Improving production and welfare of livestock through good human – animal interactions

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Human – animal interactions

Several on – and off-farm factors affect production, health and welfare of farm animals

- Genetics
- Nutrition
- Health
- Climate

- Human – animal interaction/ handling by stockpeople

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Training package - aim

Improvement of animal productivity, health and welfare by

- Showing the effect of fear for humans on productivity and ease of handling

- Understanding of animal behaviour
- Effect of human behaviour
- Improvement of animal handling

Compulsary due to welfare legislation?

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Cognitive-intervention technique

- A change in human behaviour
  - Not merely requires knowledge transfer
  - Classroom techniques are insufficient
- Intervention techniques
  - Change in established habits
  - Altering attitudes and beliefs
  - Targeting denial and offense
  - Handle reactions from co-workers
  - Maintaining changes

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Cognitive-behavioural intervention training

- Multimedia format
- Additional resources: manuals, newsletters, posters, certificates
- Individual sessions on computer
- Some group sessions
- Questionnaire: evaluation of own attitude
- Two days
  - Day 1: merely theoretical and individual
  - Day 2: reinforcement and feedback on experiences

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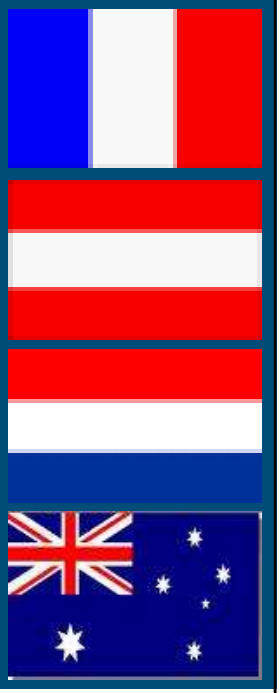
Species and partners

- Beef cattle
  - France (INRA, Institut de l'Élevage)
- Dairy cattle
  - Austria (University of Veterinary Medicine)
- Pigs and laying hens
  - The Netherlands (Animal Sciences Group-WUR)
- Australia (Monash University)



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Development – prototype training

INPUT

Australian research group (training programmes for the pig and dairy industries); Institut de l'Elevage (handling program for beef cattle)

Literature

WQ experiments and surveys (on-farm, questionnaires):
Practical solutions to handling problems
Attitude scales and their relationship with stockperson behaviour

Development of prototype training materials for cattle, pigs and poultry handlers

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Development – validation of training

Four groups of stockpeople,

Six in each group

Cognitive-behavioural intervention procedure (two groups)

No intervention (two groups)

Measurements:

