Environmental impact of packaging and food losses in a life cycle perspective: a comparative analysis of five food items

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Abstract

The environmental concern and development issues regarding packaging has for 20 years to a high extent been on packaging when it has become waste. To reduce the environmental impact from the whole food packaging system it is also important to develop the packaging’s ability to reduce food waste. In some cases it may be necessary to increase the environmental impact of packaging in order to reduce food waste. In this paper, the environmental impact of packaging and food losses and the balance between the two has been examined for five different food items. The results show that packaging’s that reduce food waste can be an important tool to reduce the total environmental impact, even if there is an increase in impact from the packaging itself. This is especially true for food items where the environmental impact of the food is high relative the packaging, for example cheese, and for food items with high losses, for example bread. It is important to analyse the risk of increasing food losses when packaging design changes, for example, when the aim is less packaging material, which is the main intention of the packaging and packaging waste directive of the European Union.

Keywords: Packaging; Packaging development; LCA; Food; Food losses; Consumer; Environmental impact