

ABSTRACT

(keywords: pork; sensory, physico-chemical, technological, microbiological, and hygienic qualities)

The general objective of the present dissertation is the analysis and valorization of pork quality, through a multifaceted approach that combines theoretical research with experimental investigations. The structure of the work is divided into two main parts: the first addresses theoretical aspects, while the second highlights the author's original contributions resulting from the conducted research.

The introduction presents the general context of the topic, underscoring the economic and nutritional importance of pork in the food industry. It highlights the role of scientific research in improving the quality of meat and its derivative products, in the context of current consumer demands and food safety standards.

Part I – Literature Review compiles information from specialized literature concerning the characteristics of pork and the factors influencing its quality, as well as modern trends in the superior valorization of meat.

Chapter 1 analyzes in detail the concept of pork and defines its quality from physico-chemical, sensory, technological, and microbiological perspectives. It examines the internal and external factors that influence these characteristics, from breed and diet to slaughtering and processing conditions. Furthermore, modern methods of meat preservation are presented, considering the necessity of extending product shelf life.

Chapter 2 explores the methods of pork valorization by classifying existing processed products and highlighting the differences between the conventional industry and small to medium-sized processing enterprises (SMEs). It emphasizes the role of raw and auxiliary materials in obtaining finished products, as well as the impact of applied technologies on their quality.

Part II – Original Research comprises the experimental activity conducted by the author, based on a rigorous research design.

Chapter 3 presents the institutional framework in which the research was conducted: the University of Life Sciences and the processing unit "Fabrika de Fum," highlighting the infrastructure and resources involved in carrying out the experiments.

Chapter 4 describes the general experimental design, establishing the work stages, objectives, and analyzed variables.

Chapter 5 details the aim of the work, the materials used (raw materials, ingredients, technologies), and the applied analytical methods: physico-chemical, sensory, and microbiological methods, as well as statistical data processing techniques.

Chapter 6 is dedicated to the presentation of the experimental results, structured into three series of experiments:

Series I evaluates the quality of the pork used in processing by analyzing its sensory, physico-chemical, technological, and microbiological characteristics. A sanitary quality index is also calculated, which is relevant to the product's safety and nutritional value.

Series II focuses on the valorization of the meat through the production of derivative products with and without a protective casing (such as *cabanos* sausage, summer salami, frankfurters, *mușchi țigănesc*, *kaizer*, and *pastramă*). The specific processing workflows for each product are detailed.

Series III analyzes the stability of these products over time, according to the packaging type and shelf life. The sensory, physico-chemical, and sanitary characteristics are re-evaluated at different intervals of the storage period to establish the minimum acceptable durability.

The final section synthesizes the conclusions drawn from the research and formulates recommendations for optimizing technological processes and increasing the added value of pork. The importance of applying modern technologies and rigorous quality control at all processing stages is emphasized.

The dissertation concludes with a comprehensive bibliography, which includes the scientific sources consulted in the elaboration of the study – specialized books, scientific articles, legislative regulations, and technical standards.