

Risk-based meat inspection: Implementation experiences in Germany and integration of animal-oriented welfare criteria

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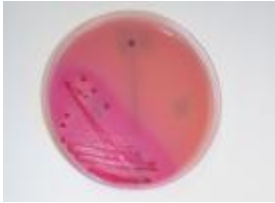
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The (new) European food safety strategy

- **improvement of food safety, animal health and animal welfare**



food safety



animal health



animal welfare

- **enhancement of the food producers' responsibility (i.e. feed producers, livestock owners, food business operators, etc.)**
- **process control along the whole food chain as tool for continuous improvement measures (food chain information)**
- **risk-based meat inspection due to relevant food chain information (inspection intensity adapted to indicated risks)**



Central questions in the framework of the risk-based meat inspection

1. How to measure food safety risks?
2. How to measure herd health?
3. How to measure animal welfare quality?



Good herd health.

Food safety (subclinical zoonoses) ?

Animal welfare??



Good animal welfare.

Herd Health?

Subclinical zoonoses/food safety??



Developed measuring tools

for food safety, herd health and animal welfare



Developed measuring tools

Indicators created from available data

„Meat juice multi-serology“

Blaha and Meemken et al., 2010

- Seroprevalence values/herd
 - Zoonoses (Salm. + Yers., Toxo., HEV...)
 - production diseases (M.hyo., A.pp., SIV)
 - notifiable diseases (CSF, AD, FMD, ASF?)

„Herd Health Score“

Blaha et al., 2007

- mortality rate per herd
- use of antimicrobials („ATI“, 2006)
- slaughter check results (pn., pl., pc., ...)
- ADWG (duration of the fattening period)

Animal-oriented welfare criteria

Blaha et al., 2010

- cannibalism (tails, ears, flanks)
- slaughter check results (pn., pl., pc.,)
- signs of animal cruelty (beating marks)
- abscesses



Measurement criteria of animal welfare in the past

- **transport** (overestimation of the duration/ intensity of animal handling during loading)
- **animal husbandry** (conventional vs. modern housing and climate vs. manure management, bedding, indoor vs. outdoor holding, farrowing vs. group housing)
- **lactation** (all-in /all-out vs. continuous flow, early-weaning vs. duration of suckling period)

Underestimates impact of stockmanship quality

Animal welfare input criteria



Resources-oriented animal welfare



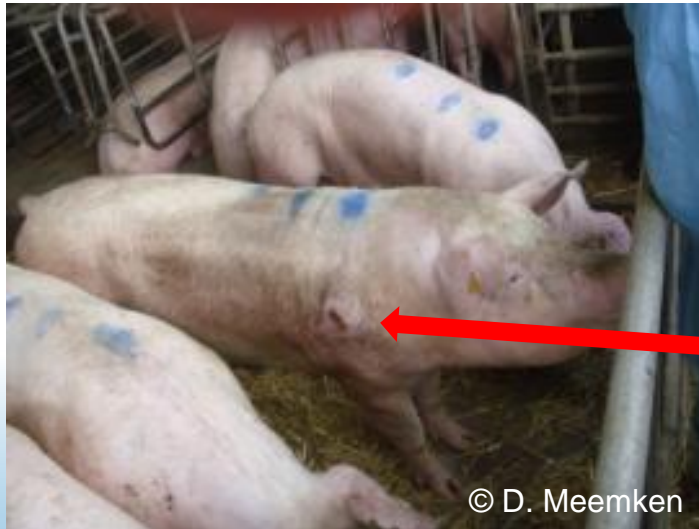


How “resources-oriented” criteria fail

How does the animal cope with the supplied
resources and the **stockmanship quality**
straw bedding poor body condition

+ **-**

The actual outcome



shoulder decubitus





How “resources-oriented” criteria fail

How does the animal cope with the supplied

resources

and the

stockmanship quality

slatted floor

good animal handling

forced ventilation



The actual outcome



© D. Meemken



**low morbidity
low antibiotic usage**





Animal-oriented welfare criteria needed

Measuring animal welfare output criteria that allow for estimating the actual quality of the animals' life

- Evaluation of the resources AND the stockmanship

1. ante-mortem inspection during unloading and lairage

- observation of behaviour, lameness, injuries, signs of cannibalism, runts
in addition to the rare existing records on punishable animal cruelty

2. post-mortem inspection at the slaughter line

- documentation of cannibalism, arthritis, pregnancy, signs of animal cruelty **in addition** to food safety oriented meat inspection results like condemned carcasses and abscesses





