The impact of stockmanship on the welfare of growing pigs

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Stockmanship in growing pigs?

• Behaviour, health and productivity of pigs are greatly influenced by the specific design of housing equipment, climatic factors and stockmanship (EU Council directive)

• **Stockmanship**: The knowledgeable and skillful handling of livestock in a safe, efficient, effective, and low-stress manner
Stockmanship in a wider sense

• handling skills
• preventing and treating lameness
• preventing and treating internal and external parasites
• giving medicines by injection
• providing appropriate care to sick and injured pigs
• management of pigs to minimise aggression

……
Stockmanship attributes  
(FAWC, 2007)

• **Knowledge of animal husbandry.** Sound knowledge of the biology and husbandry of farm animals, including how their needs may be best provided for in all circumstances.

• **Skills in animal husbandry.** Demonstrable skills in observation, handling, care and treatment of animals, and problem detection and resolution.

• **Personal qualities.** Affinity and empathy with animals, dedication and patience.
Issues to consider

- Early socialisation & group stability
- Split sex rearing and marketing
- Routine welfare and health care monitoring
- Automatisation and precision farming
- On-farm animal based indicators
- Animal integrity
- Outcome-based indicators at slaughter
Early socialisation & group stability (no mixing after 10d of age) Kutzer et al. 2009
separate transport and slaughter

2 grower pens with gilts and boars separated

4 farrowing pens with mixed socialised litters
Concept of animal integrity

• Animal outcome-based indicators:
  Body condition & damage, morbidity, behavioural & functional deviations

• Challenge:
  Intact and healthy pigs in group housing adjusted to their functional, resource and social needs
What makes a good indicator?

- **Availability**: easy to obtain
- **Simplicity**: easy to perform (practicability)
- **Validity**: the degree (accuracy) to measure the issue of interest
- **Specificity**: to measure exactly what we want to be measured
- **Reliability**: consistency of measures
- **Sensitivity**: capacity to detect changes in the issue of interest
Concept of Critical Control & Management Points

On-farm self control
(Management & stockmanship)

- Health & welfare management plan
  (Prophylaxis, hygiene, feeding, animal care, routine monitoring & documentation)

- Animal integrity & resources
  (Checklist based on integument scoring & functional resource needs)
Integrity and resources
Animal based risk assessment

Integrity

Ethics

Welfare

Sustainability cost-benefit analysis
**Risk assessment castration & tail docking**

- **Benefit:** reduced aggression & risk of injury > curative measure (prevention of harm)
- **Cost:** painful intervention;
  consideration of functional aspects: tail > signal; castration > loss of sexual function

**Conclusion:**

acceptable, as long as anaesthesia & pain treatment is used, given that no sustainable alternatives are available (i.e. other genotype, housing & management);

questionable under ethical (integrity & aesthetics) and functional aspects
Stockmanship vs. automatisation

iPad game „Pig Chase“
 „Industrial (mass) pig housing“: welfare

- Welfare of each animal has to be considered
- Welfare legislation does not differentiate between animal numbers (herd size)
- Animal health (> factorial diseases) depend on specific housing and management factors
- Crucial factor: stockmanship, replacing direct animal - human interaction by automatisation & precision management in large herds (?)
Consumer perception of industrial mass animal housing (Kayser & Spiller, 2011)

Cattle herd size: **500** (more than average herd size)

Pigs: **1000** (less than average)

Poultry: **5000** (much less than average)

Herd size of which 90% of the consumers speak about mass animal housing
Future challenge

- Integration of outcome-based parameters into existing documentation- and control systems
- Requirements: valid & reliable indicators and risk assessment (control points)
- Practicability (economic efficiency)
- International compliance of animal welfare standards
- Demand for self control, consultation & market differentiation (labeling)
- Motivation & attitude of farmer
Quality welfare assurance

Public/Retail

- Public response
- Promote
- Assure

Standardised welfare assessment & information

Producers

- Self-assessment
- Certification
- Independent assessment
- Action (plan)

Improved animal welfare

(Webster, 2007)