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Green Enough

Module 1.5 Food Waste

Green Enough: Educational program to raise ecological behaviour through an inclusive methodology using Augmented Reality Technology

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Module 1.5 Learning Objectives

By the end of this module trainees will be able to:

- Demonstrate the ability to understand the main sources of domestic food waste (LO9)
- Demonstrate the ability to understand the impacts of food waste (LO10)

Learning Outcomes	Knowledge	Skills	Competences
LO9: Demonstrate the ability to understand the main sources of domestic food waste	Name the most common sources of household food waste	Identify actions to reduce food waste in the household	Formulate food waste reduction strategies for people with D.D./I.D. they work with
LO10: Demonstrate the ability to understand the main impacts of food waste	Explain how food waste contributes to climate change	How food choices may have a negative impact on the environment	Analyse how reducing food waste helps fight climate change

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1.5.1 What is food waste?

1. Food wasted **before, during, or after** household meal preparation.

1. Food discarded during **production, manufacturing, distribution, retail and catering**.

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Food Waste Statistics

1/3 of food produced for human consumption is **wasted.**

If saved, **it could feed 3 billion** people.

About **1 million** people are **malnourished.**

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1.5.2 Sources of food waste

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Food loss:

Production

Handling, transport & storage

Food waste:

Processing & packaging

Distribution & market

Consumption

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Food loss during:

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1. Production*

**Happens during or immediately after harvesting on the farm.*

- Fruits bruised during picking or threshing.
- Crops sorted out post-harvest for not meeting quality standards.
- Crops left behind in fields due to poor mechanical harvesting or sharp drops in prices.

2. Handling, transport & storage

- Edible food eaten by pest, degraded by fungus/disease.
- Livestock death during transport to slaughter or not accepted for slaughter.

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Food waste during:

1.Processing and packaging

- Milk spilled during pasteurisation & processing.
- Edible fruits/grains sorted out as non-suitable for processing.
- Livestock trimming during slaughtering & industrial processing.

2. Distribution & market

- Edible produce sorted out due to low quality.
- Edible products expired before purchased.
- Edible products spilled/damaged in market.

3. Consumption

- Edible products sorted out due to quality.
- Food purchased but not eaten.
- Food cooked but not eaten.

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Where is most food lost or wasted?

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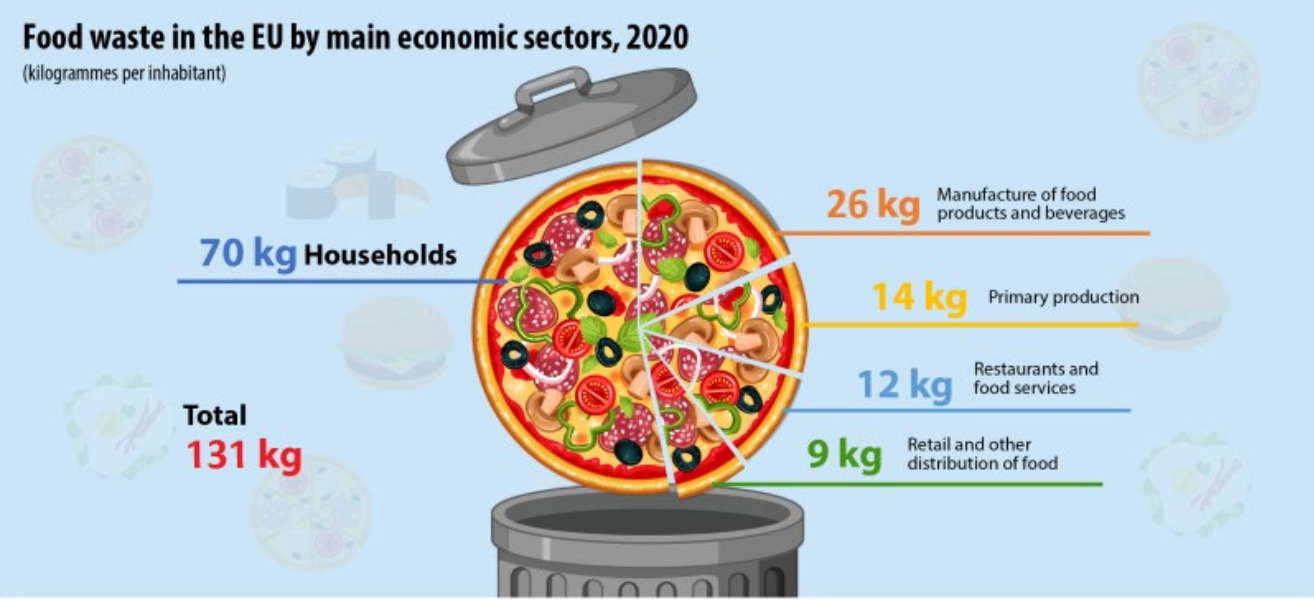

