

A practical framework for tracing sources of Salmonella in a pig slaughter plant

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Introduction

Salmonella causes around 30 000 cases of human illness per year in The Netherlands, of which an estimated 25% is caused by pork. Salmonella carrying pigs and resident flora on slaughter equipment are relevant sources of carcass contamination. Although recognized, these sources from which and the routes through which Salmonella is transmitted to the pig carcasses during slaughter are not well understood in a quantitative way.

Here, we present the application of a sampling scheme at predefined potential sources and at downstream sampled carcasses to get insight in the change in Salmonella numbers throughout a slaughter plant. The resulting data are implemented in a biotracing system for Salmonella in the pork chain. This results in a framework that:

- Gives insight in the most important source of Salmonella upon a contamination event.
- Becomes more powerful in source tracing each time new data is added.
- Can be used as a monitoring system on a day-to-day basis.
- Points to targeted intervention

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