



HOW TO PREVENT FOOD WASTE

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WHAT'S AN E-BOOK?

The *Louis Bonduelle Foundation* has compiled an e-book focusing on the complex and challenging subject of **food waste**. This **digital book** is an **interactive** document with **lots of images**.

It gives you access to a wealth of **information** with a **simple click** thanks to the many links throughout the text. Moreover, countless **images** will give you a better insight into the topic, as well as a different perspective.

ENJOY!



FOOD WASTE: FACTS & FIGURES

It is hard to fathom that food can be wasted, considering **11% of the world's population is hungry**¹. Yet the figures are clear: **1.3 billion tonnes** of food is wasted or disposed of every year. That is approximately **1/3 of all foods** for human consumption²! It equates to **41 tonnes** of food wasted every second.



These figures have **doubled in the past 40 years**³, so the time has come to break this downward spiral. In particular, because, with these levels of food waste, the increased food production will not be enough to feed the world population, which keeps rising⁴.



The **European Commission's**
THOUGHT-PROVOKING
VIDEO



CLICK
on the image to
watch the **video**⁵





WHERE IS FOOD WASTED?

On the one hand, there are **'food losses'**, which occur in the production process, post-harvest, and during the processing and distribution of foods. On the other, there is **'food waste'** that is caused by retailers and consumers. The latter, **'food waste'**, can be used as an umbrella term to describe both concepts. Due to a lack of consensus on these definitions at a European level, experts tend to use the broader term **FOOD LOSSES & WASTE**⁶.



The total quantity of food that is disposed of throughout the food chain consists of a mix of potentially edible parts and parts that are not suitable for human consumption.

These losses and this waste can occur **at all stages of the food chain**. All food types are affected, particularly these three food groups:



fruit & vegetables



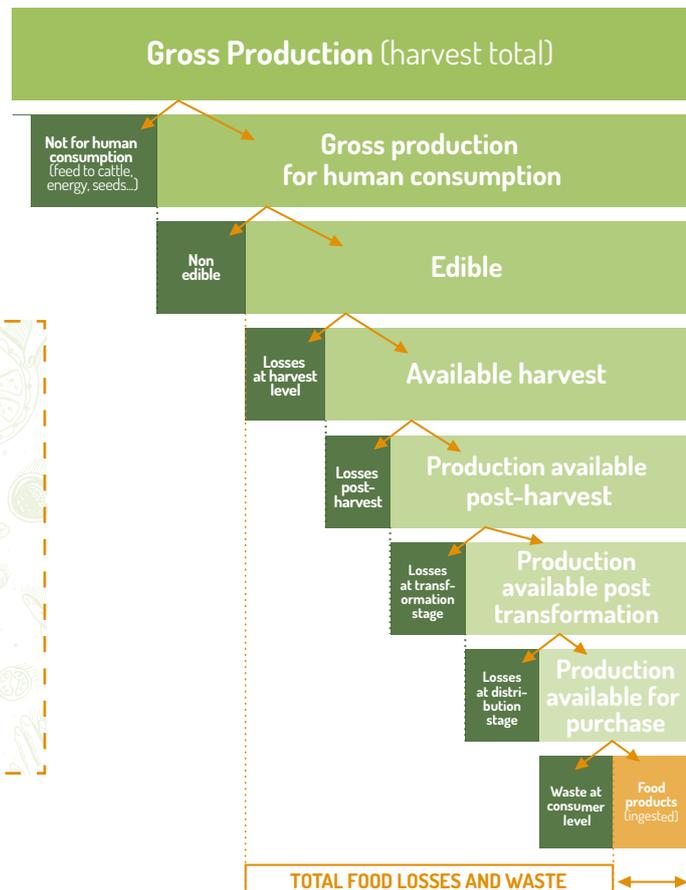
roots & tubers



meat & fish

FOOD LOSSES AND WASTE THROUGH THE FOOD SUPPLY CHAIN⁷

DISCOVER the **6 strategies** to counter **food waste** in **the inventory** compiled by the **Louis Bonduelle Foundation**.





WHAT CONTRIBUTES TO FOOD WASTE?

