WELFARE OUTPUTS

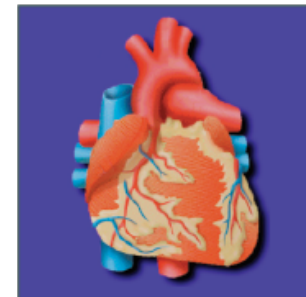
Clinical health;
production



Behaviour



Physiology



Welfare assessment

How to assess welfare (Butterworth et al., 2011)

- ❖ Welfare outputs (physiology and behaviour including production and disease)
- ❖ Welfare inputs – information about animal management and any associated risk factors
- ❖ Inform the farmer/owner
- ❖ Support him/her in making changes

Welfare and positive emotions?

Behavioural responses to positive emotions (Boissy et al., 2007):

- ✦ Play
- ✦ Affiliative behaviours, eg allogrooming, resting together
- ✦ Some vocalisations

Farm health planning

Practical, structured preventive programme (Sibley, 2006)

- ✦ Needs to cover all aspects of welfare, not just disease prevention

Regular visits to monitor and advise (Goddard, 2011) eg

- ✦ Every three months, or
- ✦ At times of particular welfare risk within the husbandry system, eg
 - Parturition season
 - During management operations, eg shearing
 - Before transport for slaughter



Example: sheep farm



Example: extensive sheep farm (Goddard, 2011) (continued)

Plan Area	Welfare benefit
Nutrition	Freedom from hunger and thirst, better disease resistance, faster growth rate
Housing	Protection from extremes of weather, especially after shearing
Biosecurity	Less risk of introducing disease
Routine preventive health treatments, e.g. vaccination for clostridial disease	Less risk of endemic disease outbreaks
Lambing intervention strategy	Less peri-natal suffering and loss of ewes or lambs
Intervention point when a risk factor reaches a specified level	Early relief from/reduction in suffering, e.g. when weather becomes very dry or cold

Farm health planning

Monitoring success of plan

Review records of welfare outputs:

- ❖ Must be easy for farmer to keep
- ❖ May require training to observe
- ❖ Include data from elsewhere, e.g. somatic cell count

Farm health planning

Inspect farm and animals (welfare inputs and outputs)

Use the four areas of concern of the Welfare Quality® Project (2009)

- ▣ Good nutrition
- ▣ Good housing
- ▣ Good health
- ▣ Appropriate behaviour
- ▣ These areas include a total of 12 welfare criteria

Extensive sheep farm

(Goddard, 2011)

Area	Criteria	Example of measure
1. Nutrition (absence of)	1. Prolonged hunger	<i>Body condition score; extra feed</i>
	2. Prolonged thirst	<i>Reliable supply of clean water</i>
2. Housing (comfort)	3. Resting area	<i>Dry, clean lying area (shelter)</i>
	4. Ease of movement	<i>Rough terrain?</i>
	5. Environmental temperature	<i>Shelter from extreme weather. Panting; huddling; shivering</i>

Extensive sheep farm

(Goddard, 2011)

Area	Criteria	Example of measure
3. Health (absence of)	6. Injuries	<i>Lameness, injuries</i>
	7. Disease	<i>Mastitis, foot rot, sheep scab, etc.</i>
	8. Pain caused by procedures	<i>Protocols for castration, tail-docking, disbudding as appropriate</i>

Extensive sheep farm

(Goddard, 2011)

Area	Criteria	Example of measure
4. Appropriate behaviour	9. Positive emotional state	<i>Absence of fearful behaviour; playing (lambs)</i>
	10. Expression of social behaviours, as appropriate to the species	<i>Sheep are generally social except at lambing and breeding</i>
	11. Expression of other species-typical behaviours	<i>E.g. grazing. Response to sheepdog</i>
	12. Good human–animal relationships	<i>Stockperson’s handling; avoidance distance</i>

Farm health planning

Inspect farm and animals (welfare inputs and outputs)

Risk assessment for current and future welfare problems

Adjust the preventive plan, eg

Handling

Vaccination strategies

Goals

Costs and benefits of achieving them

Group assessment: quality assurance schemes

Welfare Quality® project (www.welfarequality.net)

- ✦ Collaboration between researchers in 19 countries
- ✦ Four in Latin America: Mexico, Uruguay, Chile and Brazil
- ✦ 15 in Europe
- ✦ Laying hens and broilers, pigs, beef and dairy cattle, water buffalo

AWIN Animal Welfare Indicators project developing concepts further for these and other species and provide on-line information about animal welfare education.

