

Organic Parmesan Cheese On-line Traceability: A feasible solution

Zanasi, C.¹, Nasuelli, P.², Buccolini, F.³, & Pulga, A.⁴

Keywords: organic Parmesan cheese, traceability, software, casein label

Abstract

The need to increase the whole of the organic Parmesan cheese supply chain agents' trust in the products origin encourages the adoption of a transparent traceability management. An experiment has been carried out to implement an effective traceability system for organic Parmesan cheese. A traceability solution was developed by the joint work of the University of Bologna, ICEA (an organic certification body), and Voxnet (a system integrator specialized in agro-food and supply chain management. Its features include a standard procedure for data management along the supply chain, a simple and cheap system for the data uploading and transfer, and making data easily and quickly available. The result is web-based traceability software that manages the data collected at the dairy plant. Its implementation implied the definition of an online standard traceability procedure, linking all the supply chain agents, and the adoption of a technically sustainable data reading support; so far other supports, like RFID tags, did not work. We adopted a barcode system printed on a casein label placed on the Parmesan cheese pie; the data, collected at the cheese pie level, are transferred along the supply chain. The traceability process was tested in different organic dairy plants, and a cost estimation of its application to the organic cheese producers was performed. The system works; a 100% success in reading the data from the barcode after 24 months resulted. The process seems economically feasible; even if a formal calculation of the consumer-trader willingness to pay has not been performed, a cost increase of five eurocent/kg (the worst scenario) was considered acceptable by the cheese producers involved in the test. Further research should focus on the supply chain governance; previous experiences show that managing the problems related to the inter-firm relationship seems to be one of the most important constraints to the introduction of Parmesan cheese supply chain management.

¹ Diproval Bologna University, e-mail: cesare.zanasi@unibo.it

² e-mail: piero.nasuelli@unibo.it

³ Vox Net S.C. e-mail: Fabio@voxnet.it

⁴ ICEA – Emilia Romagna, e-mail: dir@icea.info