Stockperson attitudes

Stockperson behaviour

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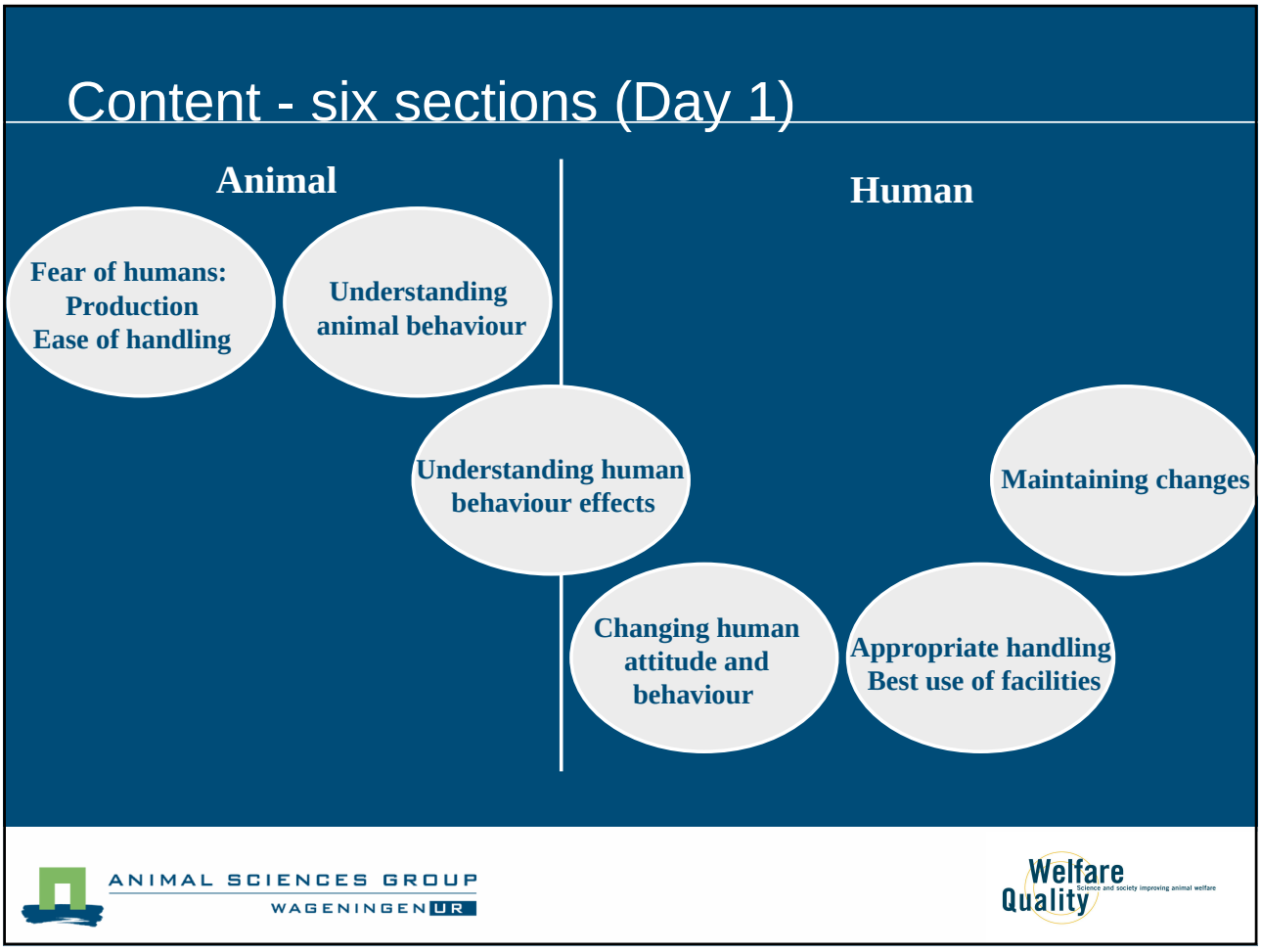
Content - six sections (Day 1)
Animal
Human
Fear of humans:
Production
Ease of handling
Understanding
animal behaviour
Understanding human
behaviour effects
Maintaining changes
Changing human
attitude and
behaviour
Appropriate handling
Best use of facilities
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Questionnaire

- Evaluation of own attitude. Comparison with general farmers attitude (database) later on in the training program
- Statements about animals, working with them and about farming in general. Examples
  - Pigs are easy animals to work with …. Disagree …. Agree
  - How difficult are gilts in oestrus to handle….. Difficult … easy
  - How do you feel about frequent talking or patting/stroking …. Wise …. foolish