Some results: pigs (Temple et al., 2011)

30 farms: total of 64,496 pigs

- ✦ Took 5.5 to 6.5 hours per farm
- ✦ Easy to do

Lots of variability between farms in all the welfare outputs

- ✦ Health and behaviour

This means you could distinguish farms with good welfare from those with poor welfare

- ✦ However, it was not clear what caused farms to have such differences in the behavioural measures

Group assessment: at slaughter (Grandin, 2010b)

Prevent 'bad becoming normal'

Very specific wording eg

“Most of the animals were handled roughly.”

vs.

“The handler kicked all the animals and hit 18 out of 20 on the head with a metal rod.”

Group assessment: at slaughter (Grandin, 2010b)

Five animal-based measures

Percentage effectively stunned at the first attempt

- ❖ E.g. at least 95 per cent of cattle

100 per cent must still be unconscious after they are hung on the rail

Percentage that vocalise during handling and stunning

- ❖ E.g. 5 per cent or fewer of the pigs squeal in the restrainer stun box or stunning pen

Percentage that fall during handling

- ❖ Handling practices or flooring need to be improved if more than 1 per cent of animals fall during handling

Percentage moved with an electric goad

- ❖ Under 25 per cent

Group assessment: at slaughter (Grandin, 2010b)

Prohibited practices

- ❖ No dragging of animals
- ❖ No dropping of animals
- ❖ No throwing of animals
- ❖ No use of puntilla (stabbing behind the poll)
or cutting tendons to immobilise
- ❖ No hoisting live animals before ritual slaughter

Group assessment: at slaughter (Grandin, 2010b)

Measures of welfare on-farm, during transport and at the abattoir

- Percentage of lame animals
- Percentage of thin animals
- Percentage of dirty animals
- Percentage of animals with sores, bruises or lesions
- Percentage that die before slaughter
- Percentage morbidity (illness or injury)
- Percentage of birds with broken wings and legs

Group assessment: laboratory animals

Animal welfare grading (Mellor et al., 2009)

Developed to assess the impact of procedures on research animals
Assesses level of welfare compromise, but not positive experiences

Five domains

Each graded A to E according to specific criteria,
and one overall grade is then assigned

Animal welfare grading (Mellor et al., 2009)

1 Nutrition: dehydration, malnutrition, under-nutrition

eg body condition score

2 Environment: cold exposure, heat exposure

eg shivering, panting, body temperature

3 Health: disease, injuries

eg fever, cuts, diarrhoea

4 Behaviour: absence of normal behaviours, presence of abnormal behaviours

5 Mental state: feelings and emotions, anticipated intensity of nausea, pain, fear, etc.

eg posture, vocalisation, heart rate, behaviours, physiological measures

Example of animal welfare grading (Mellor et al., 2009)

- | | | |
|---|--|----------|
| 1 | Underfed animals exposed to severe cold for 24 hours | |
| 2 | Nutrition: food intake restricted
to cause loss of 20 per cent of body weight | GRADE: C |
| 3 | Environment: low temperature –
at the limit of the animal's capacity to adapt | GRADE: C |
| 4 | Health: mild impairment | GRADE: B |
| 5 | Behaviour: mild restriction | GRADE: B |
| 6 | Mental state: severe distress from underfeeding and cold | GRADE: D |

OVERALL GRADE: D

Assessing welfare as part of individual veterinary examination

Consider welfare inputs and welfare outputs that reflect all aspects of welfare

- ❖ Physical functioning
- ❖ Mental state
- ❖ Performance of important behaviours

Include as part of annual health check



Who is responsible?

Owner

- ❖ Overall responsibility
- ❖ Formulates plan for procedures
- ❖ Maintains records

Vet

- ❖ Advises on plans and record system
- ❖ Reviews performance
- ❖ Advises on corrective action

Assessor

- ❖ Gives feedback only, not advice

Summing up

Why you carry out welfare assessments

How you carry out welfare assessments in different contexts

- ❖ Veterinary practice: farm health planning
- ❖ Quality assurance: on farm
- ❖ Slaughterhouse: five-point audit
- ❖ Impact of research on lab animals: animal welfare grading
- ❖ Veterinary practice: individual clinical examination

Feedback:

Please let us know what you think

- ❖ How have you used this module?
- ❖ What did you like about it?
- ❖ What did you not like?
- ❖ Do you have any tips to share?

Please take part in our 10 minute survey here:

<https://www.surveymonkey.com/s/BKP3D6H>

Your feedback will help other teachers like you

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Welfare Quality® Project (2009). Welfare Quality® Project: Science and society improving animal welfare in the food quality chain. Retrieved from www.welfarequality.net

Websites of labelling schemes cited in Slide 5

Farm Assured Namibian Meat Scheme: www.nammic.com.na/fan.php

Freedom Foods UK: www.rspca.org.uk/freedomfood

Welfare Quality® Project: www.welfarequality.net