Lame animal in the lairage



© V. Gotter



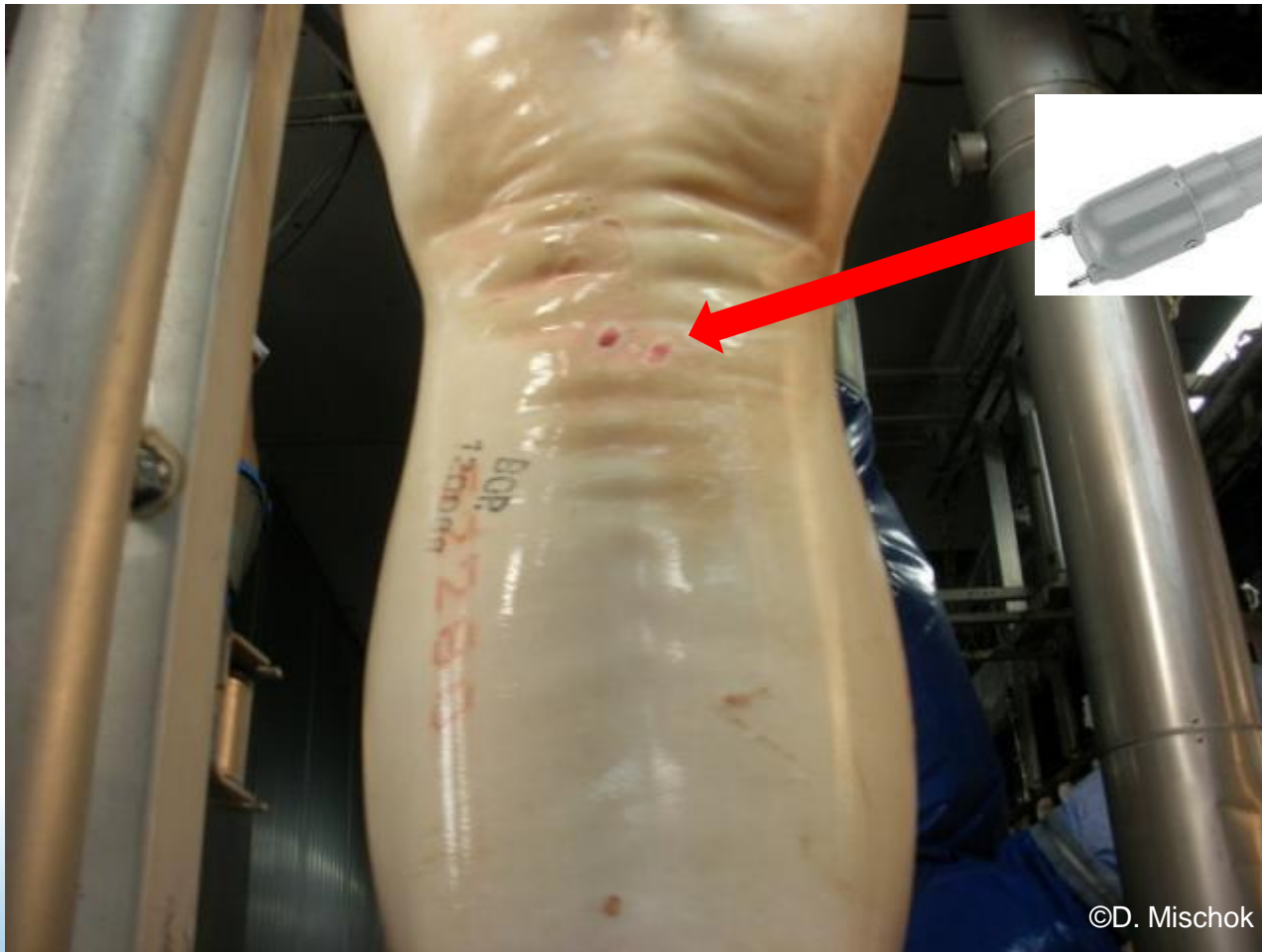


Signs of animal cruelty (beating marks: welts and bruises)





Signs of animal cruelty (sign of an electric shocker)

