

## The Role of packaging technology in reducing loss during the food product life cycle

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### **Abstract:**

Food packaging is an essential part of modern society. Commercially processed foods cannot be processed and distributed safely and efficiently without packing. The World Packaging Organization (WPO) estimates that more than 25% of food is lost due to poor packaging.

Packaging can reduce the large loss amount of food through the continuous development of packaging materials, closing techniques and methods.

**Research problem:** Weak performance of food product packaging, which leads to increase of accidental loss during the life cycle of the product, as well as the absence of packaging role in reducing the loss in the food product until it reaches the consumers' hands safely.

**Aims of the research:** To monitor the percentage of loss in the food product during the product cycle from the harvest stage to the consumer's hand. Reduce loss of food during the life cycle of the food product through the use of appropriate packaging technology and methods for each stage. Setting guidelines to the Egyptian packaging factories and the involved parts to reduce the loss of food product by perfect suitable packaging.

The paper results the identification of the appropriate packaging strategies to reduce waste of food during the product life cycle and setting guidelines to reduce food loss in different stages.

Finally, emphasis was placed on the role of packaging in reducing waste at each stage and the importance of adopting new packaging materials and technologies, to extend the shelf life of foods and recommend the need for continuous development by further research and development to understand the impact of different packaging materials on products.

**Keyword: Keywords:** food loss - product life cycle - packaging life cycle analysis - packaging technology - opening and closing methods