

Detection of cattle, swine and sheep herds infected with *Salmonella* by different surveillance systems in Sweden during 1993-2009

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Introduction

Control of *Salmonella* in the Swedish animal production chain was initiated more than 50 years ago. The aim of the control programme is to have an animal production free from *Salmonella*. The programme covers the whole production chain, from feed to food of animal origin.

The prevalence of *Salmonella* in the Swedish animal production is very low: during the years of 1996-2009 an average of 0.02% of beef, 0.01% of pork and 0.03% of poultry carcasses were contaminated with *Salmonella*.

Rapid identification of herds infected with *Salmonella* is essential to prevent further spread of the infection and to facilitate the sanitation. In order to increase knowledge about the efficiency of different surveillance systems, information on how the infection was detected was collected for cattle, swine and sheep herds between 1993 and 2009.

Materials and methods

Surveillance in animals

In case of suspicion of *Salmonella* in an animal, a veterinarian is always obliged to take samples and prevent further transmission. Finding of *Salmonella* in feed, feed mills, animals and food is notifiable. When *Salmonella* is confirmed, the holding is put under restrictive measures, an epidemiological investigation is performed and a plan to eradicate *Salmonella* is established.

At slaughterhouses, intestinal lymph nodes of approximately 3000 cattle, 3000 slaughter pigs and 3000 breeding swine are annually tested as well as carcass swabs from 3000 cattle and 6000 swine.

Material

We collected information on how *Salmonella* was detected on cattle and swine herd in 1993-2009. Sufficient data was obtained from 186 cattle, 82 swine and 11 sheep herds.

