



**Evira**

**National Salmonella control  
programme - good practice**

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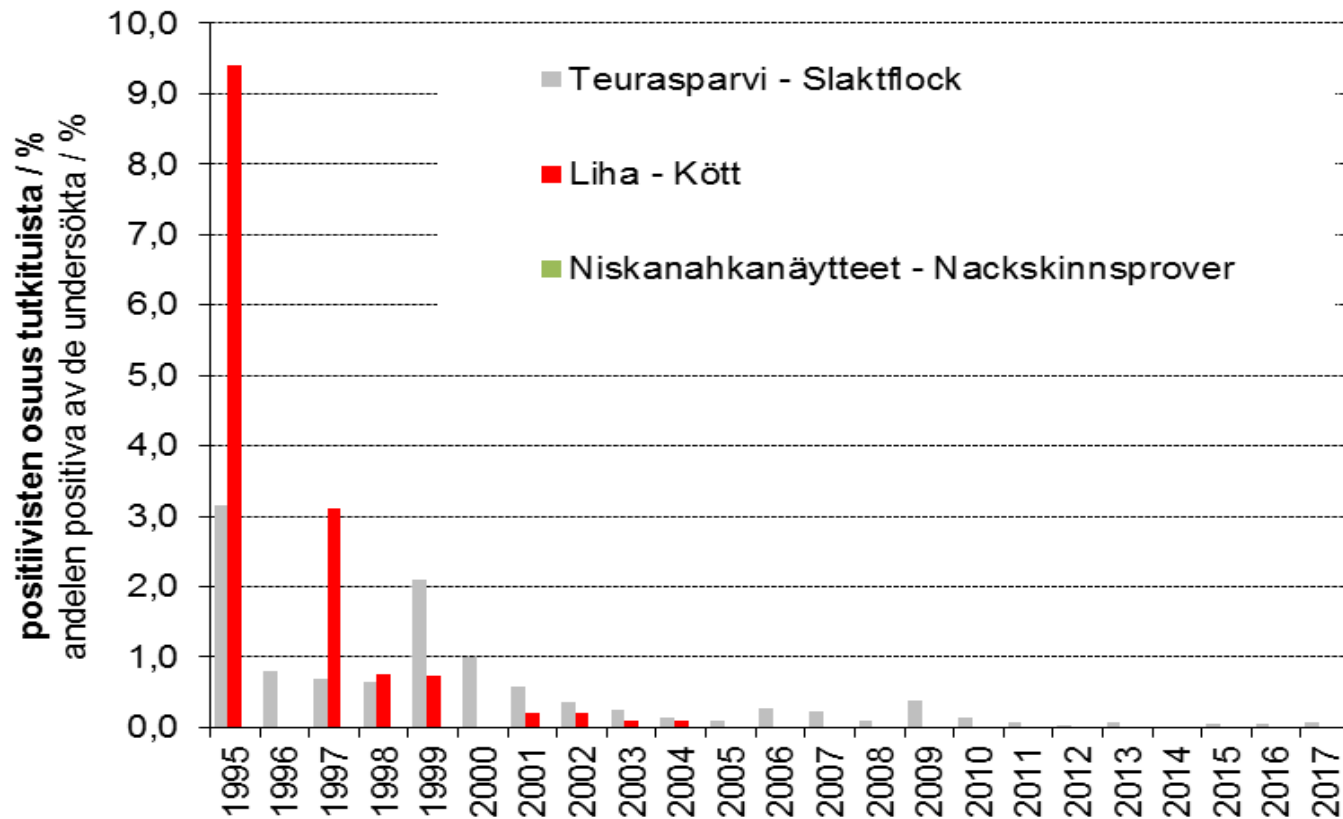
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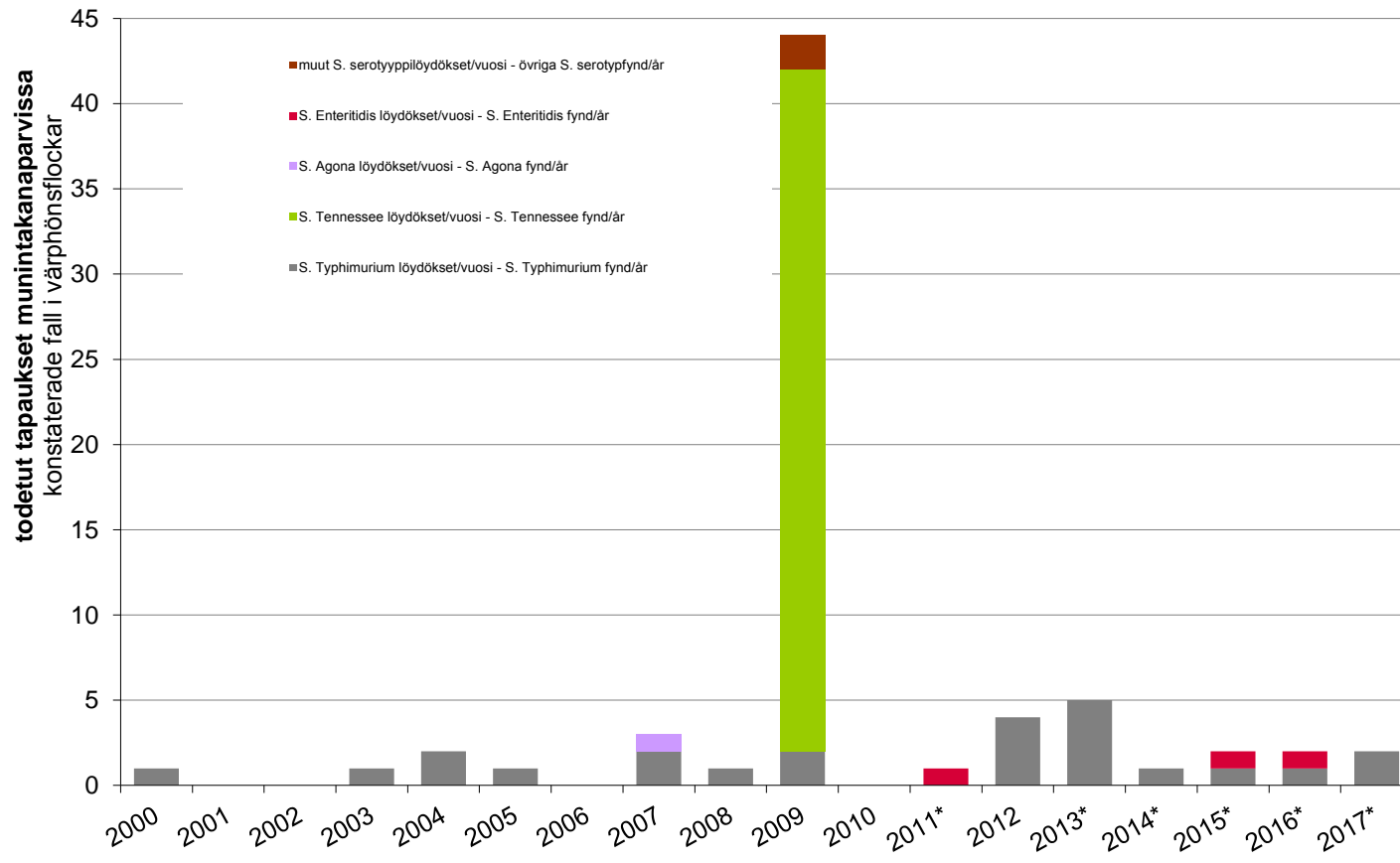
# Background