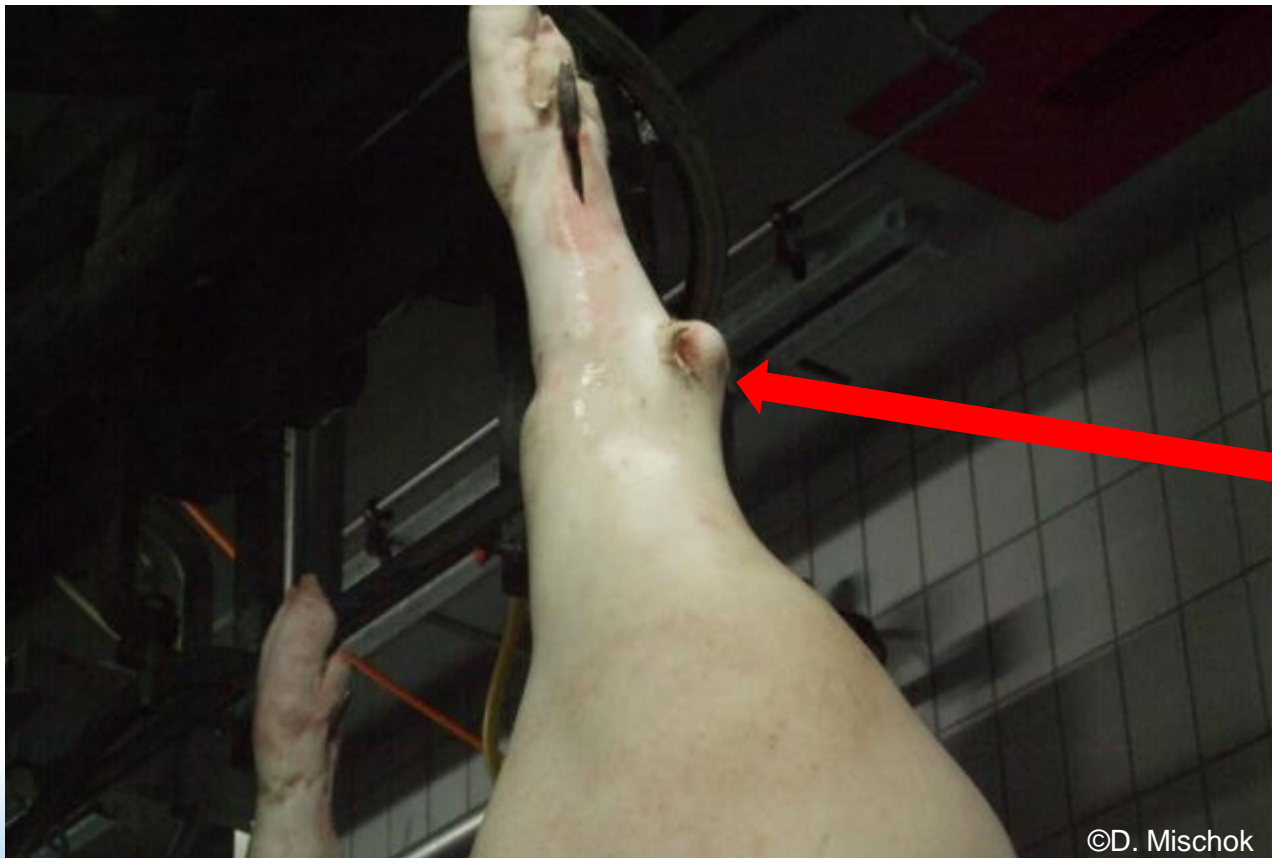


©D. Mischok





Beginning of an arthritis (enlarged tarsus)



©D. Mischok





Arthritis cubiti (enlarged cubital joint)



