



Better Training for Safer Food *Initiative*

Training course on "Animal Welfare during transport"

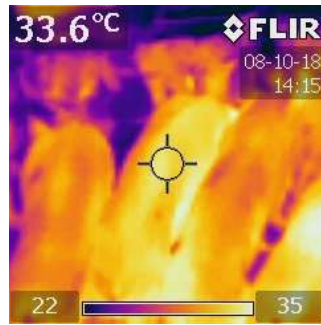
**Influencing Animal Welfare policies at
national level by active veterinary
leadership**

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and Practice Limited, UK.**

BTSF

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Slovenia/Italy, 24-27 June, 2014



Overview

What is animal welfare?

How are welfare policy and laws made?

Role of Research?

Leading welfare nationally and locally

WIN WIN

WHAT IS ANIMAL WELFARE?

People's beliefs and understanding of what is meant by welfare and what they consider is optimal or sub optimal will vary depending on their :

Cultural
Scientific
Religious
Political
Ethical and
Economic background

BTSF

Three approaches to Animal Welfare

Ethically based not on science:

1. those based on feelings,
2. on biological functioning
3. on behaviour in nature.

These three do not necessarily lead to similar conclusions of welfare

animal minds

- Feelings
pleasure
suffering

animal bodies

- health
- disease,
- growth
- reproduction

animal nature

- natural conditions
- natural behaviour

Scientists approach

Physiology

**Veterinary Science
Clinical Medicine
Pathology
Epidemiology**

Behaviour

**Genetics
Nutrition
Engineering**

**ANIMAL Centred
Approach**

=

**Appropriate level
of Animal welfare**

Economists approach

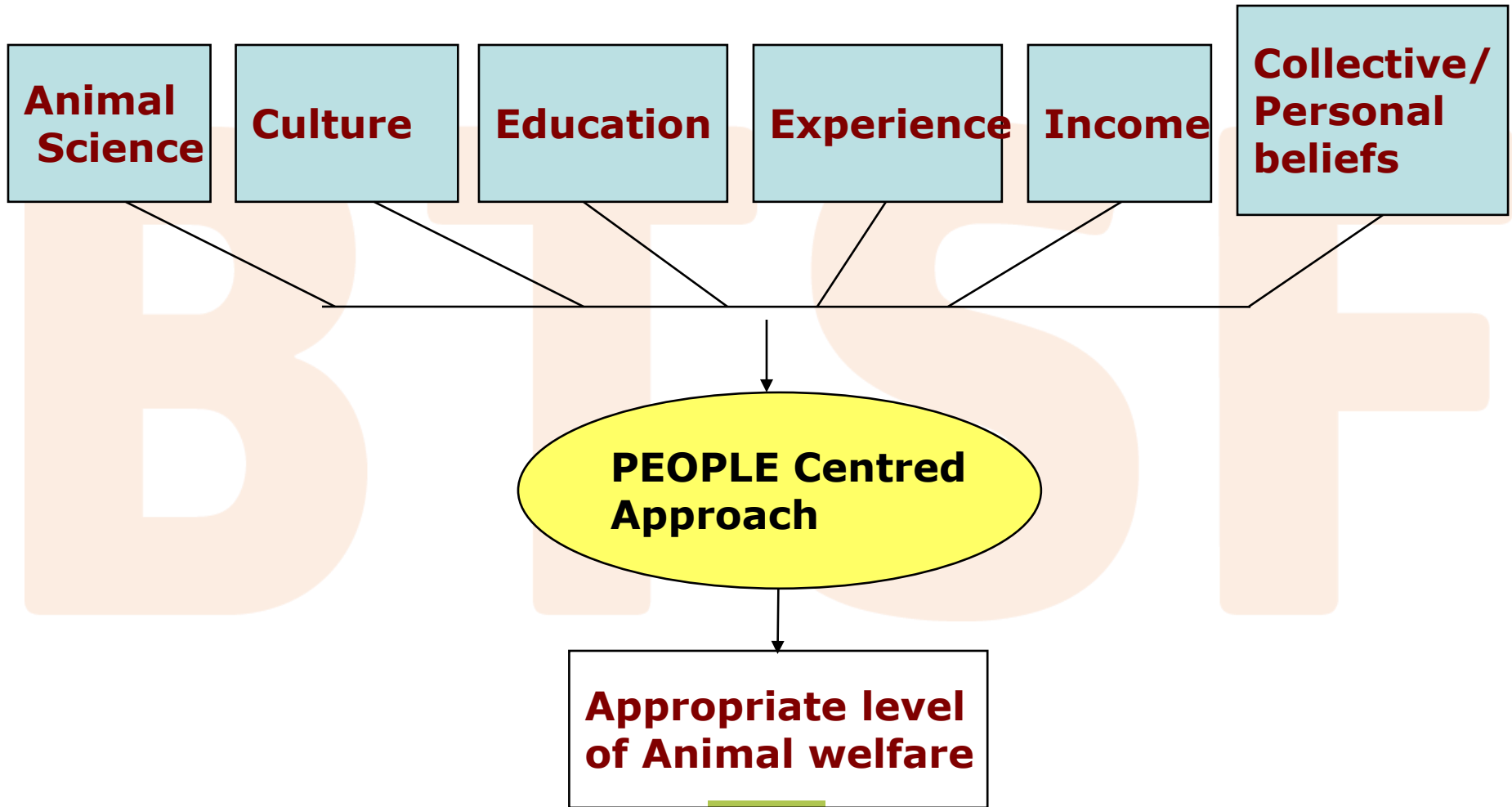
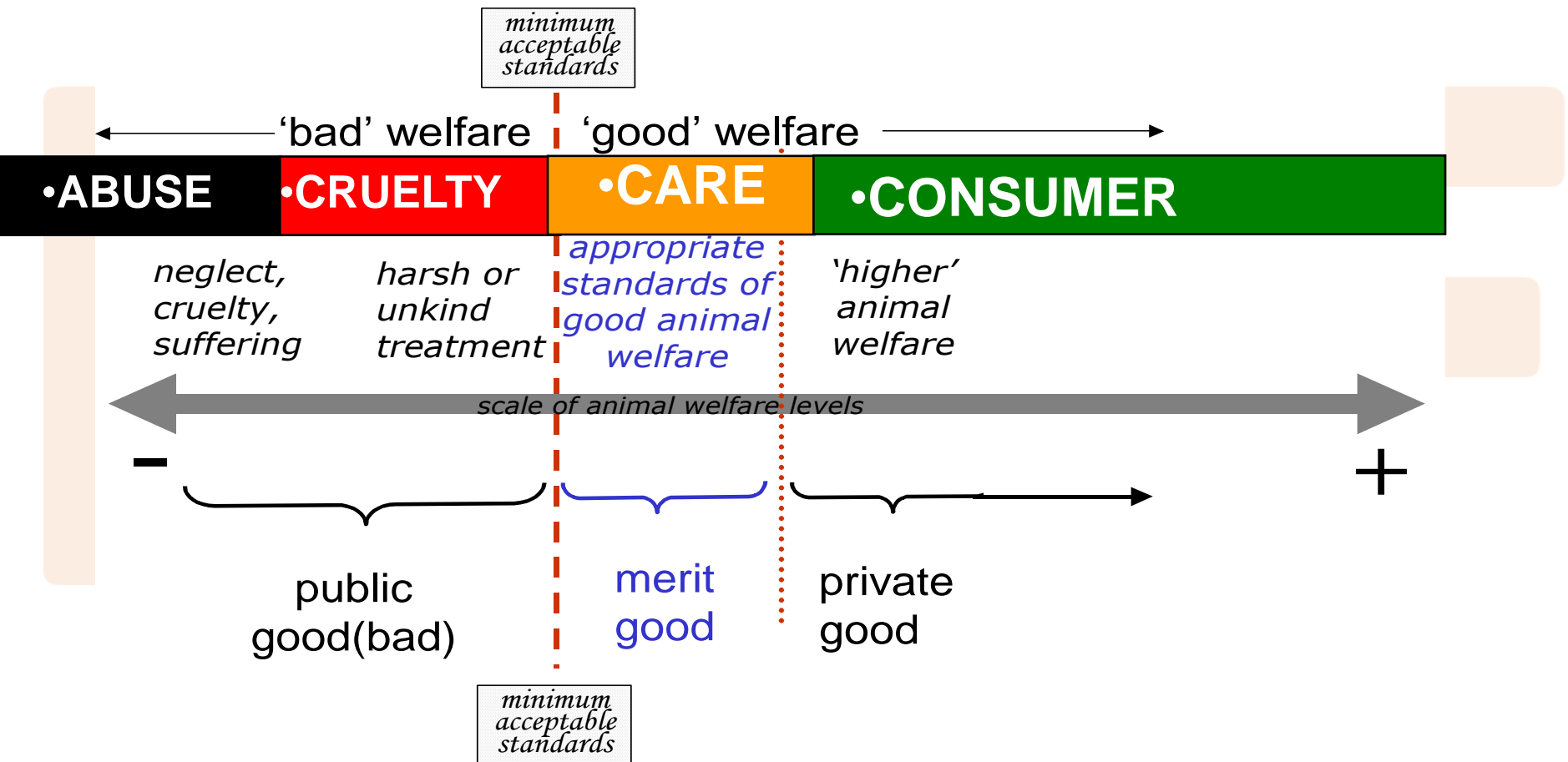


