ORAL PRESENTATIONS

ANALYZING PRECONDITIONS FOR A TRANSPARENT MEAT PRODUCTION SYSTEM FROM FARM TO RETAIL FOCUSING ON ANIMAL HEALTH AND FOOD SAFETY

Breitenbuch, A.V., Meemken, D., Dickhaus, C.-P. and Blaha, T.

University of Veterinary Medicine Hannover, Field Station for Epidemiology, Bakum, Germany

SUMMARY

The paper describes a cooperative group of pig farmers, owning a slaughter plant operating an integrated system of pork production. In this system, a transparent production of pork leads to fulfilling the requirements of the new EU regulations for food safety (transparency, traceability, process optimization and risk-based decisions) and enables a feedback system from slaughterhouse to farm as a precondition for the continuous improvement of animal health and animal welfare in food producing animals and enhances the cooperation between all participants.

Keywords: transparent pork production, risk-based meat inspection, food chain information, improving animal health and animal welfare

INTRODUCTION

In a time of an increasingly rising number of “meat scandals”, many consumers ask themselves whether or not promises of meat producers regarding the quality and especially the safety of the meat can still be trusted. A cooperative group of pig farmers in Northern Germany uses means of communication, an integrated Veterinary Health Service and a vertically organized production system to enhance meat quality and safety by increasing animal health as well as animal welfare.

THE COOPERATIVE AND HOW IT WORKS

In the year 1974, a cooperative of around 250 sow herd owners with a production of about 420.000 piglets per year was founded. The target of this cooperation was the common use of strict quality and production guidelines as well as a shared marketing strategy for these piglets. Good genetic homogeneity and good animal health are achieved by the controlled acquisition of young sows and the controlled use of selected, stress-resistant boars.

As a logical consequence, the fattening pig herd owners using these piglets for producing slaughter pigs founded a cooperative including their own slaughterhouse as well with very strict rules in respect of feeding, housing conditions and a self established supervision system in the sense of self-control. This includes the supervision and consulting by agricultural advisers as well as by an integrated Veterinary Health Service.

Ways of communication between the slaughterhouse, the advisors and the veterinary practitioners are extremely short and efficient. This is due to the facts that the advisors are located in the slaughterhouse building and have the opportunity to see the results of the meat inspection directly at the slaughter line. The findings of the official meat inspection unit are registered online in a data processing system which is monitored by these advisors. The results of the meat inspection as well as the results of the carcass classification are submitted to the farms either by email or by mail, enabling the farmer to react very swiftly in accordance with the advisors and/or with the Veterinary Health Service. This service profits from the standardized conditions under which the pigs are fed and kept. It develops strategies for the prevention of diseases. Its veterinarians, who are highly specialized in pig herd management, try constantly to limit the use of drugs by optimising feed strategies and ventilation systems as well as other housing conditions. A close cooperation between agricultural advisors, farmers and the Veterinary Health Service is the basic requirement for the efficiency of this system.

The meat inspection unit uses the knowledge on the housing and feeding conditions of each individual herd, the use of drugs indicated by the "Animal Treatment Index" (Meemken and Blaha, 2007), the mortality rate, laboratory results like the Salmonella antibody herd-prevalence as food chain information. This information is the basic tool for the risk-based meat inspection. Food chain information, including the herd prevalence of organ findings of previously slaughtered pigs, enables the meat inspection unit to decide whether to increase or decrease the intensity of the inspection of the according batch of slaughter pigs of the same holding of provenance.

The Cooperative also cooperates very closely with the competent authorities, as shown in Figure 1.

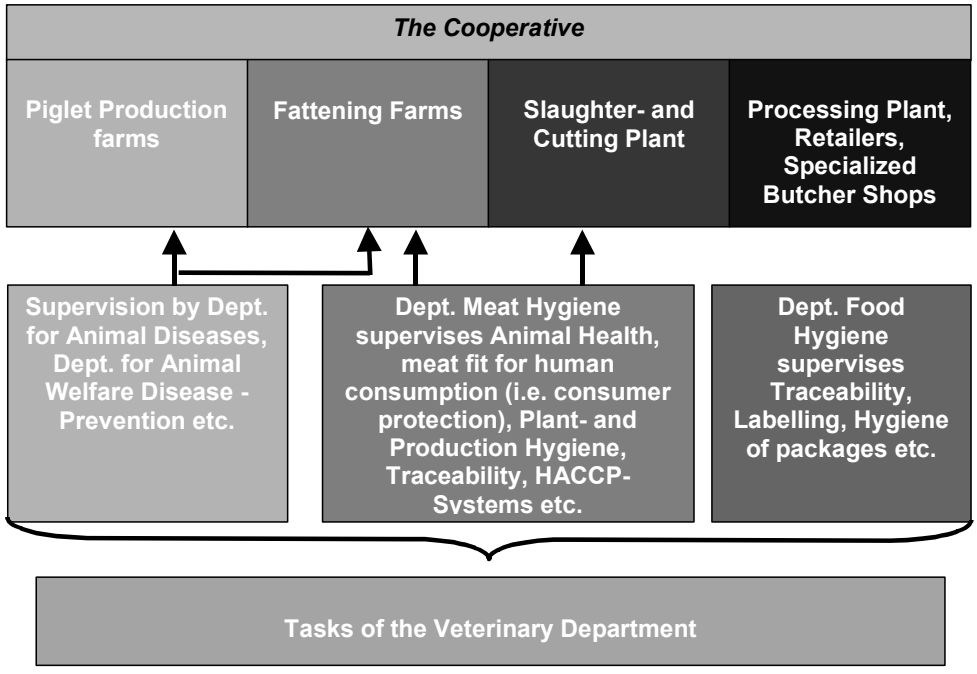

Figure 1. Cooperation between the State Veterinary Department and the Cooperative

ADVANTAGES OF THIS SYSTEM

The cooperation of a large number of farms enables the participants to acquire means of production (e.g. feed) collectively and thus gain profit. The feed comes from only three feed manufacturers and can therefore be influenced easily by the cooperative with respect to prescribing all components and ingredients. Constant sampling and control of the feed is easy and effective. Using only three suppliers makes also the required traceability easy. Attractive prices can be achieved on a basis of 50.000 tons of feed, negotiated biannually.

The work of the state meat inspection unit and, thus, the consumer protection becomes more efficient because all suppliers are known, and food chain information can be gained easily such as:

- Prevalence of organ findings in previous batches of the same supplier
- Herd health indicators such as mortality and drug use
- Salmonella monitoring results of previous batches of the same supplier
- Other laboratory results of previous batches of the same supplier
- The supplier's guarantee that the animals have not received drugs or medication with a withdrawal period greater than zero in a relevant period before slaughter

Besides that, these pieces of information are the basis of a proper risk-based meat inspection, enabling the meat inspection unit to decide about the intensity of the meat inspection for each batch of slaughter pigs.

CONCLUSIONS

Transparent meat production is possible. It is profitable for all participants of the described system. The system is not only enhancing food and consumer safety but also providing the means for a continuous improvement of the health and welfare in the animals that are kept and raised for food.