TITLE: *Salmonella* SPP. TRACKING ON A PORK PRODUCTION CHAIN

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ABSTRACT:
Pork and its products are considered as important sources of *Salmonella* spp. to humans, demanding proper monitoring of this foodborne pathogen in the pork production chain. This study aimed to detect the main sources of contamination by *Salmonella* spp. in the pork production chain. Ten pig farms and a slaughterhouse located in Paraná state were visited between September/2016 and February/2017 to collect samples from different steps of pig production (floors of pig barns and lairages, feed, water), slaughtering (carcasses before bleeding, after buckling, after evisceration and after the final washing, and tonsils and lymph nodes), processing (knifes, tables and hands of the employees), and end products (cuts). A total of 800 samples were obtained and subjected to *Salmonella* spp. detection according ISO 6579. In pig farms, *Salmonella* spp. was detected in 3 samples from pig barn floors, and in 7 samples from lairages. This difference can be explained based on the stress which the animal is subjected at the preslaughter that is capable to promote an increase of the *Salmonella* sp. excrection by the carrier swine. *Salmonella* spp. was also detected in 45% of tonsils and 43% of lymph nodes, but only two correspondent carcasses were also contamination by this foodborne pathogen after bleeding (n = 1) and after final washing (n = 1); demonstrating the efficiency of slaughtering process to avoid the contamination from natural infected pigs to the carcasses. During processing, *Salmonella* spp. was isolated in 1 (2.5%) sample from knives, 2 (5%) samples from steel gloves from employees, and 4 (10%) samples from end cuts. Despite the high number of *Salmonella* carrier pigs, the results from slaughtering and processing indicate that the procedures adopted by the slaughterhouse are enough to control and to avoid the cross contamination to the facility environment and to end products.

Keywords mesenteric lymph nodes; pork, *Salmonella,* slaughtering, tonsils

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