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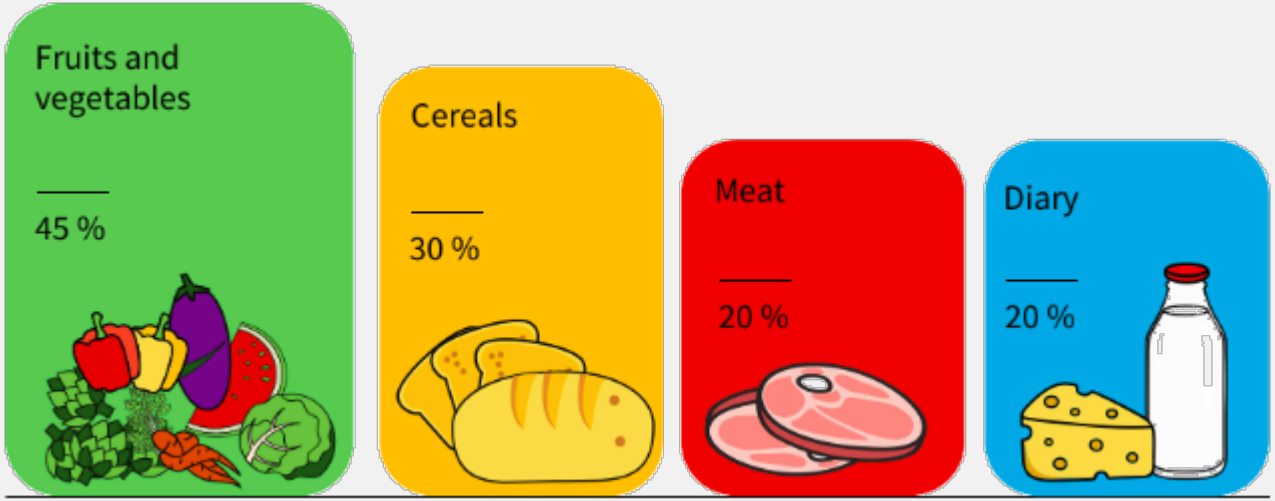
Not all foods are wasted equally

Some food products are wasted more often than others.



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1.5.3 What are the impacts of food waste?

Financial impact

Waste of resources

- Water
- Land
- Energy

Climate impact

Environment

- Loss of biodiversity
- Desertification

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Scan to watch

1. Financial impact

- Food waste = tossing in the bin **money spent to grow, harvest, process, sell & buy food.**
- **A modern phenomenon** – due to being more removed from where food comes from.
- Total cost of annual EU household food waste = **143 billion Euros**

2. Waste of resources

¼ water used in agriculture goes to growing food that will end-up being wasted.

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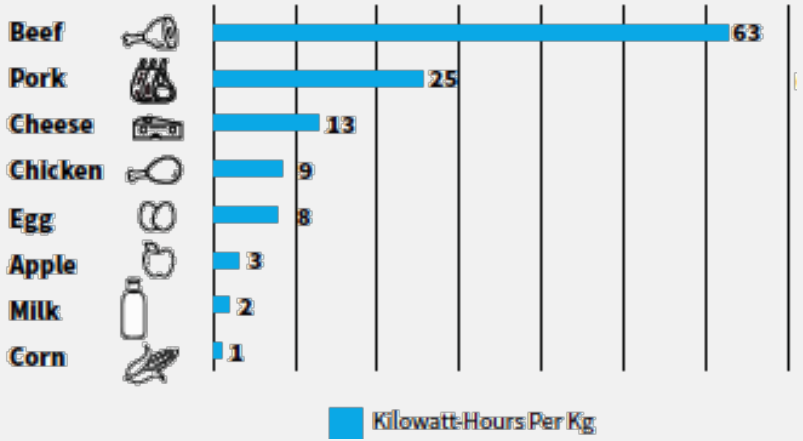
Size of land used to grow food that will later be wasted is slightly smaller than Russia.

- **83%** of food land occupation used in meat industry.

- **38%** of energy consumption in global food system used to produce food that will be wasted.

FACT: approx. **70 times** more energy-consuming to produce 1kg beef than 1kg of vegetables/cereals/fruits.



