



The Prevalence of *Listeria* Species in South African Pork Production at Farm Level

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Abstract

The microbial safety of food plays a vital role in the food industry, thus a vast and comprehensive “farm-to-fork” approach to food safety is essential in order to reduce the extent of foodborne diseases. Foodborne pathogens are the causative agents of most food-related outbreaks globally. A major reservoir of foodborne pathogens are food producing animals, including pigs, cattle and chickens. The contamination of animals and animal products throughout the food chain poses a threat to human health due to the difficulty in controlling the spread of pathogenic microorganisms throughout the food production chain.

A total of 558 samples were collected from three pig farms in the Western Cape in 2020. Faecal and swab samples were collected from pig species as well as environmental samples, including feed and water, swabs of biosecurity bathrooms and general infrastructure. RAPID'L.mono chromogenic agar was used to detect *Listeria* species. *Listeria monocytogenes* isolates were confirmed using the 3M Molecular Detection System (MDS) for detection of the *hlyA* gene. Confirmed *Listeria monocytogenes* isolates were tested for resistance against two commercially used QAC-based sanitisers at the recommended concentration.

From the 558 samples analysed, 359 (64%) were positive for *Listeria* species, of which 15 (2%) isolates were characterised as *Listeria monocytogenes* on RAPID'L.mono chromogenic agar. These 15 presumptive isolates were analysed using the 3M MDS and all 15 isolates were confirmed as *L. monocytogenes*. All *L. monocytogenes* isolates were susceptible to both QAC-based sanitisers.

Biography: Caitlin McQuillan

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