FAEN Forschungsverbund Agrar- und Ernährungswissenschaften Niedersachsen

Risk-based meat inspection and risk-based official controls as means for improving animal health and animal welfare

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Introduction (1)

The new EU food safety strategy:

- Enforcing the food producers` responsibility
  (Stable-to-table-principle, farmers as well)
- Optimising processes instead of end-product inspection
  (HACCP principles along the food chain – animal welfare included)
- Tracing and tracking
  (at least one step up and one step down)
- Decision making and official controls has to be risk-based
  (e.g. meat inspection and residue testing)
- **Continuous improvements on the basis of risk-assessment (science-based evaluation of hazards and risks)**

Introduction (2)

The principle of the “risk-based” meat inspection

- **Instead** of inspecting **individual** carcasses with **equal intensity**,

  inspecting batches with **different intensity** according:

  - to the **estimated food safety risk** based on food chain information**,**

    and

  - to the **estimated risk of lesions** based on previous lesion frequencies

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Introduction (3)

Based on **“relevant food chain information”**, batches will be inspected as follows:

- **Visual inspection** for batches:
  - with an expected low food safety risk and/or
  - with a low number of lesions
- **Traditional inspection** for batches:
  - with an expected medium food safety risk and/or
  - with an average number of lesions
- **More intensive inspection** for batches:
  - with an expected high food safety risk and/or
  - with a high number of lesions

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Relevant food chain information

Reg. (EU) No 853/2004:

1. Status of holding of provenance/ regional health status
2. The animals´ health status
3. Medicinal products or other treatments administered to the pigs
4. Occurrence of diseases that may affect the safety of meat
5. Laboratory results incl. zoonoses monitoring results
6. Results of previous ante- and post-mortem inspections
7. Production data that indicate the presence of disease
8. Name and address of the private veterinarian

Assessing herd health

- **Direct data are hard to quantify and to compare:**
  - coughing, diarrhoea, fever, lameness etc., etc…..

- **However, the following indirect data can be used:**
  - **Mortality**
  - **Use of antimicrobial substances**
  - **Slaughter check results**
  - **Animal performance data**

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Assessing the mortality

Mortality:

- spread in our investigation: 0,0 – 12.2 %

Our proposals:

Visual inspection: 0 % – <5 %

Traditional inspection: 5 % – 8 %

More intensive inspection: >8 %

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Assessing the use of antibiotics
- Animal Treatment Index (ATI) -

Epidemiological assumption:

- Animals which were treated very often with antimicrobial substances were more ill than animals which were not treated

$$ATI = \frac{\text{(\# treated animals) x (\# days of treatment)}}{\text{(\# animals in the fattening group)}}$$

- **Spread in our investigation: ATIs : 0 – 67**

Visual inspection: 0 - <40

Traditional inspection: 40 - <60

More intensive inspection: >60

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Assessing the animal performance

Some animal performance data are **not or hardly available 24 – 72h before slaughtering**:

- daily weight gain, feed conversion…..

Our proposal:

- Using the **duration of the fattening period**
- **Spread in our investigation: 85 – 219 d**

Visual inspection: 80 d - <120 d

Traditional inspection: 120 d - <150 d

More intensive inspection: >150 d

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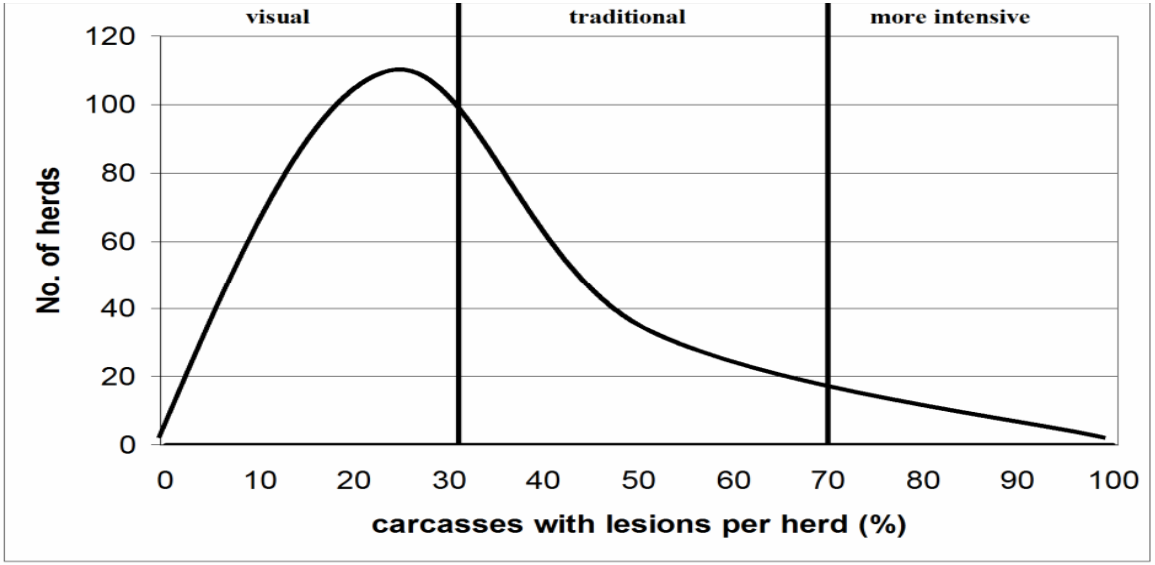
Assessing slaughter check results

Preconditions: - **standardized** documentation of lesions

- documentation of lesions **per herd!**

Our proposals:

- Calculation of a slaughterhouse specific distribution of lesions
- Splitting into three thirds



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Improving herd health (1)

- 1st step: measuring herd health
- 2nd step: benchmarking herd health
- 3rd step: improving herd health

Meaningful food chain information and **the feed-back of the slaughterhouse findings** to the farmer (and the veterinarian) as tool for improving herd health:

- **endocarditis**: vaccination against Erysipelothrix rhusiopathiae
- **pleurisy, pneumonia:** optimisation of ventilation, vaccination….
- **trichinella:** optimisation of rodent control
- **salmonella:** improving herd hygiene management
- **mycobacterium:** no outdoor holding and straw bedding
- **abscesses:** improving injection technique and hygiene

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Improving herd health (2)

Implications of the risk-based meat inspection on the work of a private veterinarian:

- Relevant food chain information are mandatory for all suppliers
- Ranking for each parameter is possible per food chain
- Increasing interest in “safe” pigs – great market demand
- Zoonoses monitoring results, e.g. serological salmonella results, indicate room for improvement
- Feed-back of herd specific slaughter check results can and should be used for veterinary herd health and animal welfare consulting

Risk-based meat inspection and risk-based official controls result in valuable information for the private veterinarian for his efforts to improve herd health and animal welfare

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Thank you for your attention

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