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Necrotizing tarsitis





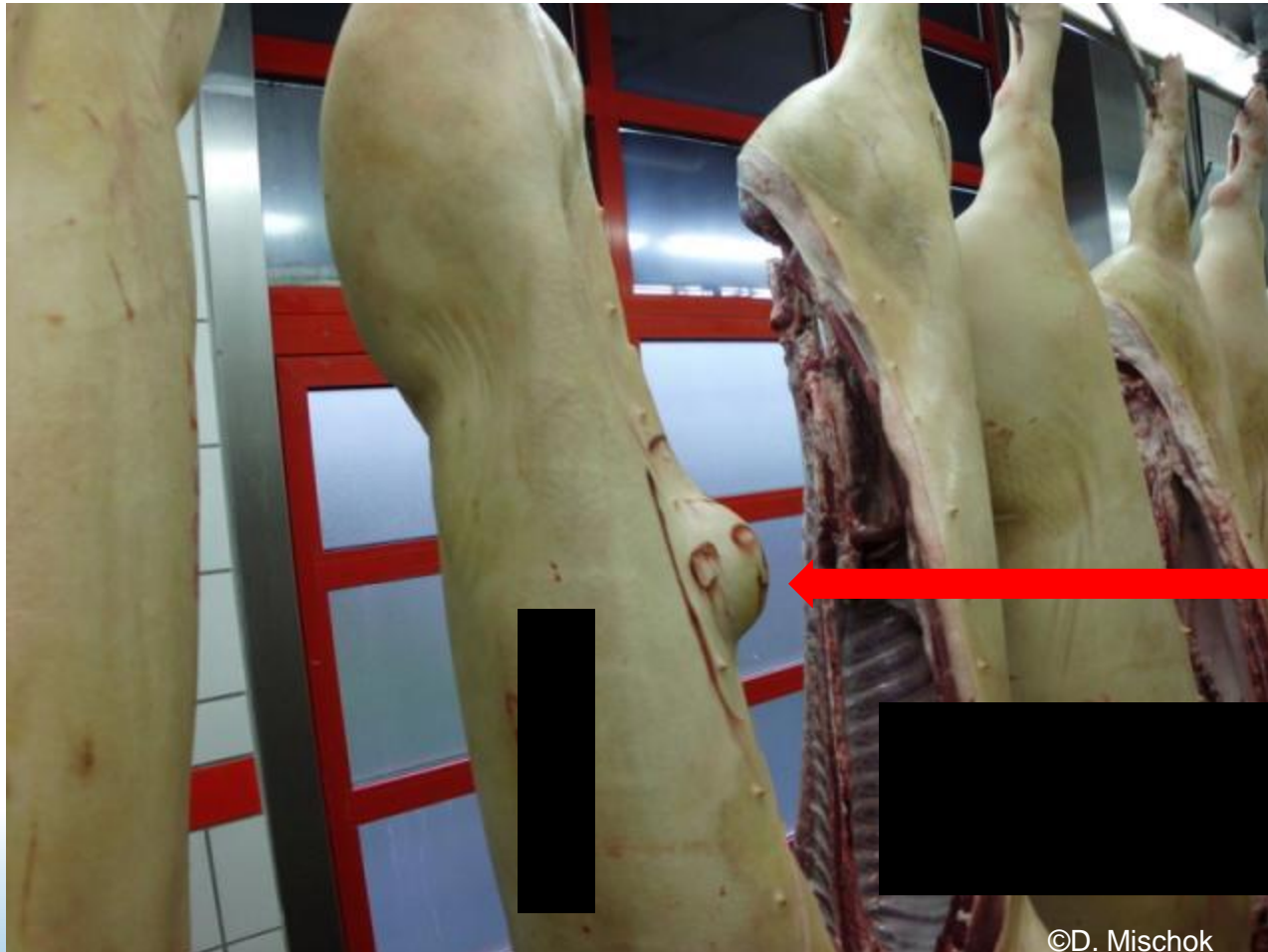
Necrosis of the tail

(tail biting=higher risk for abscesses)





Purulent abscess in the regio umbilicalis



©D. Mischok



Documentation at the slaughterhouse accumulated per herd

Official veterinarian in the ante-mortem inspection

- number of lame animals (broken bones, arthritis)
- number of unthrifty and cachectic animals
- number of animals with injuries (acute and chronic injuries)
- [number of animals that are not fit for being slaughtered]

Official veterinarian in the post-mortem inspection:

- number of animals with lesions due to cannibalism (tails, ears)
- number of animals with lesions due to animal cruelty (welts, bruises)
- [number of animals that are not fit for consumption]

