

# #8



## Reducing process packaging and conditioning

### Case study in the French meat sector



Project co-financed by the European Regional Development Fund

REINWASTE project made it possible to diagnose 14 companies in meat sector: assessment of the inorganic waste produced and identification of the solutions available to reduce the company's inorganic waste. The following summary gathers information of 9 companies according to the availability of their traceability and their cost and treatment data.

The main inorganic waste issues in Meat agro food industries are:

- **Non-recyclability** of several types of plastics (research in progress) : PET/PE, PLA, EPS.
- **Inorganic waste soiled** after contact with raw materials:  
Ex: bags for packaging spices, tomato sauces or other ingredients for ready meals.
- **Lack of processing opportunities** of ordinary industrial waste such as disposable operator gloves and cuffs, colourful plastic bags, etc.

EU objectives adopted **in May 2018(\*)** are :

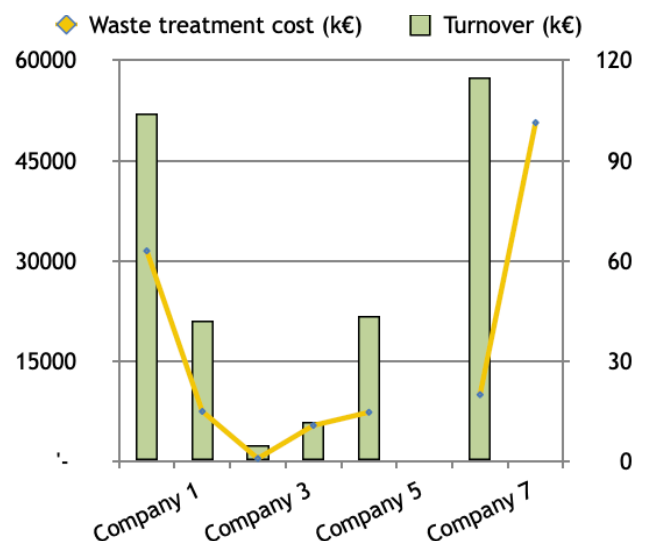
- By 2025: 55% recycling of municipal waste; 65% packaging waste; separate collection of textile waste and hazardous waste from households.
- By 2030: 60% recycling of municipal waste and 70% recycling of packaging waste.

In addition to its directives, the European Union funds research or entrepreneurial projects that focus on waste reduction, such as its Horizon 2020 research and innovation program REINWASTE.

#### TYPES OF WASTE IN 9 COMPANIES

OIW	1 179 036 Kg
Paper- Cardboard	475 646 Kg
Others	83 860 Kg
Scrap Metal and Aluminium	47 762 Kg
Wood	31 400 Kg
Sorted Flexible Plastic	28 010 Kg
Hard plastic sorted	22 144 Kg
Refusal OIW	17 140 Kg
Plastic « Chemicals »	2 080 Kg

#### TURNOVER VS TREATMENT OF INORGANIC WASTE



#### INDICATORS

- **1 888T/year:** Quantity of inorganic waste of 9 companies in Meat sector in region of PACA. This is equivalent to the quantity of household packaging sorted by **39 661** French citizen/year.
- The total cost of inorganic waste treatment for 7 pilot companies is: **225 797 € /year**. This is equivalent to the treatment cost of **21 103 inhabitants /year**.
- The costs of inorganic waste treatment represent between **0.068% and 0.183%** of the turnover of 5 pilot companies. The costs are not proportional to the turnover.

## REDUCING PROCESS PACKAGING AND CONDITIONING

### Challenges and solutions



#### CHALLENGES

- Soiled plastic
- Use of multilayers plastics
- Packaging requirements : microwaveable, light and oxygen barrier, conservation, technical constraint (passage through existing machines), food safety...
- Affordable cost
- Eco-friendly solutions

#### TREND SOLUTIONS

EU is passing new regulations including regulations to increase recycling rates and recycled content. As a result, manufacturers are rushing to reach their own quotas and targets. Below, you will have a view on current trends:

- Reducing raw materials packaging (bags, vacuum bags, buckets and drums)
- Reducing process packaging
- Reducing conditioning
- Increasing the use of bio sourced materials
- Increasing the use of biodegradable materials
- Increasing the use of compostable materials
- Shift to Mono-materials
- Increase recycled content
- Design for reuse / recycling
- Replace plastics with paper

#### SOLUTIONS PROVIDED BY REINWASTE PROJECT

- Trays made of monomaterial or separable materials consisting wholly or partly of recycled material
- Conditioning under protective atmosphere 50 N2 / 50 CO2
- Incorporation of chemically recycled coating
- Offer reusable or edible cutlery
- Switch to skeletonless sealing technology
- Avoid plastic/metal combinations such as aluminium

#### REINWASTE ACTIONS

##### Reduce process packaging waste

Ham is cooked in plastic packaging. Plastic bags allow good shrinkage on the product and facilitate cooking. After cooking, the products are deconditioned and repackaged for pasteurization, generating a significant amount of plastic waste. The proposed alternative is to use valve bags to evacuate the cooking liquid and thus avoid deconditioning – reconditioning.

##### Reduce packaging waste from the packaging process

The finished products are generally packaged in a package consisting of a plastic container and an operculum. Depending on packaging's design, a skeleton can be generated corresponding to the cutting cuts. These technologies cause a lot of polluted waste when the station is started up and/or resumed.

**The alternative** is to switch to **skeleton-free technologies** where the transition time between two trays is reduced to a minimum, favoring mono materials for recyclability and reducing operculum edges to the minimum acceptable.

#### Links to articles in relation with the subject

- (\*): <https://www.europarl.europa.eu/news/en/press-room/20180411IPR01518/circular-economy-more-recycling-of-household-waste-less-landfilling>

Circular economy: More recycling of household waste, less landfilling

- [https://ec.europa.eu/environment/circular-economy/index\\_en.htm](https://ec.europa.eu/environment/circular-economy/index_en.htm)

A new Circular Economy Action Plan for a Cleaner and More Competitive Europe:

- <https://conseil-emballage.org/> - French packaging council

Interreg MED Green Growth Community  
/ REINWASTE Project

Website: <https://reinwaste.interreg-med.eu/>  
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