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Evaluation of the microbiological quality of dry aged beef in Belgium

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Dry-aging is a process whereby meat is stored at low temperature and relative humidity for a long period of time, resulting in improved tenderness and the development of a unique flavor. The aim of this study was to evaluate the microbiological quality of dry-aged beef produced in Belgium. The crust of 29 loins at the end (n=15) and beginning (n=14) of the ripening process were sampled from 15 companies. From each loin, 25 cm^2 of the surface of lean and adipose tissue were sampled and analyzed for total psychrotrophic aerobic bacteria, *Enterobacteriaceae, Escherichia coli*, coagulase positive *staphylococcus, Pseudomonas, Brochothrix thermosphacta*, psychrotrophic lactic acid bacteria, yeasts, moulds, *Listeria* spp. and *Listeria monocytogenes*. The total psychrotrophic aerobic bacteria on the dry surface at the end of the dry aging process varied between 2.08 and 8.81 log10 cfu/cm^2 on lean and between 1.60 and 7.95 log10cfu/cm^2 on adipose tissue. Most of the lean and adipose tissue at the end of the dry aging process showed high numbers of Pseudomonas (median>4.7 log10cfu/cm^2), lactic acid bacteria (median>3.7 log10cfu/cm^2), and yeasts (median>4.0 log10cfu/cm^2). On more than half of the loins, moulds were found in detectable numbers (>1 log10cfu/cm^2). Large variations were also seen for loins at the beginning of the dry aging process. None of the samples showed detectable levels of *E. coli*, *Listeria* spp. and *L. monocytogenes*. In conclusion, the microbiological quality of dry-aged beef varied greatly which emphasizes the need to identify the main factors contributing to these large variations.

Biography

Tanuja K G M Gowda has completed her Master's in Veterinary Public Health at Maharashtra Animal and Fishery Sciences University, India. Currently, she is pursuing PhD at Ghent University. She has published two papers in reputed journals.

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