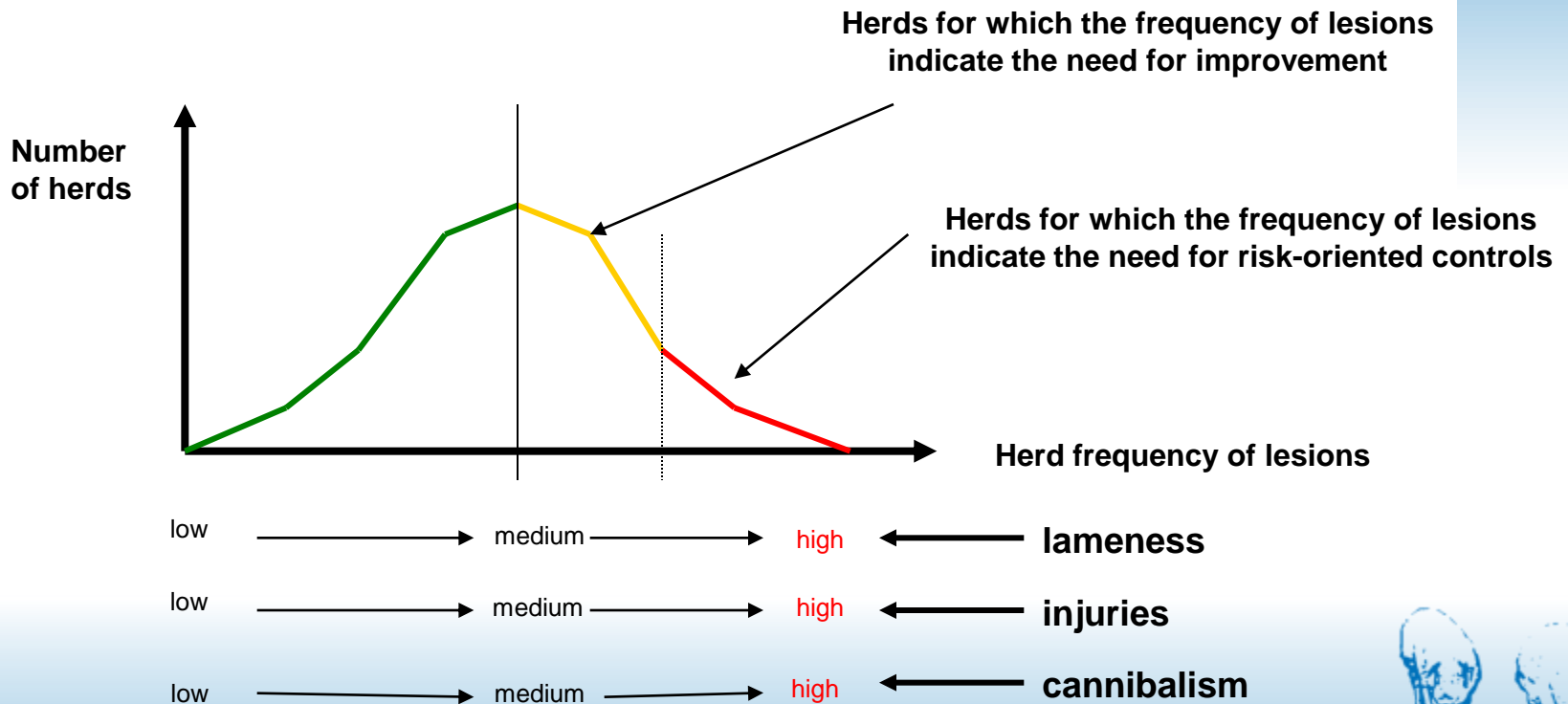
Benchmarking the health and welfare of supplying herds will lead to

- **targeted consulting,**
- **incentives for the better, and,**
- **in non-compliance cases, to punishment**



Benchmarking pig herds

Animal-oriented criteria: lamenesses, injuries, cannibalism,...



Present state of the implementation of the risk-based meat inspection (Germany)

- No broad implementation, only pilot projects in Germany (n<10)
- Today, only 2 slaughterhouse enterprises got official permission for the routine visual meat inspection due to the following **enterprise-specific risk-based elements** in addition to the requirements of Reg. (EC) 1244/2007 (e.g. controlled housing)

Enterprise A

Benchmarking slaughter checks

- targeted residue testing of low-health herds

Identifying the origin of feed

- tracing back in case of scandals – e.g. dioxin

Serol. MAP risk profiling of herds

- informing farmers for targeted herd consulting
- possibility for additional serological tests

Enterprise B

Benchmarking herd health

- adapting the meat inspection intensity

Enterprise-own veterinarian

- targeted herd consultancy of low-health herds

Benchmarking animal welfare

- implementation of a „welfare label“
- at present only 10% farmers that get a bonus



Most important experiences

- Do not start before all stakeholders **understand**
- Do **not wait** for a state “monolithic” solution
- Do allow **enterprise-specific ways**
- Insist on **100% PPP** (public private partnership)
- Do not start with visual inspection, but with developing a **meaningful food chain information**
- Do develop **benchmarking systems** for herd health
- Add benchmarking for **animal-oriented welfare**
- Start, if all stakeholders comply with the **minimum legal demands**, but insist on continuous improvement