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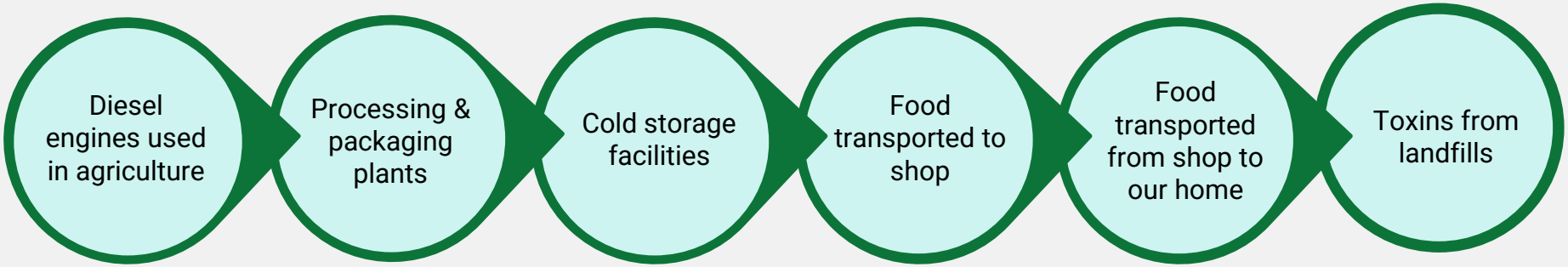
3. Climate impact

Food travels all the time, so greenhouse-gas emissions occurs at nearly **all supply chain stages**



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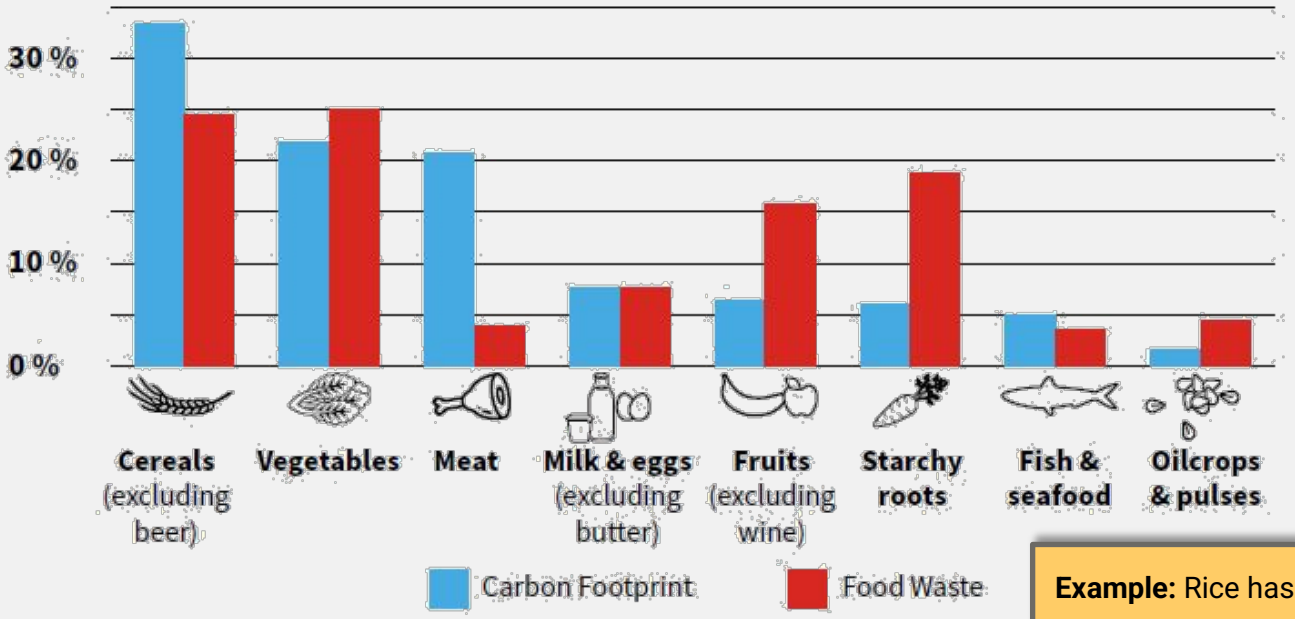
Products hold different carbon intensities



Example: Rice has higher impact factors than wheat (i.e., 1kg CH_4 = 25 kg CO_2)

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4. Environmental impact

Forests cut down to make space for crop fields (i.e., deforestation):

