ISAH 2005 - Warsaw, Poland
Vol 2

GENERATING VALID FOOD CHAIN INFORMATION FOR THE RISK-BASED MEAT INSPECTION (REG. 854/2004/EC)

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Key words: risk-based meat inspection, food chain information, animal health, data flow between farm and slaughter plant, validation of data

Introduction

As outlined in the paper "The concept and epidemiological aspects of the risk-based meat inspection" by Thomas Blaha (also presented at the 2005 ISAH Congress and in these proceedings), in the European Union from January 2006 on, the meat inspection for pigs at the slaughter line has to be done in a risk-based way after assessing the potential risk for food safety that pigs may carry into the production line

This paper describes, how the process of validating the data (threshold values and inclusion and/or exclusion values) that are planned to be used for the decision making process on whether a batch of pigs is to be inspected: "visual", "traditional" or "extended" is done in the working group 4 (responsible for research for modernizing meat inspection) of the 5-years research project on "Border-crossing quality management in pork production" (GIQS) led by Prof. Brigitte Petersen of the University of Bonn, Germany.

Data validation

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 first step of the validation procedure was to check; whether the data sets that are to be used for the decision on the inspection method ("visual", traditional" or "extended")

have an at least remarkable (if not significant) variation between pig herds and slaughter batches. For this we tested the data on condemned carcasses, condemned parts of carcasses and on slaughter checks (pneumonia, pleurisy, pericarditis and milk spots) and found that there is a considerably high variation between these data from each herd and a lower variation between data from each slaughter batch of a herd. This means that most of the variation of the data that is to be used for the decision making process for the risk-based meat inspection show a "herd effect", which justifies to dedicate in principle herds to one of the three inspection methods. However, the lower, but existing variation of these data between slaughter batches of the same herd, justifies also the need to make the decision on the inspection method for each slaughter batch, in disrespect of the fact that the herd is qualified for the visual inspection or not (this means that a batch from a potentially "visual" herd can of course be assigned to "traditional" or even "extended", if the data for the batch indicate a special risk for food safety (disease, salmonella results, late drug use, etc.).

The second (next) step of the validation procedure is to use the following "theoretical" threshold values for the "visual" inspection: a batch is allowed to be visually inspected, if:

1) no more than 0.2% of the carcasses of the herd in the last 6 months were condemned ,
2) no more than 2.0% of the slaughtered pigs of the herd had partial condemnations in the last 6 months
3) no more than 5% of the lungs of the slaughtered pigs of the herd had lesions in the last 6 months
4) no more than 10% of the serosae of the slaughtered pigs of the herd had lesions in the last 6 months
5) no more than 5% of the pericards of the slaughtered pigs of the herd had lesions in the last 6 months
6) no more mortality than 1.5% in the finisher group from which the slaughter batch in question comes from.

These threshold values (more or less theoretically assigned) will be taken on three different slaughter plants and used for assigning slaughter batches to "visual" or not. Then, the real meat inspection data, derived from the still (until December 31, 2005) traditional inspection, will be compared to the theoretical decision (virtually assigned to "visual" or not). If the virtual decision "virtual" is significantly more often assigned to batches with very low condemnations and very low slaughter check results, the thresholds can be used for the risk-

based meat inspection. If not, the thresholds will be adapted to the real data in the study group and validated again.

We think that this procedure will help to find thresholds that can be used for the implementation of the risk-based meat inspection as expected by the EU Commission by January 2006.

References

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