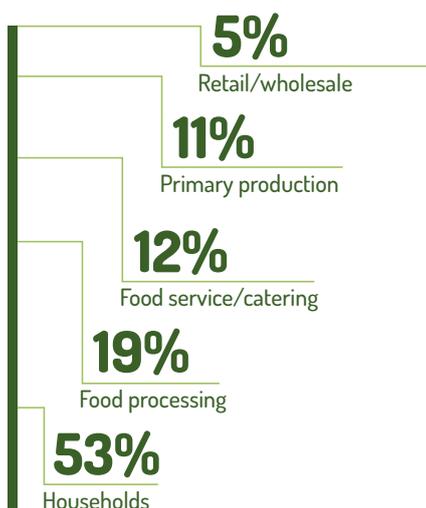
As surprising as it may sound, **developed countries** do not contribute much more to food losses & waste than **developing countries**! The foods lost or wasted amount to **670 and 630 million tonnes a year** respectively.



In **developed countries**, waste occurs at all levels of the food chain. Through their **carelessness**, consumers also play their part in this. Every year, we waste 95 to 115 kg of food per inhabitant⁷.

Many foods that are perfectly edible end up in the bin as a result of poor grocery **shopping planning**, a lack of **storage** and **preservation methods**, confusion between the best-before date and the use-by date, **skipping meals** or preparing **excessive amounts of food**, or **poor knowledge** of how foods should be consumed and used⁷.

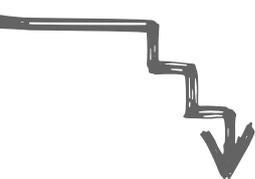
CONTRIBUTION TO FOOD WASTE BY SECTOR IN THE EU²:



In Europe, consumers' contribution to food waste amounts to an astonishing 53%²!



FOOD LOSSES IN EVERY FOOD GROUP THROUGHOUT THE FOOD CHAIN IN EUROPE AND RUSSIA⁶



	Agricultural production	Post-harvest handling & storage	Processing & packaging	Distribution: Supermarket Retail	Consumption
Cereals	2%	4%	0,5%, 10%	2%	25%
 Roots & Tubers	20%	9%	15%	7%	17%
Oilseeds & Pulses	10%	1%	5%	1%	4%
 Fruit & Vegetables	20%	5%	2%	10%	19%
Meat	3,1%	0,7%	5%	4%	11%
 Fish & Seafood	9,4%	0,5%	6%	9%	11%
Milk	3,5%	0,5%	1,2%	0,5%	7%

As you can see in this table, food is lost or wasted at every stage of the food chain, more specifically at the beginning and at the end.

In **developing countries**, losses and waste are more common **at the beginning of the chain**, in other words during the production and processing stages. The **main causes** include a lack of proper **tools**, **infrastructure**, **warehouses** and suitable **trade systems**, but also **climate conditions** that destroy harvests (drought, hurricanes etc.)⁸. Consumers' contribution to food waste is very limited: 6 to 11 kg of food per inhabitant per year, which is **10 times less** than in developed countries⁷!



“
The paradox of developing countries: the level of food waste is comparable to that of developed countries, but the **causes are different**.
”