Figure 9. Animal welfare levels and the definition of economic goods

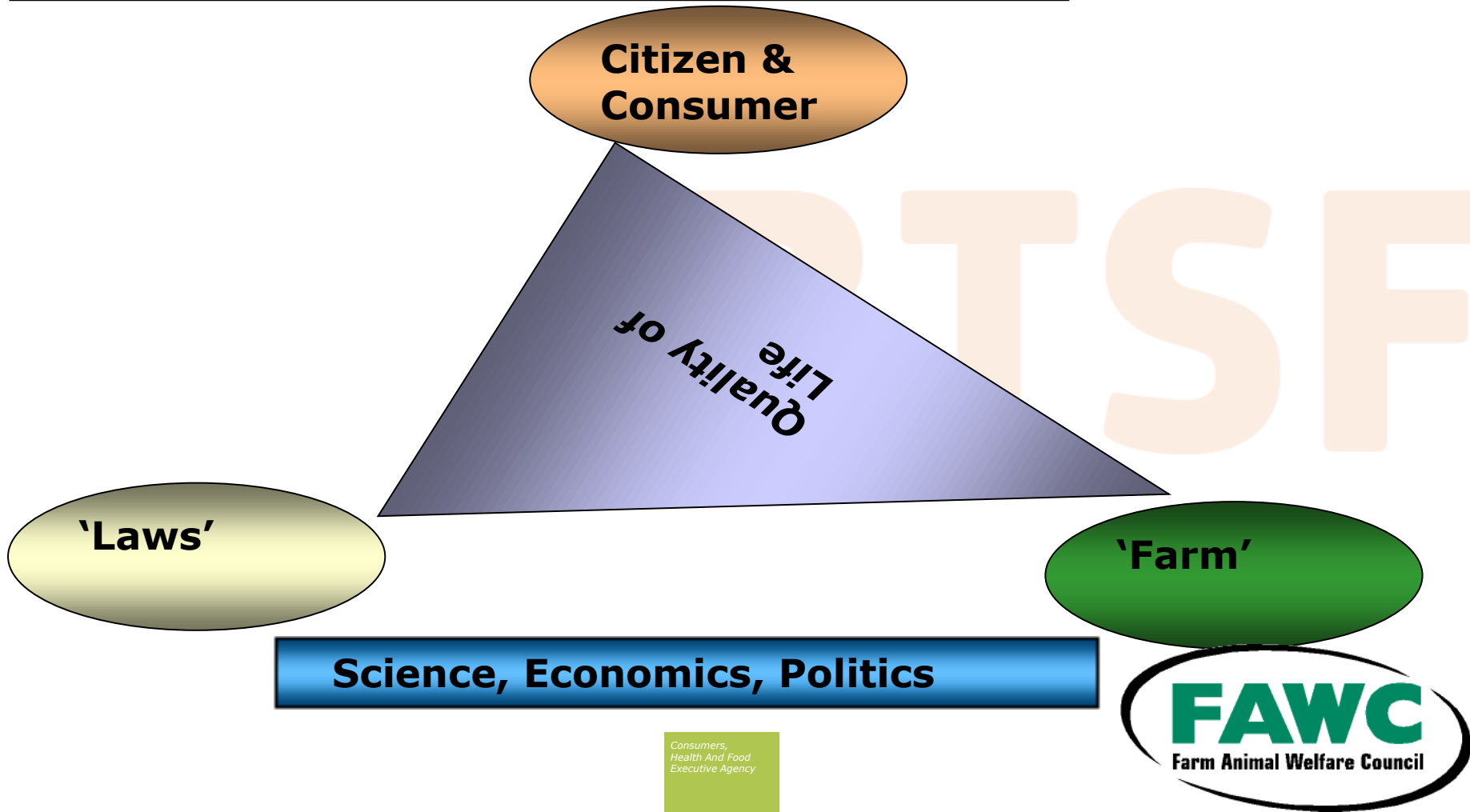


- **Stockmanship**
- **Knowledge transfer**
- **Optimising human and animal welfare**
- **Estimating value placed welfare**
- **Role of consumer in developing welfare**

Social Science



How do we ensure an acceptable quality of life for a farm animal?



Legal minimum standard – Beyond the Five Freedoms

The emphasis in current legislation is on the avoidance of “unnecessary suffering”.

This reinforces the negative image of farming and food production.

Focussing on an animal’s quality of life rather than its suffering puts everyone on the front foot.



European
Commission

**Minimum welfare
standard ?**

Good Welfare

A good life

**A life worth
living**

**A life not
worth living**

Quality of Life

**Does current
legislation lead to
a 'life worth living'
for all?**

**"Legal
minimum"**

Poor Welfare

Consumers,
Health And Food
Executive Agency





Necessary conditions for ethical consumers and farm animal welfare



- 1. Citizens educated about food and farming from childhood**
- 2. Minimum welfare standard defined by quality of life**
- 3. Standards for a 'good life' defined by an independent body**
- 4. Rigorous welfare assessment with independent audit**
- 5. Due diligence in the food chain with marketing claims verified**
- 6. Welfare labelling provides consumer choice**

Quality of life of farm animals raised

Delivering policy for the public

As professional policy makers we have developed a consistent way of developing and implementing policy – we call this the Defra policy cycle.

Using the policy cycle in our work makes us more professional; we work with our customers and delivery partners to identify the issues we will address, focus on the clear outcomes that the policy will achieve, use evidence to justify our decisions and identify and manage those risks that may prevent us from implementing our policies in the most cost effective fashion.

We need to use the best available evidence and draw on sources of innovation inside and outside government and consider a sufficiently wide range of possible solutions.

This powerful combination of creativity and evidence enables us to explore new and cost effective ways of delivering what our customers and the public need.



