

THE CONCEPT AND EPIDEMIOLOGICAL ASPECTS OF THE RISK-BASED MEAT INSPECTION (REG. 854/2004/EC)

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Introduction

The majority of today's food safety concerns have their origin in the production stages prior to slaughter and processing, the so-called "pre-harvest" stages, i.e. mainly the agricultural primary production. Examples for pre-harvest food safety issues, which stem from non-defined and non-standardized agricultural production procedures, are: latent infections such as *E. coli* O157:H7 in cattle, *Salmonella* in pigs, poultry and cattle, feed contamination with dioxin or TSE prions. Furthermore, the use of antimicrobials in food animals is an emerging concern, which additionally draws the attention of the public to the production practices in livestock production.

Therefore, the EU Commission issued in 2002 the Basic Directive "EG 178/2002", which followed the intentions of the EU White Book on Food Safety (2000) and is in congruence with the rules of the Codex Alimentarius (FAO, WHO and O.I.E.). The major principles of the new food safety approach are:

- The primary production (feed and animal production) has to be included into the food safety system as so-called "stable to table concept";
- Process control gets priority over end product control: HACCP, GMP = Good Management Practice, GVP = Good Veterinary Practice, and QM-Systems;
- The responsibility for the safety of the produced food products has to be taken by the producers at any production stage including the agricultural production;
- Self-controls at all stages of the food production chain carried out by the producers themselves are mandatory;
- The governmental control of the food chain changes to mainly taking over the state control of the self-controls of the producers;

The description of such basic principles as the above explained new food safety approach has not yet a real input on the daily actions of those that produce and slaughter animals for meat production, but they need to be put into action. To trigger this process, the

EU Commission issued in April 2004 the so-called hygiene package, i.e. four EU-Directives (851/2004, 852/2004, 853/2004 and 854/2004). Two of them are directly dealing with the so-called risk-based meat inspection: 853/2004 and 854/2004.

The author is leading a working group of a 5-years research project on “Border-crossing quality management in pork production” (GIQS) led by Prof. Brigitte Petersen of the University of Bonn, Germany. This working group has developed the principles for a decision model for the risk-based meat inspection, which is demonstrated and discussed in this paper.

