

THE USE OF TOOLS RELATED TO MOLECULAR CHARACTERIZATION, SYSTEMIC ANALYSIS OF STAKEHOLDERS AND GEOMATICS FOR IDENTIFICATION OF THE PRINCIPAL VECTORS AND OF CONTAMINATION BY BACTERIA AND VIRAL INDICATORS AT FARM AND SLAUGHTERHOUSE LEVEL

PROJECT LEADER

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PROJECT OBJECTIVE

To identify potential vectors and microbial dissemination among herds and at a slaughterhouse using geomatics, systemic and genomic tools.

Biosecurity is a shared responsibility. All stakeholders must be involved in the food safety process to limit the microbial dissemination and animal health/food safety impact.

FINAL RESULTS

Results of the systemic analysis showed that food safety among industry stakeholders could be improved by establishing a proactive, reactive, interactive and systemic approach.

Results from the geomatic analysis showed that half of the identified viral and bacterial contaminations came from the slaughterhouse. The slaughterhouse yard showed to be highly and diversely contaminated. Trucks can become an important vector of microbes dissemination in a production network. Results showed that cleaning and disinfecting procedures constitute a good basis to minimize the presence of Salmonella and E. coli in trucks. Although current procedures should be improved as evidence of viral contamination was found after washing and disinfecting transportation trucks. Furthermore, the inside carpets and the outside of the truck should be included in the cleaning protocol.

Results showed that ETEC (Enterotoxigenic E. coli): F4 and Salmonella spp. can be used as markers to describe bacterial dissemination events in a network and that rotaviruses can be good indicators of viral contamination in the environment.

Simple actions such as cleaning and disinfection of transportation trucks can have a significant impact!