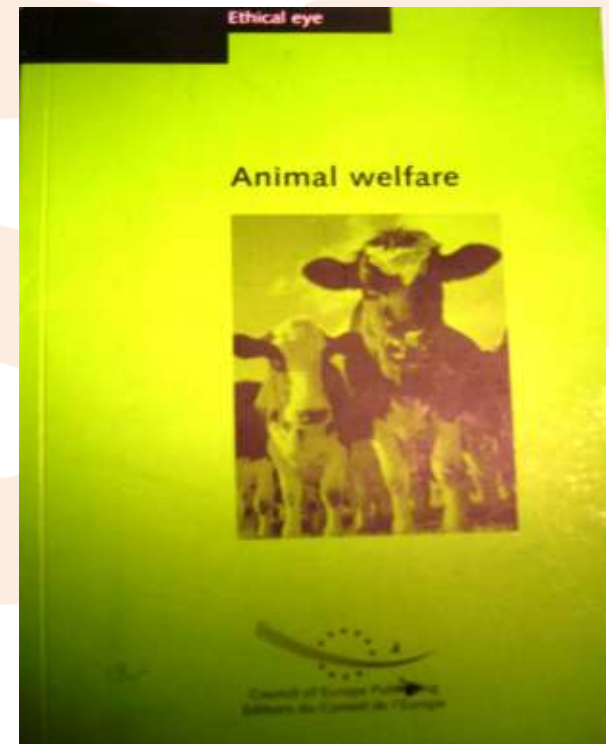
Why have Conventions on animal protection?

COE recognises

- Animal welfare is as important
- Contributions animals make to human health and quality of life

respect for animals counts among the ideals and principles which are the common heritage of State members as one of the obligations upon which human dignity is based.

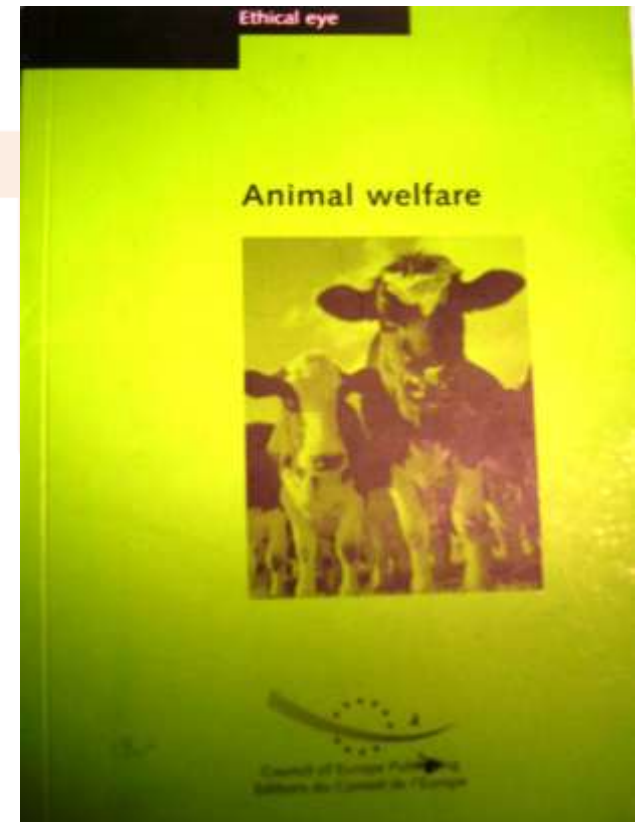
animal protection a topical subject on which governments have agreed to the necessity of concerted action



Ethical principle of all Conventions for animal use and protection
"for his own well-being, man may, and sometimes must, make use of animals, but that he has a moral obligation to ensure, within reasonable limits, that the animal's health and welfare is in each case not unnecessarily put at risk."

Each Convention has addressed particular areas of ethical concerns

Ethical eye



Convention for International Transport (ETS 65 1976)

WHY?

**1961-“ Humane treatment is one the hallmarks
of Western Civilisation”**

**BUT ...even in ..Member States of CoE the
necessary standards are not observed**

**Animated by the desire to safeguard ...animals
in transport...from suffering**

**..Progress possible though adoption of common
provisions for international Transport**

Laid down essential principles for all species

F

Revised Convention for International Transport (ETS 165 2003)

30 Years experience of implementation

**WHY? Update .. New science and practical
experience**

Preparation for journey

Loading to unloading

Detailed standards for road sea air and rail

Cattle sheep, goats, pigs, poultry horses

**Vehicle design fitness to travel handling,
veterinary controls**

Loading pigs by stock ramp



COE
International
Transport
conventions
(ETS 65 1976)

European
Community
Directives on
transport 1980s
&1991



OIE
Terrestrial code
Guidelines on
Transport by
Air
Sea 2005
Land 2005
Fish 2009

Recommendation
Cattle Horse pigs
sheep poultry
Codes
sea land rail
Technical
Protocols drafts

European
Union
Regulation on
transport
2005/1

COE International
conventions ETS
165 2003

CoE Conventions



Pets



**Farmed
livestock**



**Laboratory
Animals**



Slaughter

Leading animal welfare policies
through research

Why do research on animal welfare?

