



ANIMAL WELFARE ASSESSMENT

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Plan of the talk:

1. Introduction
2. What is animal welfare
3. The five freedoms
4. Assessment of animal welfare
5. Project “Welfare Quality”

Introduction

Animal welfare has become an important problem

- in European livestock farming
- in EU politics
- in EU society

EUROBAROMETER surveys – 2005:

- 82% believe they have a duty to protect animals whatever the cost
- But 31% have never visited a farm
- Production methods (organic, free range etc.) more important for food choice than country, brand name or convenience-availability

In food chain quality assurance systems animal welfare is included as one of four main issues beside food safety, public health and animal health.

What is animal welfare?

Two major fields of study for « what is welfare »

- The state of an individual in regards to its attempts to cope with its environment (Broom, 1986)
→ **adaptation** is the focus
- The absence of suffering (Dawkins, 1983)
→ **feelings** are the focus

What is animal welfare?

Two comparable terms:

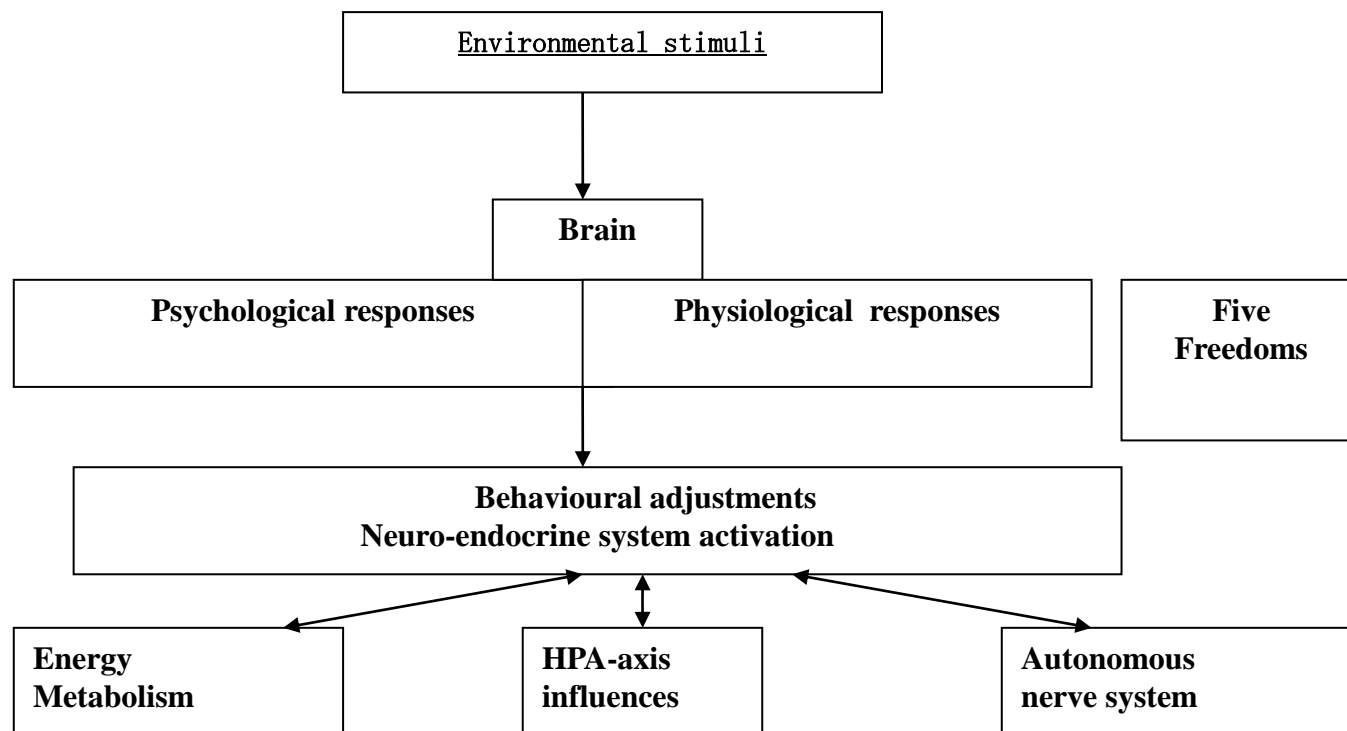
animal welfare

animal well-being

Different approaches have been followed:

- basic neurobiological and neuro-endocrine approaches
- balance between satisfaction status and stress responses

Synthesis of animal welfare concepts and pathways



(Dantzer, Mormède, 1983; Dantzer, 2002)

Animal's five freedoms

In animal welfare defining the most frequently referred concept is animal's five freedoms:

1. Freedom from thirst, hunger and malnutrition;
2. Freedom from lack of appropriate comfort and shelter;
3. Freedom from pain, diseases and injuries;
4. Freedom from fear and stress;
5. Freedom to display most normal patterns of behaviour.