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S1. Fear of humans

Animals are sensitive to our behaviour and can become fearful of us

- Fear = strong emotional state
- Behaviour: defensive behaviour or escape

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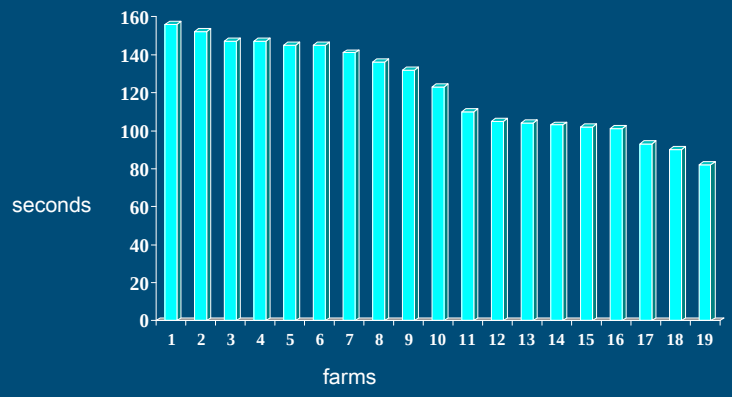
S1. Fear of humans

Large variability among farms in fear responses to human by animals



approach latencies to humans as a measure of fear

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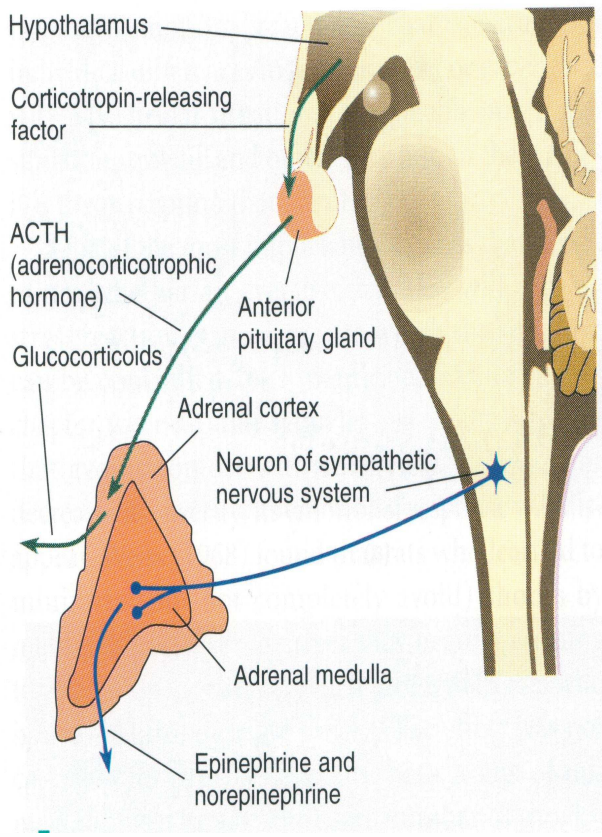
S1. Fear of humans

Fear is also associated with physiological changes

- State of stress
- Welfare is reduced
- Activation of
  - HPA-system
  - Autonomic nervous system



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S1. Fear of humans

Prolonged fear and stress, by effects of stresshormones, leads to (generic)

- Increased risk for hypertension and artherosclerosis
- Increased frequency of gastro-intestinal ulcers
- Reduced size of various organs, e.g. reproductive organs
- Neuronal damage
- Increased risk for infection due to immunosuppression

S1. Fear of humans: production and health

Prolonged fear and stress, by effects of stresshormones, has negative effects on (animals)

- Growth
- Feed-efficiency
- Meat quality
- Milk yield
- Egg production
- Immune system
- Reproduction
- Offspring

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S1. Fear of humans: ease of handling

High levels of fear make handling more difficult

- When fearful, animals see humans as a threat
  - Avoidance, retreat
  - Potential for injuries when avoiding humans

S2. Understanding animal behaviour

Routine handling may cause fear because it does not match the world's perception of the animal

- Nature of human- animal interactions: handling procedures are either positive or negative to the animal
  - Sensory characteristics
  - Other species-specific characteristics
- Habituation to human (e.g. sensitive periods, imprinting, positive reinforcement)

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S2. Understanding animal behaviour

Sensory characterics of pigs

- Pigs rely primarily on olfactory and auditory signals: hearing and smell are well-developed senses.
- Sensitive to physical contact
- Limited eye-sight

