SIMULATION AND IMPORTANCE OF A TRACEABILITY SYSTEM IN DAIRY MICROPRODUCTION FOR ENSURING FOOD SAFETY AND QUALITY

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Abstract

Traceability, which provides the ability to track each step of the production chain from raw materials to the finished product, is crucial for guaranteeing the quality and safety of food. In this study, we examine the importance of implementing an effective traceability system in the production of milk and by-products from the Milk Microproduction Workshop of Iasi University of Life Sciences. A system like this makes it possible to quickly identify the causes of non-compliance, reducing the risks involved in removing items from the market and safeguarding consumers' health. In addition, the article offers a realistic simulation of a traceability exercise that involves monitoring raw milk batches, processing them, and identifying each final product, including cheeses and yogurts. The results of the exercise show that a well-designed traceability system increases consumer confidence in the products obtained within the workshop, while guaranteeing compliance with existing laws. The results emphasize how this system must be continuously modified to satisfy market demands and enhance the efficiency of the production and food safety procedures.

Key words: traceability, food safety, food quality, HACCP.