Animal's five freedoms

Five freedoms are rather common for practical use. Bracket et al., 2001 have suggested “animal's biological needs”.

Primary biological needs

- Feed and feed-related behaviour
- Water and drinking-related behaviour
- Resting, lying and standing
- Locomotion (and claw/leg disorders)
- Social comfort (interactions)
- Health status
- Safety (fear, flight behaviour, aggression)

Secondary biological needs

- Excretion (faeces and urine)
- Thermoregulation
- Exploration and orientation
- Grooming, comfort behaviour
- Reproduction and rearing

Indicators of welfare used in research

- **production characteristics (performance, yield),**
- **physiological indicators,**
- **growth, reproduction, immune function**
- **pathological indicators (morbidity and mortality, disease, lesions or damage to the integument)**
- **ethological criteria.**

However, most of these indicators require expensive investigations by different disciplines or a high experimental effort. To make an assessment tool practical, one must greatly reduce the number of indicators to be used.

Assessing Welfare in Practical Settings

The environmental parameters (features of the environment and management)

Examples:

- length of stalls,
- space allowance,
- quality of bedding,
- access to pasture,
- cage size,
- numbers of feeders and drinkers,
- temperature requirements...

Animal based parameters (animals' reactions to environments (behaviour, health, physiology))

Examples:

- health (disease, injury, mortality),
- physical condition/appearance (cleanliness, skin lesions, body condition),
- behavioural responses (ease of movement, signs of pain or fear)...

The environmental parameters

Advantages:

- Relatively easy and quick to record
- An excellent basis for problem solving.

Disadvantages:

- Don't really assess *welfare*
- Don't account for the level of care, attention to detail , *the stockperson*

Animal based parameters

Advantages:

- Direct measures of welfare
- Allow for flexibility in housing, management

Disadvantages:

- Recording demands considerable resources.
- Results may be difficult to interpret.
- May indicate a problem but not the source

Methods of assessment of farm animal welfare at herd level (Johnsen et al., 2001)

ANI	Austria
TGI 200	Germany
Welfare assessment in “Ethical counting”	Denmark
The impact of housing systems in dairy cattle	Switzerland
On-farm assessment of dairy cows’ welfare	France
Decision support system to assess the welfare status in farm animals	The Netherlands
Evaluation and certification of housing systems for horses	Switzerland
Dispensation programme for battarey cages	Sweden

Animal Needs Index (ANI)

The ANI considers five aspects of the animal's environment:

- the possibility of mobility;
- social contact;
- condition of flooring for lying, standing and walking;
- climatization (including ventilation, light and noise);
- the intensity or quality of human care.

Within each field, several species-specific criteria are graded by points.

H. Bartussek. How to measure animal welfare? The idea of an "Animal Needs Index" ANI-35L

[Tiergerechtheitsindex TGI 35L]: A practical tool for assessing farm animal housing conditions on farm level in respect to animals' well being and behavioural needs - Austrian experiences.

Animal Needs Index (ANI)

Bundesanstalt für alpenländische Landwirtschaft
BAL GUMPENSTEIN
Federal Research Institute for Agriculture in Alpine Regions

Eine Dienststelle des BMLFUW

BARTUSSEK, H.

ANIMAL NEEDS INDEX FOR LAYING HENS

ANI 35-L/2001 – laying hens

June 2001

Impressum

Editor
Federal Research Institute for Agriculture in Alpine Regions BAL Gumpenstein, A 8952 Irtding, of the Federal Ministry of Agriculture and Forestry, Environment and Watermanagement, A 1010 Vienna, Austria

Responsible for contents
the author

Printing, publisher and © 2001
Federal Research Institute for Agriculture in Alpine Regions BAL Gumpenstein, A 8952 Irtding, Austria

Director
HR Dipl.Ing.Dr.Kurt Chytil

Sponsor
This paper is based on a translation of the original German version „Tiergerechtheitsindex TGI-35 L 1995 Legehennen“ (BAL- publications No. 25, BAL Gumpenstein, Irtding, 1995) sponsored by:
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Bristol Welfare Assurance Programme (BWAP)

- **The Bristol Welfare Assurance Programme (BWAP)** aims to incorporate existing animal based welfare assessment techniques into conventional and organic farming certification systems.
- The assessment protocols include dairy and beef cattle, pigs and laying hens.