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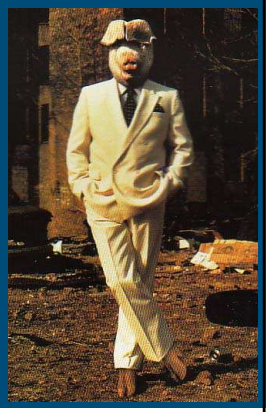
S3. Understanding human behaviour effects

Considering sensory characteristics of pigs

- Physical contact should be gentle
- Driving pigs may require more time, because pigs are curious, especially when smelling substances.
- Pigs do not like loud sounds and bright light
- Pigs do not like to walk down from steep stairs



'Think pig'

When these requirements are met,
human handling becomes more positive

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S3. Understanding human behaviour effects

Positive and negative handling of pigs

- Positive behaviour: pats, talking, hand resting on back of the animal, slow and deliberate movement

- Negative behaviour: slaps, hits, shouting, fast speed of movement, unexpected movement

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S4. Changing human attitude and behaviour

Stockperson behaviour is determined by attitude or beliefs about animals

- Beliefs about animals and how to handle them are often strong, but are often
  - Subjective and only opinions
  - Often affected by first observations and experiences
- Farmers with a positive attitude towards human-animal interactions use positive behaviour

S4. Changing human attitude and behaviour

Beliefs (cognition) to be targeted

For example, belief that (for pigs)

- Pigs are sensitive to physical contact
- Patting is an important positive behaviour
- Positive handling affects the pig (e.g. ease of handling, production and health) and the stockperson (e.g. job satisfaction)

Questionnaire - feedback

- Self-evaluation of own attitude
  - Your strenghts and weaknesses in handling animals
  - Ways to improve beliefs and attitudes about animals and working with them
- How do you compare to other stockpeople

S5. Appropriate handling

Shift the balance from negative to positive

- Recognize the difference between negative and positive behaviours
- Minimize number of negative and increase number of positive behaviours
- Use positive behaviour, even when the animal does what you want
- Alert the animals to your presence and be predictable (slow moving, talking)
- Adapt your handling to the animal's behaviour
- Give clear signals to the animals

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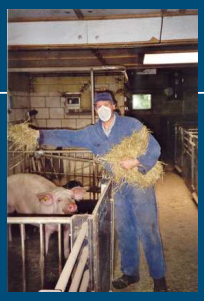
S5. Appropriate handling



Handling procedures (for pigs)

- Stockperson-pig interactions are most frequent in the farrowing house and in the mating area
- Least interaction occurs in the finishing pig barns
- Some interactions are always negative and unpleasant, e.g. for mutilations
  - Still ways to moderate aversity
  - Still possibilities for positive reinforcement

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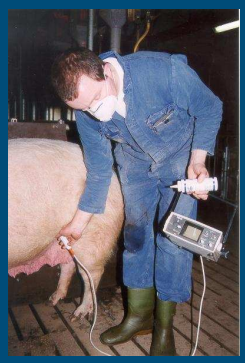
S5. Appropriate handling

Handling procedures (sows)

- Oestrus control and insemination
- Pregnancy control
- Moving
- Training sows to use a feeder station
- Caring for sows and piglets around birth



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S5. Appropriate handling

Good use of facilities/systems

- E.g. cage versus non-cage systems for laying hens
- Complexity of systems
- Construction: e.g. in farrowing stalls it is more difficult to lead a pregnant sow out of a box backwards

S6. Maintaining changes/overcoming habits

Most of the things we do are habits. How to overcome them?

- New habits require time, reminders and repetition
- Support is needed from collegues and co-workers

Day 2. Reinforcement of the training

- One month later
- Summary of day 1 by trainer
- Feedback on own experiences by trainees
- Video's to comment actual situations
- Special request of trainees

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Time schedule

- 2007 - 2008 Development of a multimedia presentation and validation
- 2009 onwards Training available in several languages

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