Objectives of the Defra welfare research programme

- .- Resolve **uncertainties** as to the exact nature of welfare requirements
 - Identify ways in which these requirements can be met under **commercial conditions** - projects involving collaboration between research providers and industry are encouraged
- .- Provide scientific data to help ensure that decisions are not taken on the basis of **subjective or emotional considerations**



Plate 16. See page xxiv

New ethological methods lead to assessment of motivation and subjective feelings of animals

Hens for space, scratch, nest box, perch (Dawkins, Nichol)

Mink for water (Mason)

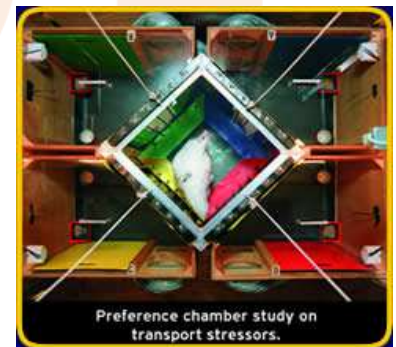
Cognition in sheep (Kendrick)

Suffering- Hunger, thirst, heat, cold, fear

Pleasure – play, comfort, body language – (Wemelsfelder)

lead to better understanding of animal minds

but their critics consider approaches anthropomorphic.



STRESS

A perceived or actual threat to the body's systems

Responses should optimise for survival

Automatic nervous and neuroendocrine responses focus on HPA axis

EXAMPLES OF STRESSORS



Social stress

**Territorial defence/ dominance/
harassment/ caring/ loss**



Fear/ novelty

Predator signals/ anxiety



Infection

**Bacterial/ immune
stimulation**



Physical injury

**Pain/
mobility restriction**



Internal disturbance

**Pain/
metabolic imbalance**

Signs of Stress

Poor welfare, during movement, handling, penning and restraint will cause stress and should be avoided at all costs

Generic indicators of stress across the species include:

- Vocalisation
- Aggression
- Reluctance to move
- Escape behaviour
- Panting
- Salivation
- Excessive defaecation
- Other abnormal behaviours

After Tallin CSL

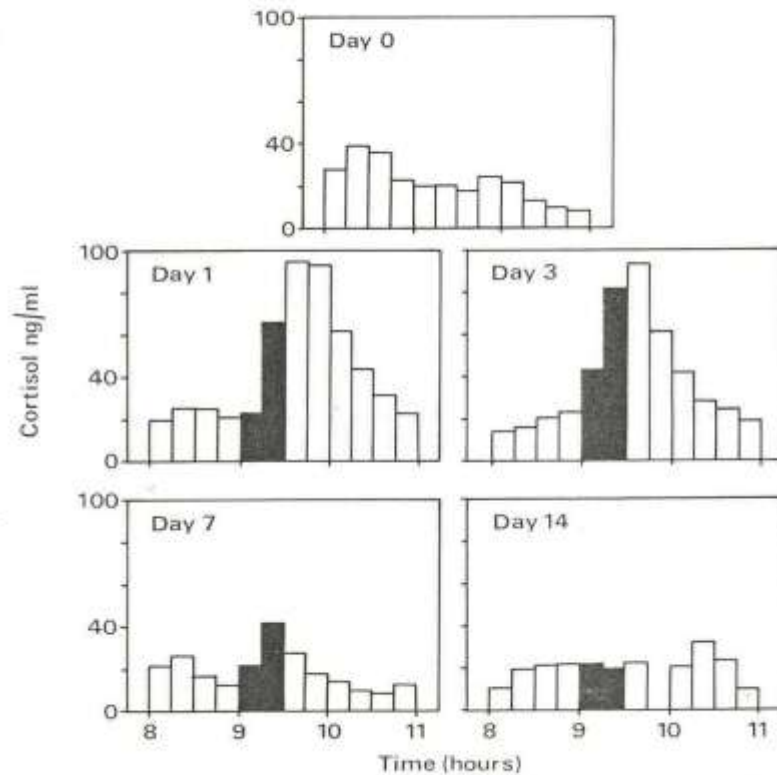


Adaptation & Chronic Stress

***Homeostasis:
The maintenance of extracellular fluid
uniformity via regulatory negative feedback
mechanisms. [Walter Cannon 1871-1945]***

Habituatation

DAILY REPEATED IMMOBILIZATION STRESS IN A PIG BETWEEN 9.00 and 9.30 h.



After: Ladewig, 1990.

Hypothalamus

pPVN

-/+ MR/ GR

CRH
+/- vasopressin
(VP)