<http://www.vetschool.bris.ac.uk/animalwelfare>

Assessment of animal welfare

So far, no scientifically based welfare assessment tool has found widespread acceptance.

There is a growing agreement that welfare should be recorded at the animal level, using direct measures.

Keeling L. Methodological considerations when measuring welfare. Proc. Food Chain, Uppsala, Sweden, 14-16 March, 2001: 136-140.

Housing conditions and production results are only indirect measures. Instead, physiology, behaviour and disease occurrence are key elements of welfare assessment.

Hultgren J. Cattle welfare aspects of animal hygiene. XIth ISAH Congress in Animal Hygiene. February 23-27 2003, Mexico City: 67-80.

The Welfare Quality® project

**Integration of animal welfare in the food quality chain:
from public concern to improve welfare and
transparent quality.**

- Approx. 150 scientists
- 40 partners in Europe + 4 in Latin America
- 13 European countries + 4 Latin American countries
- Budget approx. 17 million EUR
- 2004 - 2009

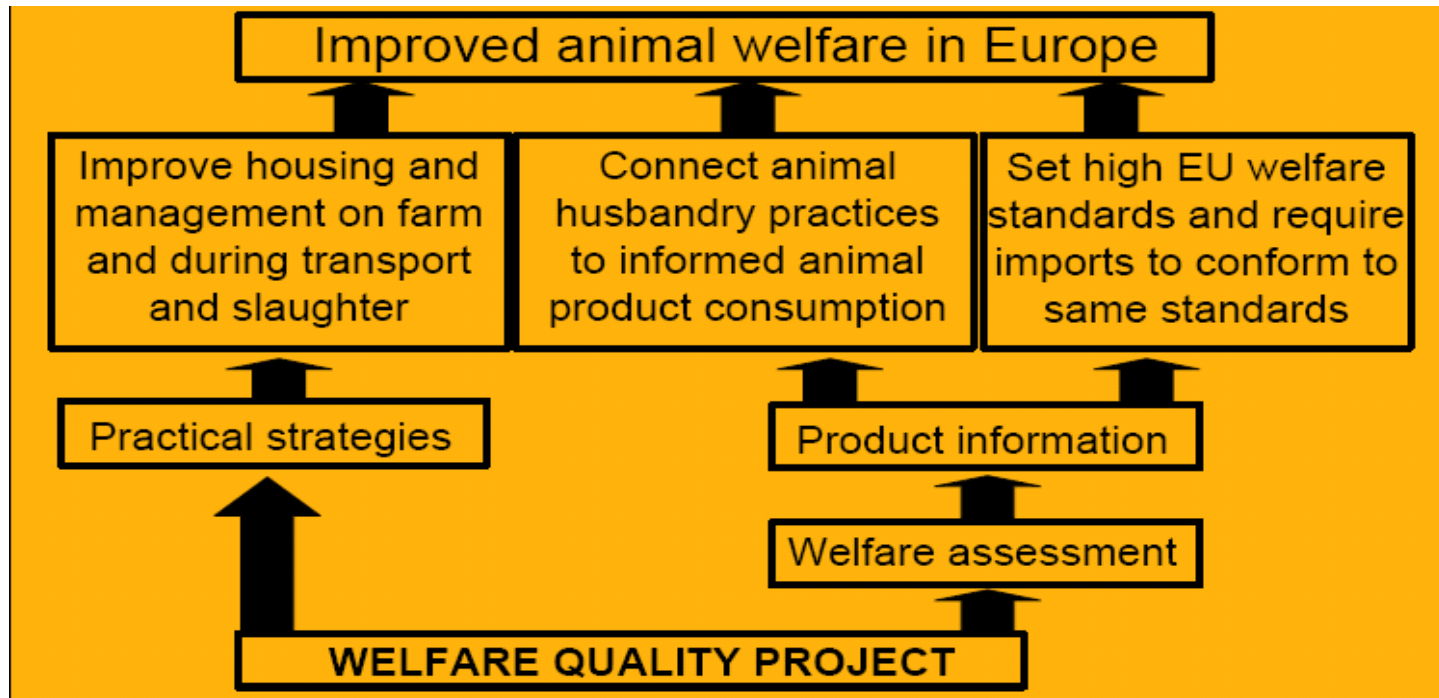
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The Welfare Quality® project

Welfare Quality® (2004-2009) aims at:

- proposing a standard for the welfare assessment of cattle, pigs and poultry
- transforming it into a standard of information

The Welfare Quality® project



The Welfare Quality® project

The main objective - develop methods to measure animal welfare on farms, using mainly animal based measures.