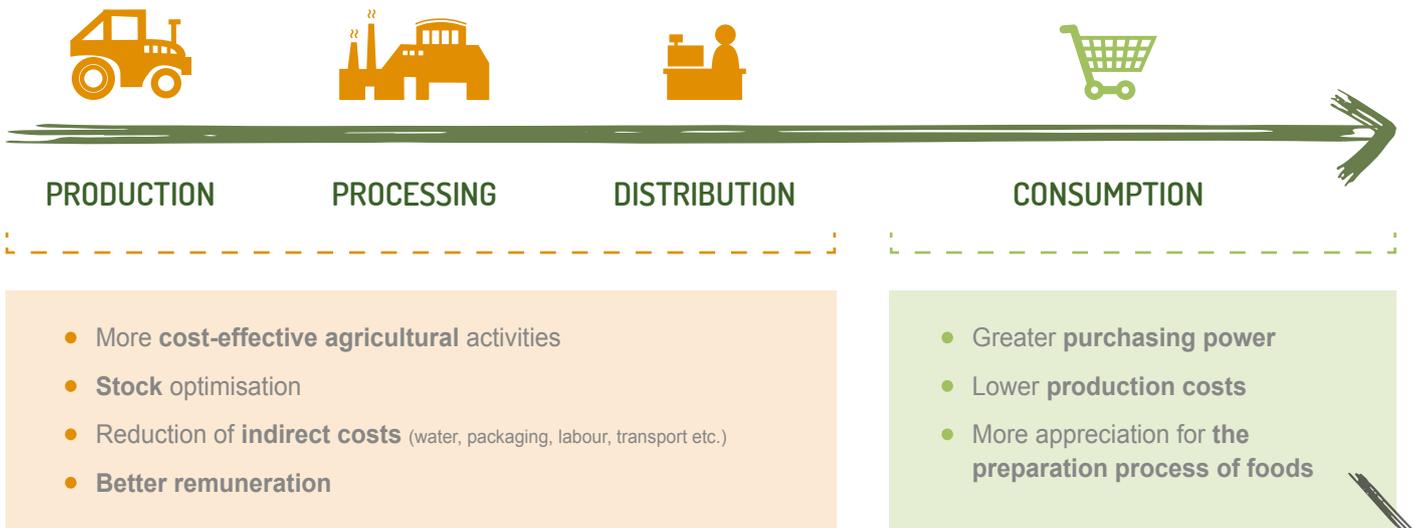


Discover the **SOLUTIONS** proposed by the *Louis Bonduelle Foundation* for limiting food losses and waste **here**



FOOD LOSSES: COSTS ACROSS THE BOARD

Food losses and waste carry a significant direct cost, namely **\$750 billion/year worldwide**, which is the equivalent of the annual GDP of Switzerland⁶. Proper **management of food losses** and waste allows us to **make savings** at all levels of the food chain:



YEARLY COST OF FOOD WASTE PER HOUSEHOLD⁶



87 €



340 €



400 €



480-680 £



\$1365-2275



**FOOD
WASTAGE
FOOTPRINT**



WATCH
the vidéo⁹
here!



THE IMPACT OF FOOD WASTE ON THE PLANET

Not only do food losses and waste carry an economic cost, they also have a **negative impact on the environment**. The production of foods that will never be consumed **requires the use of resources** such as:



agricultural land



water



fuel



fertilisers



pesticides



energy (transport, processing, distribution)

The production but also the disposal of food loss and waste involve spending **energy**, that generates a cost of **\$99 billion each year**³.

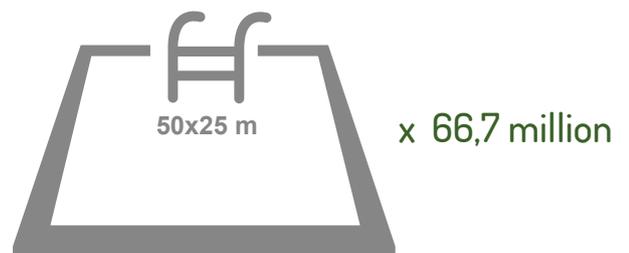
WHAT IS THE SHARE OF RESOURCES USED TO PRODUCE FOOD THAT ULTIMATELY GOES TO WASTE¹⁰?

28% OF THE AGRICULTURAL LAND WORLDWIDE



That is an area equivalent to the size of Europe and the USA

250 km³ OF WATER PER YEAR



That is the equivalent of 66,7 million Olympic pools (3 m deep)



Greenhouse gas emissions throughout the production process of foods that eventually go to waste also have a considerable impact on the environment. Every year, wasted foods emit **3.3 billion tonnes of CO₂ equivalent**.

If food waste were a country, it would be the world's **3rd largest contributor to greenhouse gas emissions**, preceded only by the USA and China⁷!

Check out more **FACTS & FIGURES** on food waste in the **monograph** and **inventory** prepared by the *Louis Bonduelle Foundation*





WHO IS FIGHTING FOOD WASTE?

