Animal I & R: Introduction of the Finnish system of veterinary surveillance and livestock development

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Veterinary interest in animal identification and registration

- Location of holdings / animals
  - geographical location of a holding
  - relative location of group of holdings / density
- Number of holdings / animals
  - number of animals of certain species
  - number in mixed farming including other animals
- Movement of animals / groups of animals
  - within area as well as to and from the area

Traceability of animals and products of animal origin

Registration as a tool for veterinary control

Domestic movement -> possible transmission of a disease / contaminant within Finland

Bovine database

- First extensive identification and registration system of production animals was initiated in 1994 in Finland (Directive 92/102/EEC)
- The bovine database was built on the milk recording system run by Agricultural Data Processing Centre Ltd (ADC) which included 50% of all bovine herds and 70% of all cows (total number of bovine farms was 42,000 with 1,350,000 bovines)
- In 1995, the system was extended to cover all the bovines
- Bovine premium schemes in EU were based on identification of the animals

BSE crisis

- After the BSE crisis, a new legislation outlining the bovine identification was introduced
- New regulations described more precisely requirements for the function of the database itself and for the information flow into the database
- Finnish bovine database was the first database which was recognised fully operational in EU in May 1999
Current situation

• The identification system of bovine animals in Finland is operated by ADC in the close supervision of Ministry of Agriculture and Forestry (MAF) and co-operation with Evira

• All main operations such as ordering new ear tags for tagging the newborn calves and notifications of animal births, deaths, movements and need for retagging of the animal are centralized to ADC

• All bovine keepers, slaughterhouses and dealers have to notify the database.

• In 2003, an upgraded database was introduced

Every bovine

• registered
• identified
• by ear tags
• both bearing the same unique identification code
• followed
• by reported movements between holdings

Information channels

• The major part of the information notified by the keepers comes into the database via electronic communications
  • PC-program
  • internet-program
  • voice response telephone.

• Paper based notification or notification through customer service has been diminishing during the past years

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• Description of system
  • Benefits
    • Future prospects and challenges

Benefits for farmers

• Receiving an information letter every other month to verify the status of their animals
• Need not to keep a manual holding register of their animals since this letter includes a list of animals, designed to serve the purpose
• The PC-program gives an easy access to the database and e.g. a tool for the farmers to make premium applications easily

Benefits for animal health and food safety

• Animals only with known origin and lifecycle can enter to the food chain.
• Outbreak of contagious animal disease
  • tracing back the animals
  • identify the possible contacts of infected animals
• Zoonooses or contaminants
  • epidemiological investigation
  • tracing back products of animal origin
• Contingency planning
• Risk assessment
Movements of slaughter pigs to one of the abattoirs in Western Finland

(analysis of pig-movements registered between May 1 and December 31, 2002, MMM/TKIE)

Mean distance = 79.5 km
Std. Dev. = 44.6 km

Total number of transactions = 5,266

Movement transactions

Distance in km

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Lyytikäinen & Raulo, 2003 (unpublished)

Simulation results applying pig-movement register data

Distance in km between the primarily infected farm and predicted secondary outbreaks

Location of the primarily infected farm in one of the official veterinary districts of Finland

Raulo & Lyytikäinen, Epidemic outbreak of classical swine fever in Finland, Quantitative risk assessment (EELA publication 06/2005)

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Future prospects for production animal I & R

• Current identification and registration of production animals cover in Finland
  • Bovine database
  • Batch movement database system for pigs
  • Identification of ovines/caprines with movement control based on paper documents
• Requirements and number of users increase
• Electronic databases have to be extended to other animal species such as sheep, goats and poultry

Challenges for production animal I & R

• Building the databases more clearly for the use of animal health purposes
• Easy combination of animal registers and geographical information systems for emergency situations
• Novel uses of registration data in health care, animal welfare and contingency planning of contagious animal diseases
• Harmonisation of the legislation for identification and registration of different species
• Multinational identification and registration systems
Key of success

Good balance between
• the official requirements
• national benefits
• benefits for the everyday work of the animal keepers
• others involved