Decision making for the risk-based meat inspection

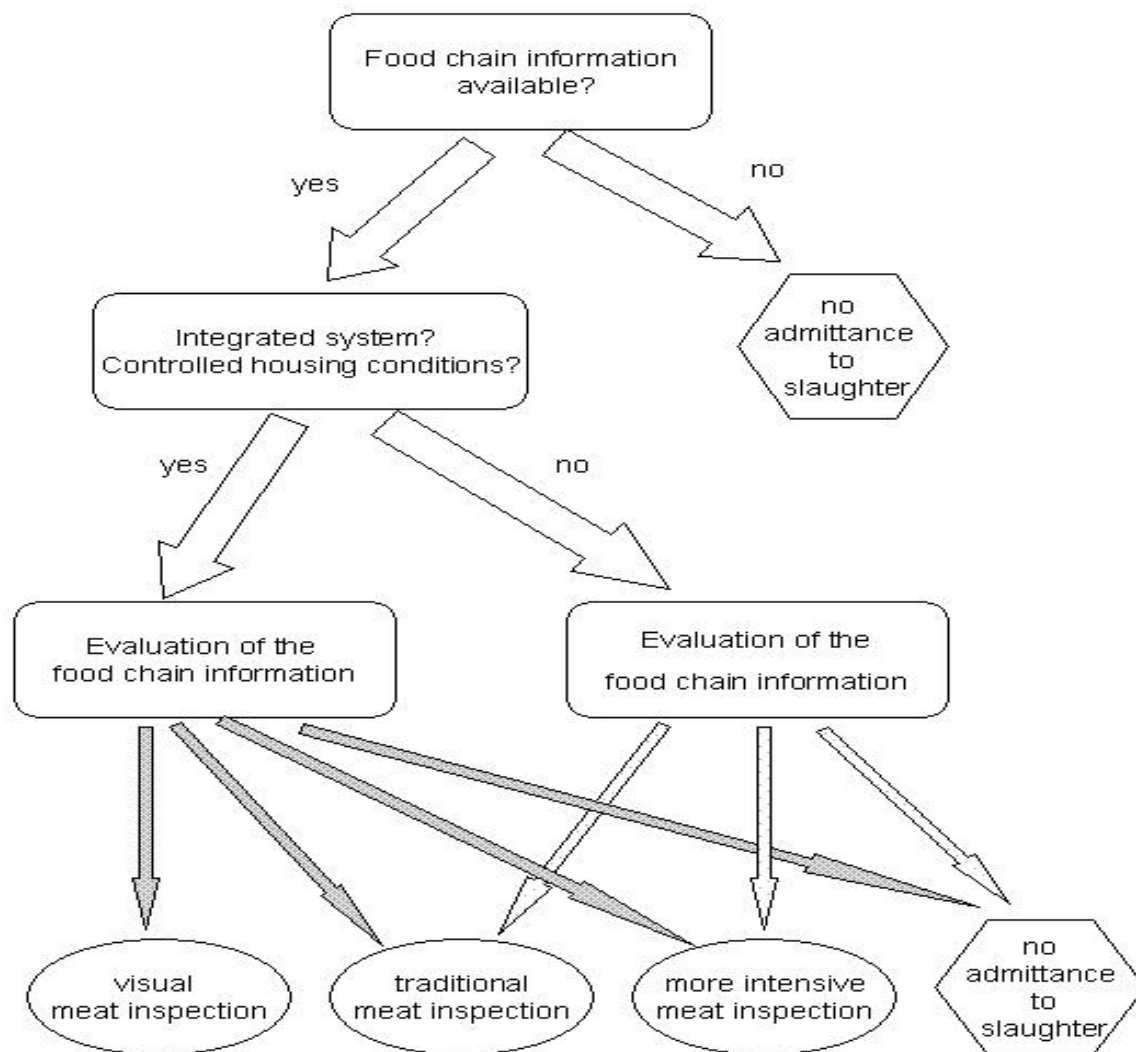
The major principle of the risk-based meat inspection is that the official veterinarian in the slaughter plant has to decide, how intensive pigs have to be inspected according to the potential food safety risk they may carry into the food chain. This food safety related risk posed by pigs (per herd and per slaughter batch) is to be assessed by taking into consideration any “relevant food chain information”. In principle, the regulation 854/2004 allows three different inspection measures:

- a) a **visual inspection**, if the food chain information signals that there is no or very little risk (the animals come from an integrated pork production system and were healthy all their life),
- b) the **traditional inspection** (the animals history is not completely known and some disease has occurred during their lives),
- c) an **extended inspection** (there is information that the animals had undergone disease or treatments or exposition to harmful substances) – the official veterinarian is to order special inspection procedures (such as laboratory tests) according to the expected risk.

To be able to make this decision, the animals have to be notified to the slaughter plant including the “relevant food chain information” at least 24 hours prior to transporting the animals to the slaughter plant. The official veterinarian has then to take the information delivered with the notification of the animals when making the decision about “visual”, “traditional” or “extended”. In case here is no information about the notified animals, slaughtering them is prohibited.

Figure 1 shows the decision making process for the risk-based meat inspection, which the official veterinarian has to use.

Figure 1: The decision making process for the risk based-meat inspection



Christiane Schuff 2004

The data that can and must be taken into account for creating a meaningful set of food chain information for each **pig herd** in question are given in the EU-Directive 853/2004:

- integrated system with a working quality management programme – yes or no
- the husbandry system (all-in/all-out, cleaning and disinfection, biosecurity etc.)
- the salmonella status, if a salmonella reduction plan is implemented
- meat inspection data (condemnations) of the previous 6 months
- slaughter check data (e.g. lung and liver lesions) of the previous 6 months

The data that can and must be taken into consideration for each **slaughter batch** from every herd are:

- the mortality rate of the finisher group the animals come from
- health status and the drug use of the finisher group the animals come from.

The paper “Generating valid food chain information for the risk-based meat inspection (854/2004)” by Diana Meemken (also presented at the 2005 ISAH Congress and in these proceedings) deals with the evaluation of the data that are needed for the decision making process, with the threshold values and how to use the food safety information for the risk-based meat inspection being discussed.

References

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