TRANSFERRING DATA FROM FARM TO SLAUGHTERHOUSE “ON-LINE” VIA CENTRALIZED REGISTER

Olli Ruoho, P Kortesniemi, P Halkosaari

The Association for Animal Disease Prevention (ETT), Seinäjoki, Finland

Introduction: According to European Union regulation (EC) No 853/2004 the meat producer has to present food chain information to the slaughterhouse operator at least 24 hours before the arrival of an animal to the slaughterhouse. The industry wants pre-information about the health status and medical treatments of the animals, because it is impossible to monitor each individual animal at slaughter for drug residues and zoonotic diseases. Meat producers, who want to meet the consumer demands for future markets, create quality assurance systems. An effective data flow between farms, slaughter plants and veterinarians is crucial for these systems. An Internet-based Centralized Health Care Register called NASEVA for Finnish cattle herds is used for storing this information and for presenting it on-line to the slaughterhouse operator and official veterinarian. The register can also be used to ensure traceability in the production chain.

Methods: A Centralized Health Care Register called NASEVA for Finnish cattle herds was introduced in 2006. Before that, some registers for health care had been maintained by the biggest slaughterhouses and dairy companies, but no uniform database for the whole country existed. The developing project was a joint operation of farmers, meat and dairy industry, veterinarians, advisors, research institutes and authorities. With the register it is possible to develop and follow-up the voluntary national health care scheme.

Figure 1. Interface - Technical scheme
NASEVA is a special unit of The Association for Animals Disease Prevention (ETT) for administration of the Health Care Register. All remarkable slaughterhouse-, dairy- and egg-packing operators are members in the ETT. The Association promotes the farm animal health and welfare, by coordinating the national herd health schemes and by instructing the import of animals, semen, embryos and animal feed. These measures control the risks of animal diseases and create a basis for the safety of foodstuffs derived from domestic animals. The slaughterhouse- and dairy operators with in the ETT are members of Naseva. The register is used by user ID and password via Internet.

A cattle herd is accepted to the register after signing a health care contract with a veterinarian. In the contract, the farmer authorizes the veterinarian, the slaughterhouse, the dairy operator and the official veterinarian to use the farm data. Information collected in the register includes a health care contract and a management plan including health status and production data of the herd. The management plan must be renewed by the veterinarian once a year in connection with a farm visit.

Finnish cattle herds belonging to the Health Care Register are in principle classified into two categories: the health class and the basic class. In the health class (national level) the farm must have systematic production control. In dairy farms, in particular, the use of antimicrobials is controlled and therefore the milk must be tested for possible residues after treatments. The farm in the health class has to follow the directions of the Association for Animal Disease Prevention (ETT) for biosecurity measures and for import of live animals, semen, embryos and feed. The herd must be free of BVD virus, clinical salmonellosis and trichophytosis. The animals must be kept clean and faecal contamination of the feed and drinking water shall be minimized by good feed hygiene. The veterinarian supervises the farmer to do the right things during the farm visits. For basic class (legal level) herds it is sufficient just to follow the EU and national laws.

The classification of a herd may affect to the price paid to the producer for meat or milk, though the amount paid varies between slaughterhouses and dairy companies. The most important rules of the health class concerning the health status of the animals etc. are also part of the basic rules of the subsidies for animal welfare paid by the state.

Except for development and follow-up of the national health care program for cattle farms, NASEVA is also used for collecting and storing data concerning health status and medical treatments of the animals on a farm. The system for recording this data in NASEVA was introduced in December 2009. The interface system in NASEVA for transferring data from the databases used by the practicing veterinarians was ready in May 2010. There are five different database system suppliers for practicing veterinarians in Finland and all of them have made an agreement to build their own part of the interface by the end of 2010. When both sides of the interface are ready, the medical treatment data can be transferred electronically. The farmer can also add medical treatments himself to the register. Meat inspection data is directly transferred from the databases of the slaughterhouses to the NASEVA register.

Results and discussion: The farm animal production has changed a lot during the last decades. A farm has become more and more as a part of the food production chain and the need for documentation and systematic animal health care has increased. The demands from the food industry and the consumers for quality, food safety, traceability and animal welfare have also increased. These demands have also affected on the EU and national legislation.

The food chain information for cattle was applied in Finland from the beginning of January 2010. It was applied for swine and poultry already a couple of years before. The food chain information is based on the European Union regulation (EC) No. 853/2004, and on the regulation 134/2006 of the Finnish Ministry of Agriculture and Forestry. The Finnish Food Safety Authority Evira has given the national orders.

According to the legislation, the official veterinarian at the slaughterhouse must have the food chain information data to be examined 24 hours before the arrival of slaughter animals. This information consists of the following data: The health status of the herd and the animals to be slaughtered, medical treatments with withdrawal periods during the last three months, possible laboratory results for disease examinations, name and address of the practicing veterinarian and previous meat inspection data.

The responsibility of the farmer is to produce the food chain information. The role of the slaughterhouse operator is to check the data and to make it useable for the official veterinarian.

The aim of the slaughterhouse operators is to receive the food chain information via internet instead of paper copies for every single animal. In the Health Care Contract for NASEVA the farmer authorizes the slaughterhouse operator to see the farm data. There are about 14500 cattle farms in Finland and about 7500 of them have joined NASEVA so far. Their volume of the meat and milk production is over 70 %.

In Finland the animals are transported directly from the farm to the slaughterhouse, so there are no animal markets. Also calves for meat production from dairy farms are collected and transported to the finishing farms by the slaughterhouses. The slaughterhouses have been required to keep records of all transported animals for decades. Thus, the traceability of the production chain has been very good for a long time. Finland is also free from the major infectious cattle diseases like enzootic leucosis, brucellosis, bovine tuberculosis and infectious bovine rhinotracheitis (IBR). The prevalence of infections like salmonella, EHEC, BVD, trichophytosis, paratuberculosis etc. is also very low.

Conclusions: It would be reasonable to move the focus of the meat inspection more towards pre-inspection before slaughter, based on the data from the producing farm. Transferring food chain information from farm to slaughterhouse via internet saves a lot of work and time. Visual meat inspection without a knife would be more cost effective than the traditional way, though we still need
also traditional meat inspection. The pre-inspection data would help to identify animals at risk to direct them to a special inspection e.g. to take residue samples from the right animals.

**Key words:** health care contract, health status, traceability, food chain information, meat inspection.

**References:**

The Association for Animal Disease Prevention ETT ry, www.ett.fi

The Centralized Health Care Register for Finnish cattle herds NASEVA, www.naseva.fi