Conclusions

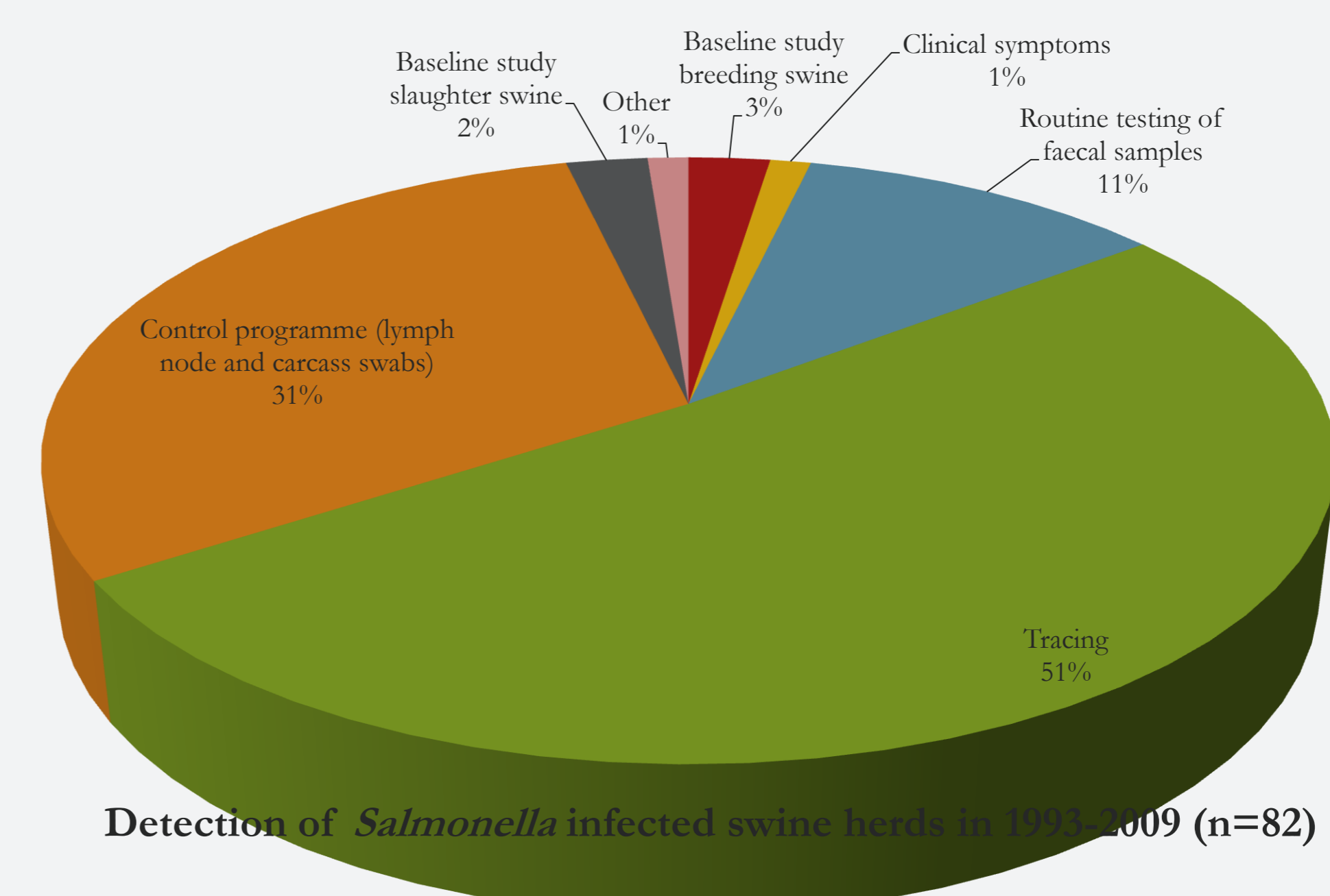
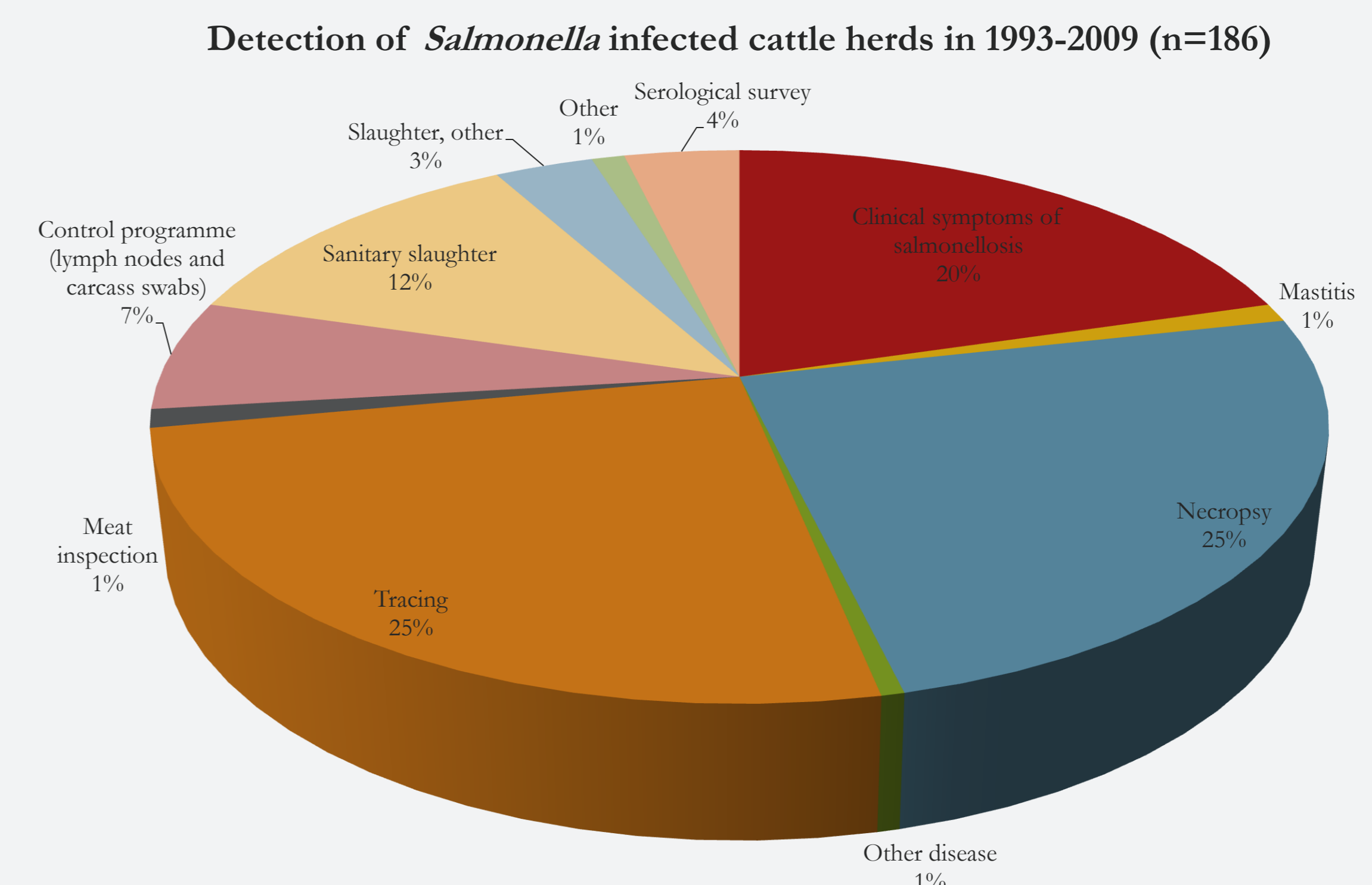
These findings highlight the importance of clinical surveillance in cattle most (58 %) infected cattle herds were detected due to clinical symptoms either at farms, in necropsies or by sanitary slaughter.

Trace-back or trace-forward investigations identified most swine herds (51 %), which was partly due to a large feed outbreak in 2003 (2). However, non-targeted surveillance at abattoirs revealed almost a third of the infected swine herds which suggests the need for an additional targeted surveillance.

Salmonella control programme at abattoirs revealed 30 % of infected swine herds but only 7 % of infected cattle herds.

Only ten sheep herds were tested positive for *Salmonella* during the study period.

Results



Detection of *Salmonella* infected sheep herds in 1993-2009 (n=11)