CRH +/-VP

Anterior
Pituitary

- GR

ACTH

Adrenal
Gland

Corticosterone/Cortisol

The hypothalamo-pituitary-
adrenal axis:
Feedback

Receptors:
GR – glucocorticoid
MR – mineralocorticoid

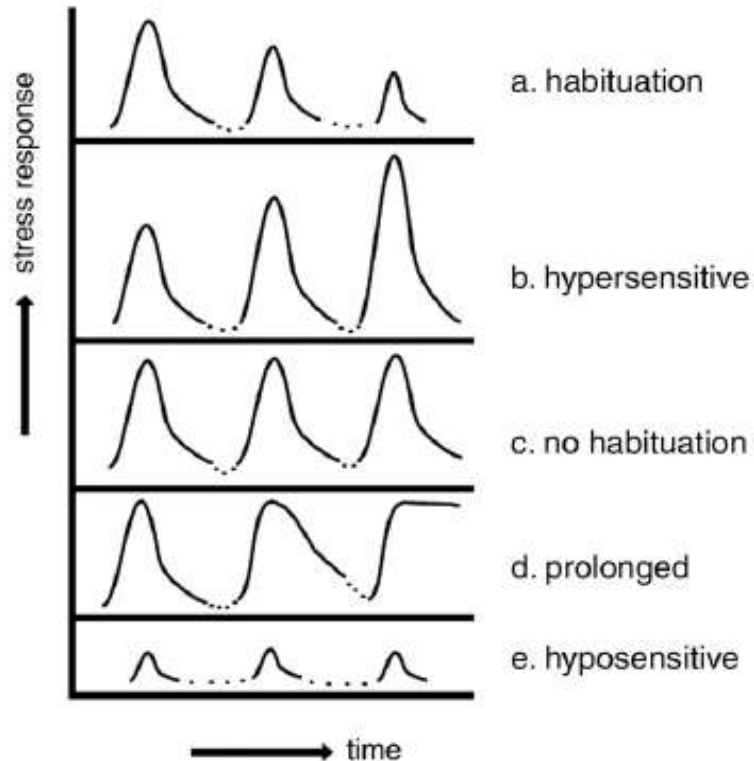
The hypothalamo-pituitary-adrenal axis: Allostasis



**Allostasis =
'stability through change'**

***Allostatic load: Too much of a good thing
The protective mechanisms involved in
adaptation can also have a cost.
[Bruce McEwen]***

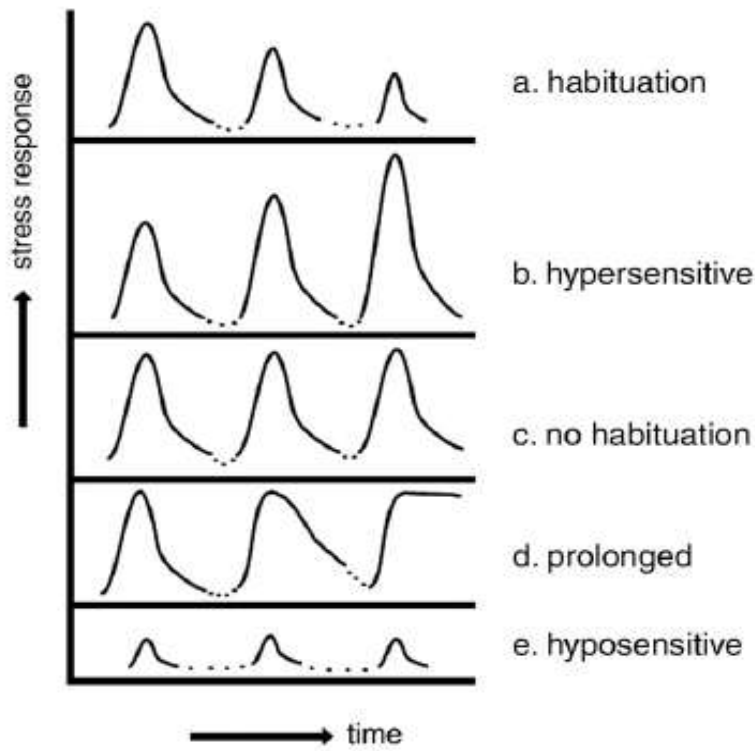
The hypothalamo-pituitary-adrenal axis: Responses to chronic stress



**Different stress
response profiles**

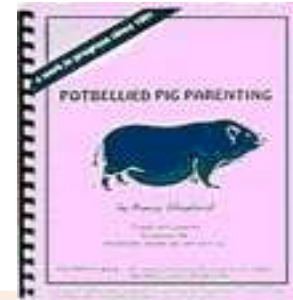
**Korte et al., 2007
Physiology & Behaviour**

The hypothalamo-pituitary-adrenal axis: Responses to chronic stress

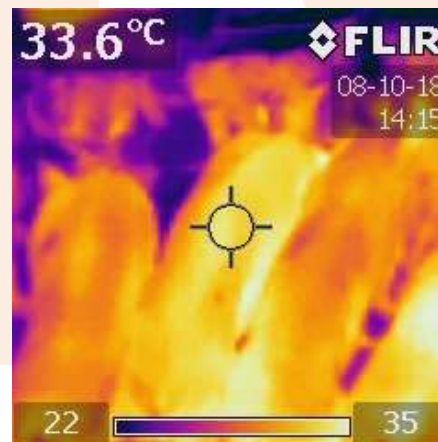
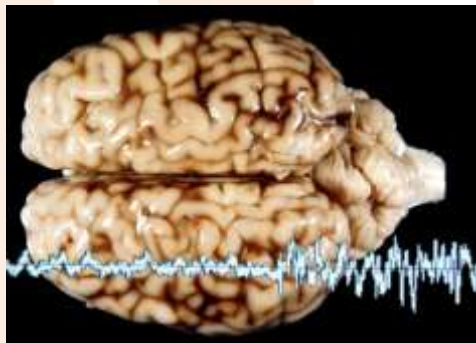


Different stress
response profiles

Korte et al., 2007
Physiology & Behaviour



Anthropomorphism versus Science



Critical Anthropomorphism

It is in principle impossible to get 'inside the mind' of an animal, however, just as with other humans, it is possible to make meaningful approximations.

In the spirit of critical anthropomorphism, scientific evidence, based on objectively measurable clinical signs, can be combined with more subjective data, obtained, for example, by drawing on empathy.

