THE USE OF INTELLIGENT PACKAGING IN ORDER TO REDUCE FOOD WASTE

UAB
Universitat Autònoma de Barcelona

AIMS

1 Understand the currently food waste problem

2 Know the functionality and the importance of packaging

3 Describe the different types of food packaging and getting interested in intelligent packaging

4 Find applications to use intelligent packaging to reduce food waste

FOOD APPLICATIONS

EXPECTED SHELF LIFE [1]
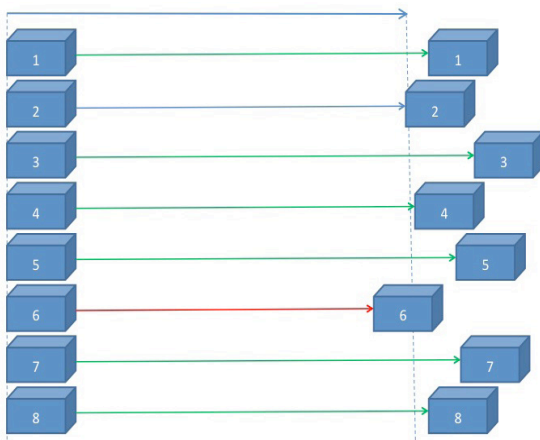
Best before date (BBD) fixed by the company can be different from the real BBD

FRESHCODE [2]

Example of freshness indicator

ONVU [3]

Example of time-temperature indicator

FOOD WASTE

⟩ 1/3 of world production = **1.300 million of tones per year**

⟩ Catalonia: 34,9 kg/ person/ year

⟩ Big amount of food is wasted in good conditions

INTELLIGENT PACKAGING

⟩ Containment, Protection, Convenience and Communication

⟩ Inform to consumer of the **real state** of the product

⟩ Indicators: Freshness, Integrity and Time-Temperature

⟩ Sensors: Gas, Biosensors and Chemical

CONCLUSIONS

Consumer can know if the product is in good conditions to eat it, without looking to the BBD.

This can be possible by using detection of degradation substances, detection of change in atmosphere composition in the package or detection on a bad use of the temperature. All influencing to shelf life.

It is very useful to reduce food waste, but expensive. More investigation are needed.

1 Saldo J. 2015. Food Packaging. Too Many Waste Containers or Less Food Waste? Temes de Disseny. 84–91.
2 https://freshcodelabel.com/
3 http://www.labellingblog.com/2014/05/intelligent-label-for-better-food.html

Maria Pugès Palomares I June 2019