

Comunicările susținute în cadrul secțiunii organizate la Chișinău

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Plastic packaging: public perceptions and sustainable development perspectives

Ambalajele din plastic: percepții publice și perspective de dezvoltare durabilă

Plastic packaging intended for contact with food occupies a central place in the modern food chain, playing an essential role in ensuring quality, extending the shelf life of products and reducing food losses. However, in recent years, in addition to the objective of consumer protection, public policies have increasingly integrated concerns related to the environmental impact generated by plastic packaging and its associated waste. The principles of the circular economy and the life cycle approach to packaging have become major strategic directions, although the development of plastic packaging from recycled materials creates additional challenges related to the variability of the composition and the need for additional controls to guarantee food safety. Public perception of plastic packaging is evolving rapidly, amid increasing awareness of environmental protection and human health. Consumers associate recyclable, reusable or compostable packaging with more natural and safer products, showing a clear preference for alternatives considered environmentally friendly. Plastic packaging is often perceived negatively, especially in the absence of clear information on its safety and environmental impact. Although public awareness of concepts such as recyclability or biodegradability remains relatively low, most consumers support tighter regulations to prevent adverse health effects. Globally, less than 10% of the total amount of plastic waste generated is

recycled to date, with the rest being incinerated, landfilled or disposed of uncontrolled in the environment. Polyethylene terephthalate remains the most recyclable type of plastic used in food packaging, due to its low diffusion coefficient and high melting point. However, recycled packaging may contain chemical contaminants introduced during use, waste processing and recycling, which can subsequently migrate into food. Studies have identified the presence of impurities in recycled PET, although these were not intentionally used. Available comparative studies generally indicate a higher level of chemical migration from recycled materials. Thus, the use of recycled materials in food packaging offers significant benefits from a sustainability perspective, but also involves complex challenges related to food safety.

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