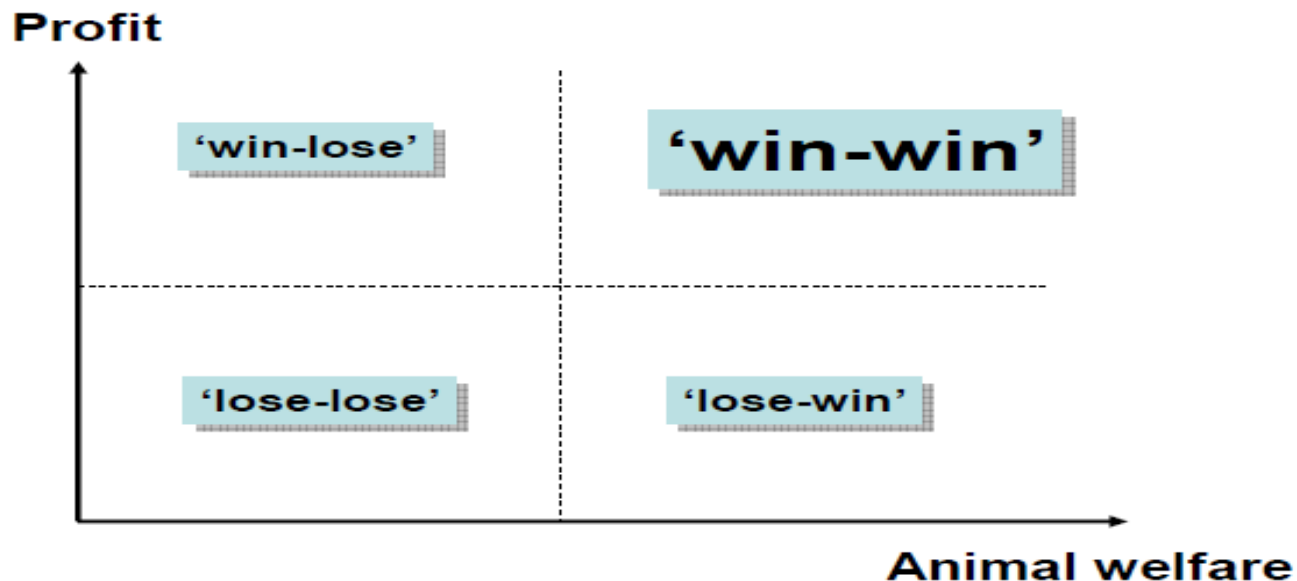
Critical Anthropomorphism Nuffield

In the spirit of critical anthropomorphism, a combination of the evaluation of clinical signs, the study of animal choices, familiarity with ethological and ecological data, and consideration of physiological and neurological features can all allow for useful predictions of animals' requirements and assessments of well-being, based on sound scientific evidence and processes.

http://www.nuffieldbioethics.org/go/browseablepublications/ethicsofresearchanimals/report_230.html

'Profit from animal welfare' (Lawrence 2009)

Figure 1: The potential 'trade-off's' between profit and animal welfare portrayed as 'win' or 'lose' scenarios; clearly 'win-win' scenarios will be the most attractive to farmers and animal welfare interest groups.



Handling of Animals

Understand perception and normal behaviour

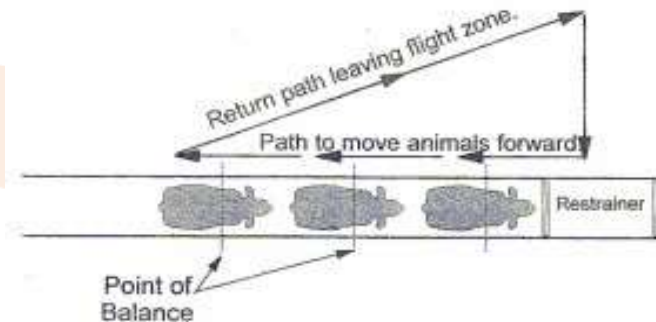
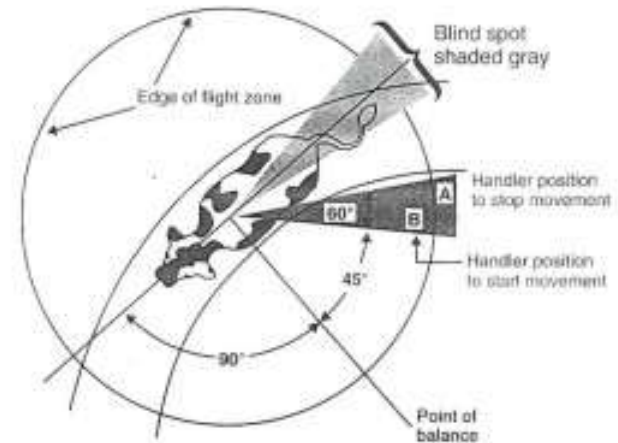
Quiet, calm, sympathetic, professional

Be aware of flight zones

Use handling aids as appropriate but not excessively

Minimal use of goads:

Use handling, race and restraint systems that are appropriate for the species & size



INIA Cattle Welfare Project Uruguay 2007



NO CORRI
NI PICA
UTILIZAR B

In Uruguay research at the meat chain showed:

