

# Assessment of risk to humans related to *Salmonella* in bile on pig carcasses

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## INTRODUCTION

*Salmonella* is the main zoonotic hazard in pork in the European Union

In 2020, the Danish competent authorities (CA) raised the concern that bile contamination of pig carcasses could be related to exposure of humans to *Salmonella*

## OBJECTIVES

To assess the role of bile for exposure of consumers to *Salmonella*

## MATERIALS & METHODS

To address this, a risk assessment was initiated, including a prevalence study

First, a pilot study was conducted to identify ways of aseptic sampling

Then, 299 gall bladder samples were collected from finishing pigs from 28 Danish pig herds

The samples were subjected to standard laboratory investigation

## QUANTITATIVE MODELING

A simulation model was set up to simulate the number of carcasses contaminated with *Salmonella* from bile that could be overlooked - if the responsibility for handling contamination were to rest solely with the food business operator (FBO)

Model parameters originated from

- 1) the collected data
- 2) the Danish meat inspection database
- 3) expert opinion from CA and FBO

A basic and a worst-case scenario were run

## RESULTS & PERSPECTIVES

None of the 299 bile samples were positive for *Salmonella*

The simulation showed that the risk to human health was negligible

The legislation has now been changed, so bile contamination on finishers is no longer considered a risk of *Salmonella*

The study is an example of modernisation of meat inspection in an evidence-based way

## CONTACT

If interested in learning more, please contact Lis Alban on [lia@lf.dk](mailto:lia@lf.dk)



## PUBLICATION

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