In order to tackle the problem in the different stages of the food chain effectively, we need to define food losses and waste properly. That is what **several research projects** have been aiming to do, including **FUSIONS** and **WRAP** in Europe, as well as **SAVE FOOD** and **THINK.EAT.SAVE** worldwide. **Countless initiatives** have also been launched to combat food waste. To effectively deal with this alarming trend, the **European Union** has assumed its **responsibility** by setting a:



WORLDWIDE GOAL TO LOWER FOOD WASTE

-50% BY 2030



The European Parliament has adopted a **report** on the subject, which was drawn up by the Environment Committee. It proposes measures¹¹ to lower food waste by **30% by 2025** and by **50% by 2030** compared to the figures for 2014. These goals are similar to those for the **United States**.

Find out more about the [measures proposed](#) by the European Parliament

In addition to this, various **large-scale projects** have been launched, including **GreenCook**, which was set up in 2010 as a joint effort between a dozen or so associations, organisations and companies in 5 European countries to reduce **food waste**. The action plan launched by WRAP in the United Kingdom encourages consumers to **waste less food**, particularly through the campaign **Love Food Hate Waste**, which combines practical tips with humour¹².

Other countries have also joined the battle against food waste by means of original, high-impact campaigns, such as 'Jeter moins, c'est manger mieux' in France, which includes '**Les Contes de l'antigaspi**'¹³. Other examples are recipe books by French chefs committed to reducing food waste and a mobile app on the topic in Denmark. That's right, citizens too have jumped on board! The **Louis Bonduelle Foundation** is also driven to fight food waste by lending its support to various local projects.



SAVE OUR SPUDS!



CLICK
on the image to watch the [video](#)¹²





To **REDUCE FOOD LOSSES & WASTE**,
we need to take measures **at every stage**
of the food chain. So how can you,
as a **CONSUMER**, contribute to this¹⁴?



THE 'STOP FOOD WASTE DAY'



PRACTICAL TIPS FOR A NO-WASTE **BREAKFAST**



Buy your **cereals, dried fruits, nuts, coffee or tea in bulk** and store them in glass jars. That allows you to reduce the amount of packaging. Buy only **the quantities you need** and add a nice touch to your kitchen with trendy jars.



Stale bread? Toast it or make **French toast** or **bread pudding!** But what about bread rolls? Here's a simple trick: wet them with tap water and bake them in the oven for a few minutes. The result? Crispy and tasty!



Overripe fruit? Turn it into juice, a smoothie or a milkshake to start the day with a vitamin boost! Running out of time? Then just mash them, mix them with yoghurt and you're good to go!



WHAT ABOUT **LUNCH?**



PICNIC TIME!

- ✓ Take last night's **leftovers** with you and reheat them at the office or at school.
- ✓ **Prepare** a nice picnic or lunchbox, with just the right quantity of food, to make sure you truly enjoy your lunch.



Prepared a bit too much? **SHARE IT!**



WHAT ABOUT **CATERING?**

Do you work at a (company) **canteen?** Place **bread** at the end of the buffet, so people can choose just the right quantity they need to accompany their meal.

That way, they won't need to assess how hungry they will be at the beginning of the buffet, even before choosing their dishes!



NO-WASTE SNACKS

Be creative here too! Use your **overripe fruit** to make **compote** or a **light pie** as a delicious snack. Expired **yoghurt** can be used to make tasty **cakes**.



GOOD HABITS FOR A ZERO-WASTE DINNER



Weigh the foods you are going to cook to make sure you prepare just the right amount **according to the number of guests** and their **appetite**.



To make sure you can **adapt the portion sizes**, follow a **recipe** that you can adjust the next time around. Check out the portion sizes on the **product packaging**, if available.



Use **measuring units** you are likely to easily remember and find, such as cups, glasses and tablespoons. You can also buy **measuring tools**, e.g. spaghetti measurers or measuring cups.



While cooking, use foods to the full, making the most of **all the edible parts**. **Fruit and vegetable peels** for example contain a lot of fibre and vitamins. It would be a pity to throw them away. Why not make a delicious soup with scraps? Discover lots of tips through the **La soupe aux cailloux** project.

If possible, wash fruit and vegetables properly and **eat them, peel and all**, to make the most of their benefits. Need some inspiration? Discover our **tasty recipes** here.