- 1995; Finland joined EU, first NSCP approved by Commission started, but Salmonella control began decades before this
- Programme covers live poultry, pigs and cattle; meat and eggs
- The aim of the programme is to minimize the human exposure to Salmonella from animals and meat and eggs
- The target of the programme is to keep the annual prevalence of Salmonella (all serotypes) in each animal and foodstuff group below 1%
- Finland got special/additional guarantees for Salmonella when joined EU to protect public health;  
meat, egg and poultry batches/flocks must be tested with negative Salmonella results before sent to FI

# Results 1995-2017, Salmonella spp. positive (%) broiler flocks (grey), crushed meat samples at cutting plants (red), neck skins (green)



# Results 2000-2017; number of Salmonella spp. positive laying hen flocks





# Bases

- Good and continuous co-operation between authorities, farmers, industry etc.
- Common goal and will
- Continuous training of farmers, local official veterinarians, laboratories..
- Clear instructions, guidelines etc..
- Motivation
- Compensations for farmers, in FI voluntary insurance system

# Prevention

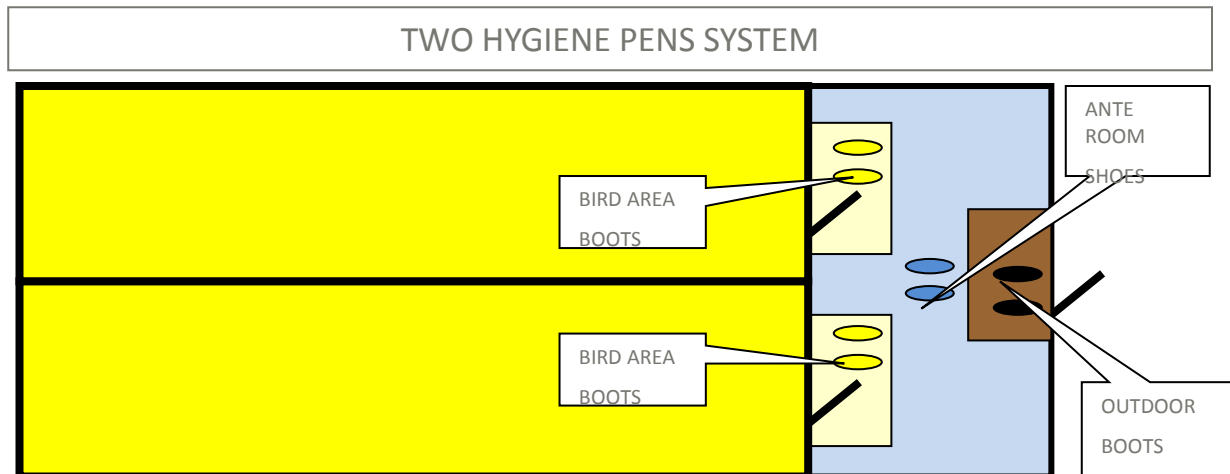
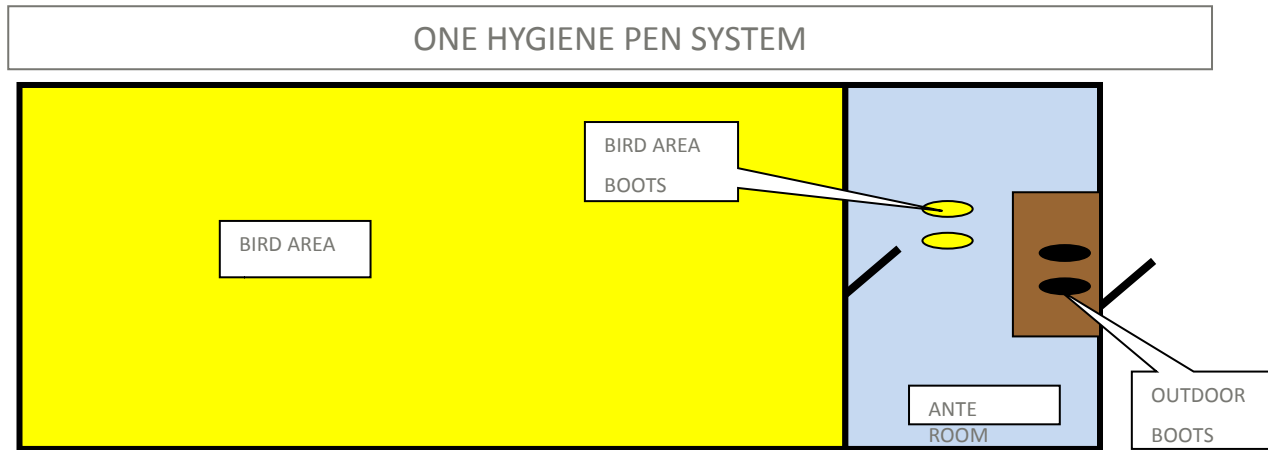
## Biosecurity at farms

- Hygiene barrier at the door
  - Change of the clothes / coverall
  - Change of the boots
  - Hand washing and disinfecting
- All in – all out  
Cleaning and disinfection between each flock
- Pest control, no vegetation around poultry houses etc..

## Feed control

- Salmonella control and monitoring at feed mills;
  - clean raw material
  - swab/environmental sampling after heat treatment (cooler etc)
- Protection of feed at the farm





# Different hygiene barriers



# Monitoring

- Routine sampling of flocks; sampling methods and frequencies according to the EU regulations (some national modifications)
- Training of farmers and officials how to take samples and how to send them to laboratories
- Training and collaborative tests for laboratories
- Immediate notification of positive results to authorities and farmers from laboratory
- Isolated strains to national reference laboratory for serotyping, phage typing, genotyping, resistance testing
  - important to get epidemiological data
- Follow-up that all the required samplings by farmers and official vets are taken
  - challenging
  - plans to have an IT-system; flock-database with connection to farm register and laboratories
- Important that slaughterhouse and egg packing center operators get information of all flock sampling

# Eradication at farm

- Restrictions to holding immediately after a positive flock
- Culling or slaughtering of positive flock + heat treatment of meat, destruction or heat treatment of eggs
- Confirmation sampling only in very exceptional cases if suspicion of laboratory contamination
- Other flocks at the holding
  - if same epidemiological unit; culling or slaughtering
  - if different epidemiological unit: sampling
- Sanitation plan, may need environmental sampling
- Disposal of litter, manure, feed etc.
- Cleaning and disinfection of premises and equipment
- Swab-sampling before new flock; official sampling, 10-100 samples
- Antimicrobials never for prevention, treatment or eradication of Salmonella

# Epidemiological investigation

- Zero tolerance policy: always action when Salmonella is detected
- Always try to find out the source/reason for infection
  - incoming birds (transmission from breeding or rearing holding or hatchery or transport)
  - feed
  - failure of biosecurity (transmission from environment or persons)
  - failure of cleaning and disinfection after previous flock
- Trace back and forward
  - sampling of contact holdings: more sensitive methods than in routine sampling, environmental samples (dust or swab) always included
- Sampling of feed and feed environment at farm
- Trace origin of feed and contact feed operator

# Acknowledgements

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Thank you!