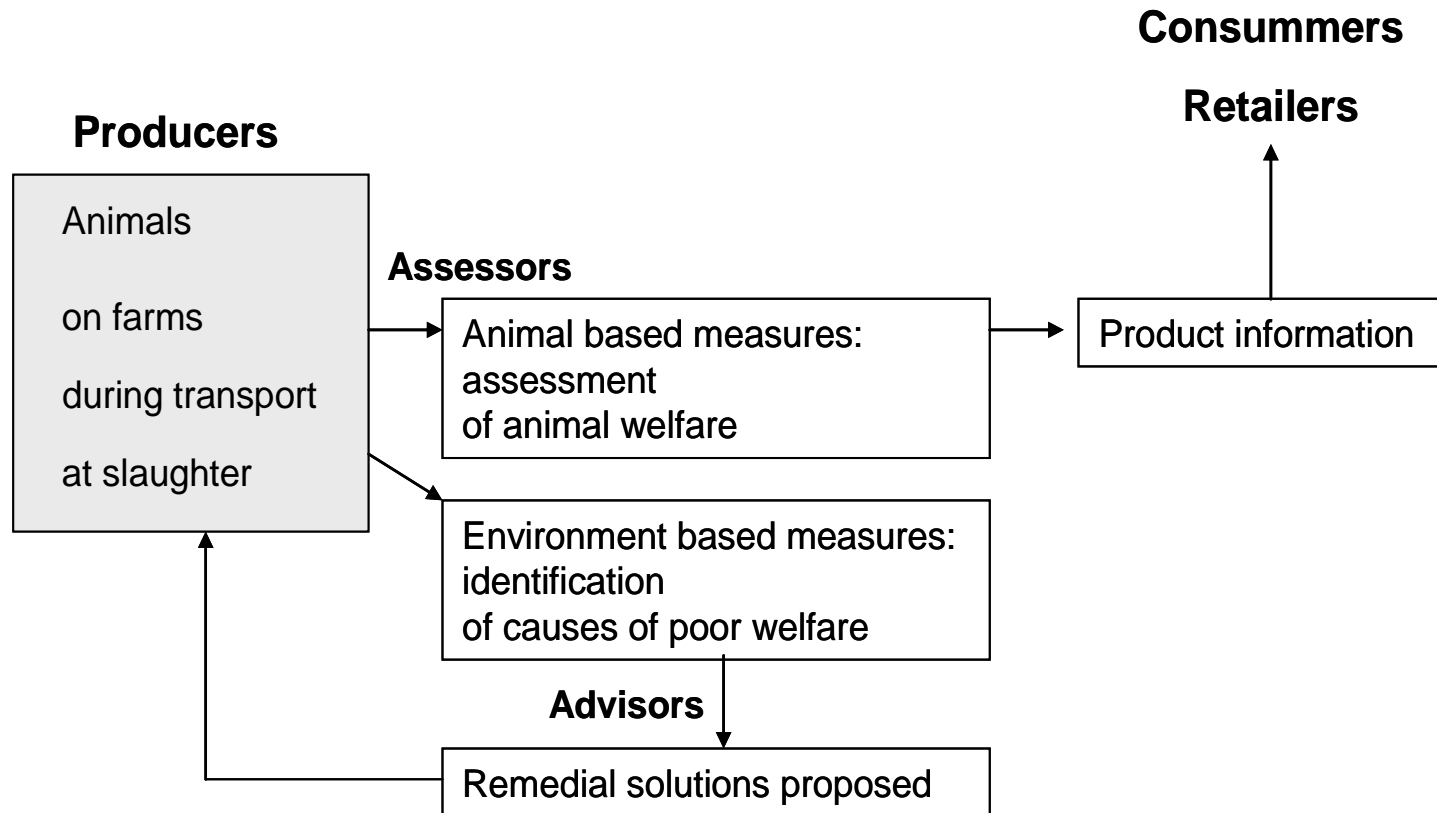
The assessment of animal welfare are based upon the four ‘Principles of animal welfare’:

“good feeding”,
“good housing”,
“good health”,
“appropriate behaviour”.

