

The Contribution of Innovative and Intelligent Packaging to the Loss and Generation of Food Waste

Adamantios Skordilis

Ce-Innovations, Ag. Paraskevi, Greece

Abstract

The constant changes in our consumer goods, at industrial level, at retail and distribution level, are important challenges for maintaining food safety and quality, but also for food waste and waste production. This background enables the packaging industry to offer innovative solutions that meet the changing demands of the food industry and consumers, as well as sustainable development. "Intelligent packaging" is defined as a packaging system that can perform intelligent functions - such as detecting, perceiving, recording or communicating - to support decisions and remedies, thus extending life, increasing safety and quality for improve, provide information and warn of potential problems. "Smart packaging" with additional functions, goes beyond protection, restriction and the provision of product information. In general, there are three basic technologies used for smart packaging: data carriers, pointers and sensors. As data carriers are the barcodes, QR Codes, and RFID tags. The indicators that can be used are the time-temperature indicators, freshness indicator, gas indicators. The sensors are divided into biosensors and gas sensors. However, not every application is useful or necessary to all factors. For every different food product type, we should examine, whether smart packaging is worth it or not. The use of such technology is meaningful only, if it really reduces food waste and offers benefits to the market.

Keywords: The contribution of innovative and intelligent packaging to the loss and generation of food waste.