1. Animals lose their habitat and ultimately threatened by extinction (leading to **loss of biodiversity)**.

2. Plants are lost (intensifying CO2 and other greenhouse-gas emissions related problems).

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1.5.4 Combating food waste

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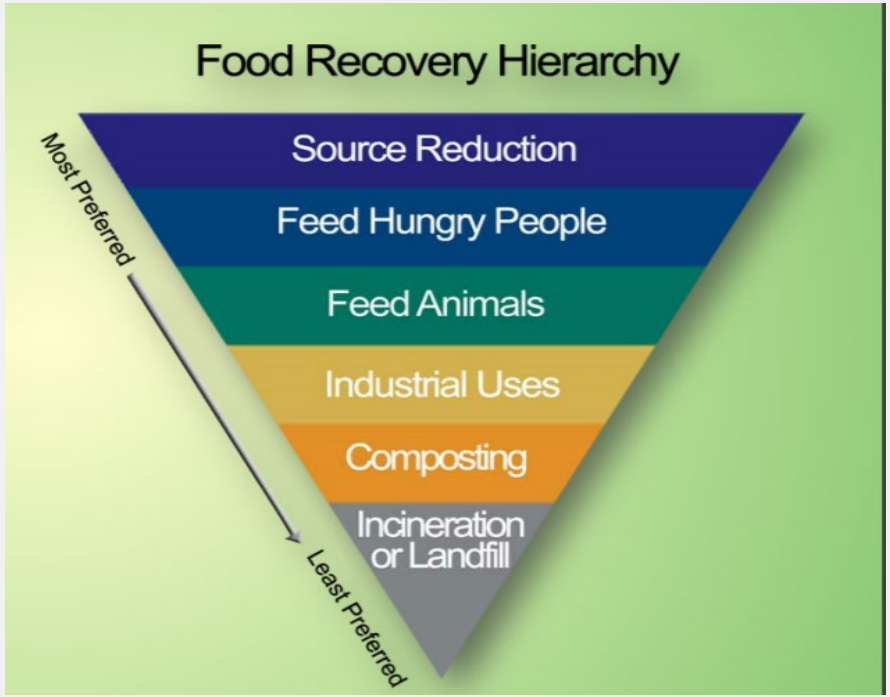

What is the Food Recovery Hierarchy?

Sets out the most environmentally preferred solution for food waste management.

What is the most preferred solution?

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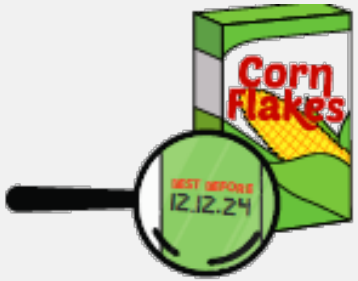
“Best Before” vs. “Use by” Dates



53% EU consumers don’t know the meaning of “best before” labelling.

53% EU consumers don’t know the meaning of “use by” labelling.

“Best before” date: food quality.

e.g., frozen foods, dried food, tinned foods, etc.

“Use by” date: food safety.

Foods that go off quickly (e.g., fish, meat products, ready-to-eat salads, etc.)

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Easy tips to combat food waste

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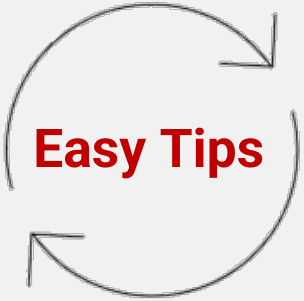
Suggestion 1:
plan ahead & cook the right amount

Suggestion 2:
buy what you need

Suggestion 3:
store correctly

Suggestion 5:
recycle what you can't eat



Suggestion 4:
eat it all or store leftovers for later

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1. Planning ahead

- Plan your weakly meals.
- Go to the supermarket with a shopping list.

2. Shopping smart

- Don’t shop on an empty stomach.
- Buy loose products instead of prepacked.
- Avoid “2 for 1” products, if you just need 1.
- Support the ‘uglies’.

3. Store correctly

- Place newest products at the back (in fridge, cupboard).
- Know what goes where