TASTY & FUN MEALS, LESS WASTE

It is important that you enjoy your meal. Do not underestimate the advantages of **having fun** at the table. Switch off the TV, put your phone away and enjoy good company and tasty food.

FINISH YOUR MEAL IN STYLE, WITHOUT WASTE

- ✓ Are there still leftovers on the dishes at the end of the meal?
See what you can save.
- ✓ Do not hesitate to **share** leftovers with friends and family!
- ✓ You can always use the leftovers for a **picnic** the following day

Freezing your leftovers is a good option too, but remember this important food safety rule: **never refreeze thawed food**. Frozen, ready-made dishes can be stored in the freezer for up to 2 months. Divide your leftovers into smaller portions, so that you can defrost them as the need arises!



ZERO-WASTE SHOPPING: TIPS & TRICKS



BEFORE YOU START: CHECK WHAT YOU HAVE AT HOME!

Check which foods are about to **expire or go bad** and try to use them for dinner. **Start meal planning** for the week ahead. Last but not least, grab a pen and paper and make a **shopping list**. That's it! You're on your way to zero-waste grocery shopping!

- ✓ Make sure you only **buy what you need**. Don't get carried away every time you spot discounted products. Only buy them if you really need them.
- ✓ When you can, **buy in bulk**. That allows you to buy the exact quantity you need.
- ✓ Remember that **fruit and vegetables that don't look perfect** are not necessarily less tasty!
- ✓ Take your time to **read product labels** and make sure you actually like a product rather than tossing it in the bin at home.
- ✓ **Respect the cold chain**: don't forget your freezer bag and leave the frozen-goods aisle for last, just before you head for the till.



TIP

Don't go grocery shopping on an **empty stomach** or you will fill up your cart with cravings you don't really need!



READ PRODUCT LABELS

Follow the storage instructions on the product label. Do not confuse the following:

- **The best-before (end) date (BBE)**, which indicates the **minimum shelf life of a product**. Past this date, certain flavours and/or nutritional properties of the product may be affected. However, it can be consumed without health risks.
- **The use-by date**, on the other hand, indicates the **shelf life expiration date (SLED)**. Past this date, the product should not be consumed because it can pose a health risk for consumers.



NO MORE WASTE AT THE RESTAURANT!

- ✗ Make sure you order dishes **according to your appetite**, not more. Don't be afraid to **ask how large the portions are** before going for the set menu, which includes a starter, main course and dessert. If you haven't finished your plate, **take your leftovers home**. This 'doggy bag' makes for the perfect lunch the following day.
- ✗ If you prefer not to have any bread, ask the waiter not to bring a **bread basket**.





GOOD HABITS START AT HOME

MAKE SURE YOU STORE YOUR FOOD PROPERLY

OUTSIDE THE FRIDGE:

Cucumber, zucchini, green beans, citrus fruits, bananas, apples...

Away from light to avoid sprouting:

Potato, onion, garlic, shallots.

IN THE VEGETABLE DRAWER:

Fresh fruits and vegetables: aubergine, asparagus, carrots, mushrooms, leeks, strawberries, grapes...

When ripe or almost expired:

Tomatoes, avocados, kiwis, peaches, pears, plums...



IN THE FRIDGE DOOR:

Butter, margarine, sauces, jam, drinks...

TAKE CARE OF YOUR FRIDGE

- ✗ Do not **overfill your fridge** to ensure proper air circulation and to allow for optimal food storage.
- ✓ Arrange your fridge so that the foods that need to be eaten first are **easy to reach**.
- ✓ **Clean your fridge** once a month to avoid the growth of bacteria.
- ✓ Store opened foods in **airtight containers** to prevent them from going bad.

5 TIPS TO REDUCE WASTE!

- **Fruit/vegetable peel**
→ crisps, candied orange/lemon peel
- **Too much fruit** → coulis, jam, dried fruits
- **Radish** or other vegetable leaves
→ salads, soups
- **Overripe tomatoes**
→ tomato sauce, coulis, mash, (creamy) soups, ratatouille
- **Too many herbs** → chop them, put them in ice trays, cover with water or oil and freeze them

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