Assessment of Quality Parameters in Dry-Aged Beef: Insights from Industrial Practices

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Objectives: In recent years, aged beef has gained popularity in Portugal and is now considered a fashionable choice. The European Commission has recently established the commercialization conditions for dry-aged meat, nevertheless, the specific requirements for the process have not been outlined. The diverse conditions under which meat maturation is conducted today and the limited data on dry aging of meat, create significant variations in the quality and safety of matured meat products available on the market. Thereby, we aim to conduct a comprehensive evaluation of the specific parameters associated with the dry aging process of beef primal cuts. This evaluation will include aging days, temperature, relative humidity, and air flow. Also, we will be collecting meat samples on days 0, 21, 30, 45, and 60 for thorough assessment, focusing on eating quality (flavor, tenderness, and juiciness), economic factors (shrinkage, retail yields, and cost), and microbiological quality and safety. We are particularly looking into the presence of psychrophilic microorganisms, *Escherichia coli*, total lactic acid bacteria, *Enterobacteriaceae*, *Pseudomonas*, molds and yeasts, as well as pathogenic bacteria such as *Listeria monocytogenes*, *Salmonella*, and Shiga toxin-producing *Echerichia coli* (STEC) on days 0, 45, and 60.

Conclusions: We believe that this project is highly valuable, and our results will be essential in establishing clear guidelines and recommendations for companies and retailers dedicated to producing dry-aged beef. Given the growing demand for dry-aged beef products, there is an urgent need for research in this area.

Keywords: Dry-aged, Meat Quality, Food Safety

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