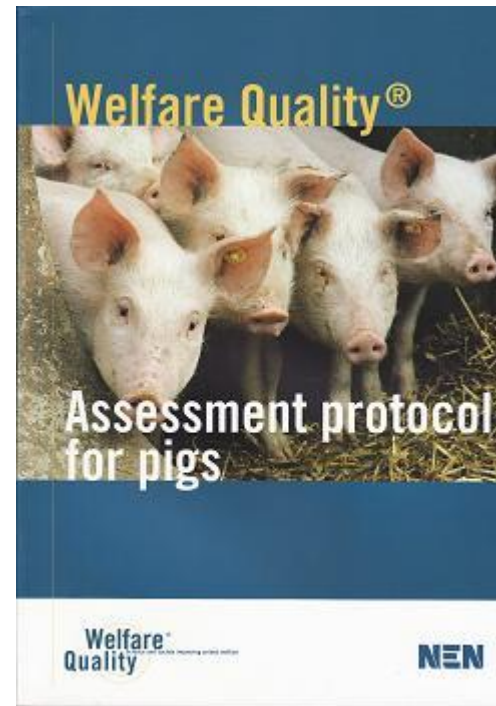
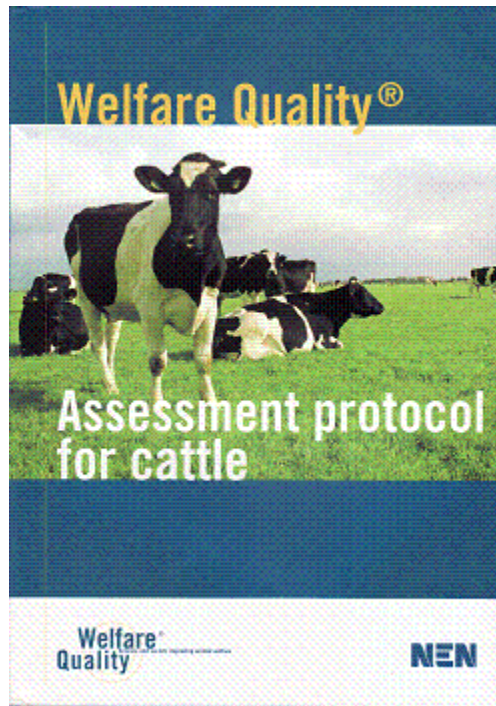
Definition of welfare criteria

Welfare principles	Welfare criteria
Good feeding	1. Absence of prolonged hunger
	2. Absence of prolonged thirst
Good housing	3. Comfort around resting
	4. Thermal comfort
	5. Ease of movement
Good health	6. Absence of injuries
	7. Absence of disease
	8. Absence of pain induced by management procedures
Appropriate behaviour	9. Expression of social behaviours
	10. Expression of other behaviours
	11. Good human-animal relationship
	12. Absence of general fear

Proposed monitoring system in WELFARE QUALITY[®] program

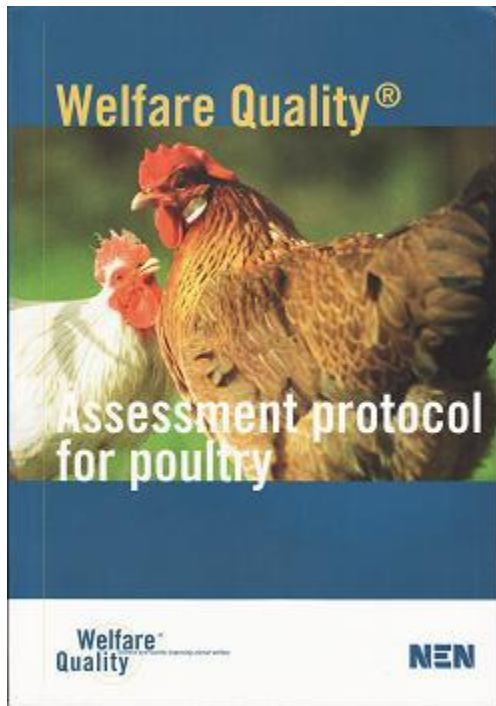


Welfare Quality® assessment protocols



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The Welfare Quality® project



Welfare Quality® - Home page
<http://www.welfarequality.net>

Subscription of the Welfare
Quality® assessment protocols
[http://www.welfarequality.net/ever
yone/43300/9/0/22](http://www.welfarequality.net/everyone/43300/9/0/22)

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Literature 1

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This material has been produced in ENPOS project. ENPOS is acronym for *Energy Positive Farm*.

The project partners are

- University of Helsinki, department of Agricultural Sciences – Agrotechnology
- MTT Agrifood Research Finland - Agricultural Engineering
- Estonian University of Life Sciences

Project home page is at <http://enpos.weebly.com/>

The project is financed by the EU Central Baltic IV A Programme 2007-2013

This publication reflects the authors views and the Managing Authority cannot be held liable for the information published by the project partners.

ENPOS Energy Positive Farm



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PROGRAMME
2007-2013