Fridge: milk, meat, eggs, carrots

Outside: tomatoes, bananas, onions, eggplants

Freezer: cooked & deshelled eggs, grated cheese, sliced bread

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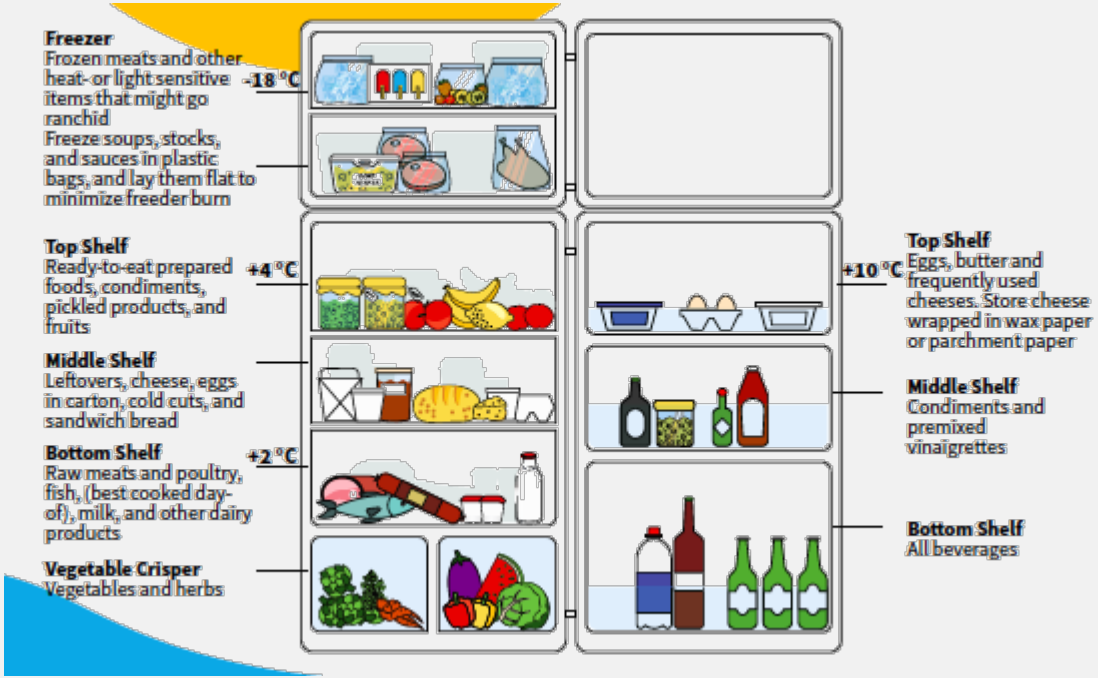

Several compartments of the fridge are more suitable for certain types of foods.

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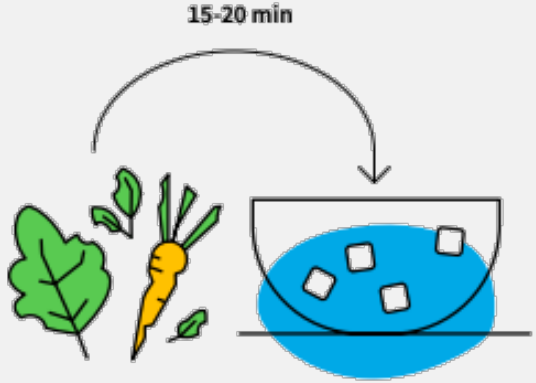
4. Reuse leftovers

Rehydrate wilting vegetables by trimming off the bottom part of the stalk and immersing them in warm water for 15 – 20'.



Steamed/baked/grilled vegetables → creamy soup.

Boiled potatoes, meat & vegetables losing freshness → omelette.

Cooked rice → salads, egg fried rice, stuffed vegetables, rice pudding.

Bananas that have gone black → smoothies, banana bread, banana chips, (n)ice cream.

Vegetable scraps → stock (store them in a ziplog bag in your freezer).

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5. Recycle/Compost your food waste

- Collect used cooking oil to be converted to biofuel (e.g., Tiganokinisi scheme).
- Make your own fertiliser

Advantages:

- Save money as there's no need to buy chemical fertilisers for your herbs/plants.
- Save resources, as you keep this useful organic material out of landfill and thus you reduce the amount of greenhouse gases.

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References

- European Commission, Food, Farming, Fisheries, 'About Food Waste', https://food.ec.europa.eu/safety/food-waste_en
- European Commision, Eurostat, 'Food waste: 127 kg per inhabitant in the EU in 2020', October 2022, https://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/ddn-20220925-2
- Stenmarck, Å., et al. (2016) Estimates of European food waste levels. Report from the EU FUSIONS project. - Sincerely Food Project, https://www.eu-fusions.org/phocadownload/Publications/Estimates%20of%20European%20food%20waste%20levels.pdf
- Food facts for healthy choices, 'Food waste in Europe: statistics and facts about the problem', September 2021, https://bit.ly/3wkQzEo
- European Commission, Date marking and food waste, https://ec.europa.eu/food/safety/food_waste/eu_actions/date_marking_en
- European Commission (2015) Flash Eurobarometer 425: Food waste and date marking.

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Thank you!

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