- 60% of carcass bruises
- Condemned meat up to 2 kg/ slaughtered animal
- Losses due to bad handling practices in 2003 up to:
 - U\$S 41/ slaughtered animal
 - U\$S 80 millions/year
 - 3000 Tons/year
- One million people would eat 30 kg beef/year



INAC-INIA-CSU, 2003; Huertas 2006

Dynamic of the courses:

- Theoretical part
 - Basic concepts on:
 - Animal behavior
 - Flight zone and balance point
 - 5 freedoms concept
 - Economic losses due to bruises



TO STOCKPERSONS IN RURAL AREA
Courses for Producers (beef & milk), rural employees, stockpersons and truck drivers
 (250 courses and more than 4.000 people trained)



Dynamic of the courses:

- Practical part
 - Moving animals using flags at the facilities
 - Loading and unloading trucks
 - Good application of injections
- Visits to slaughter houses



Continuous Improvement





Facultad de Veterinaria
Universidad de la República
Uruguay



OIE Collaborating
Centre on Animal
Welfare Chile-Uruguay

% of carcass bruises & amount of money lost by slaughtered animal

% 60 bruises

**U\$S
40**

% 30 bruises

**U\$S
29**

2004

2008

2012

INAC-INIA, 2008; Huertas, 2009

Examples of stressors likely to be reduced or eliminated by training:

Fear due to proximity to humans

Fear and pain due to rough handling

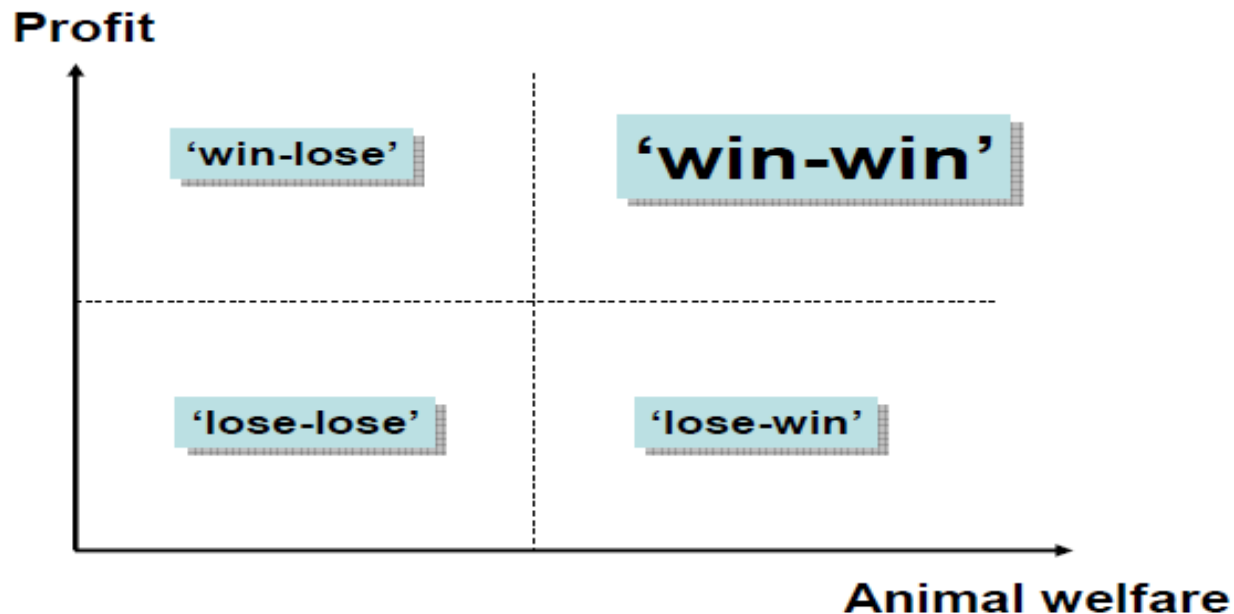
Social stress caused by mixing with unfamiliar animals

Discomfort caused by high stocking densities

Fear and discomfort caused by vehicle movement

'profit from animal welfare' (Lawrence 2009)

Figure 1: The potential 'trade-off's' between profit and animal welfare portrayed as 'win' or 'lose' scenarios; clearly 'win-win' scenarios will be the most attractive to farmers and animal welfare interest groups.



Vets leading animal welfare locally by...

Animal welfare local committee of enforcers, industry, NGOs, Practitioners.

Local strategy for improving welfare with targets
Animal Welfare officers on Abattoirs and markets.

Education, Vet schools, Agriculture schools

Operational research- behaviour change.
Evaluation of results of checks to improve quality and targeting.

Vets leading welfare during transport nationally

Laws and codes
Assurance schemes
Transporter authorisations
Driver / attendant training
Vehicle approval
Surveillance system
Robust and fair enforcement



Welfare of Animals During Transport

Advice for transporters of pigs



Welfare of Animals During Transport

Advice for transporters of poultry

Welfare of Animals During Transport

New Rules for Transporting Animals



Welfare of Animals During Transport

Advice for transporters of cattle



Welfare of Animals During Transport

Advice for transporters of sheep



Thank you

Quality of
The
journey



• www.defra.gov.uk



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