



Food and Agriculture  
Organization of the  
United Nations



**Your guide to living  
free of food waste**

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# Food waste: A global issue

Did you know that at least **17 percent of all food produced worldwide is wasted each year**, from retail stores to households? That is **931 million tonnes of food, which could feed millions of people who are going hungry each day**. Instead, edible food is squandered: 61 percent of all food waste – nearly 570 million tonnes globally – comes from households, with each of us wasting, on average, 74 kg of food each year.

Food waste refers to intentional discards of food fit for consumption, from retail to households, due to the behaviour of organizations and/or individuals.

For many people in the world, food waste has become a daily occurrence caused by, among other factors, buying more food than needed, letting it spoil in a refrigerator, or taking larger portions than can be eaten.

These habits put extra strain on natural resources and damage the environment. Apart from the economic cost, food waste is a loss of energy, water, soils, fertilizer and labour required to produce food that is never eaten – let alone the loss of forests and biodiversity cleared to make way for farmland.

The global food system has profound implications for the environment, and producing more food than is consumed only exacerbates its impacts. Consider, for instance, the energy needed to process, transport and store food that is ultimately thrown away. Or consider the greenhouse gas emissions generated by food decomposition in landfills.

To bring about the vision of a truly sustainable world, we need to transform the way we consume and produce our food.

### Consider this:

· If food loss and waste were a country, it would be the third-biggest source of greenhouse gas emissions, after China and the United States of America. The global carbon footprint of food loss and waste amounts to **3.3 gigatonnes of carbon dioxide equivalent**.<sup>1</sup>



1<sup>st</sup>



2<sup>nd</sup>



3<sup>rd</sup>

· The **total volume of water** used each year to produce food that is lost or wasted (250 km<sup>3</sup>) is equivalent to the annual flow of the Volga River in the Russian Federation – or three times the volume of Lake Geneva.

30%

· Almost 1.4 billion ha, equal to about **30 percent of the world's agricultural land**, is used to produce food that is never eaten.

<sup>1</sup> FAO. 2013. *Food wastage footprint: Impacts on natural resources*. Summary report. 63 pp. (also available at <http://www.fao.org/3/i3347e/i3347e.pdf>).

# What can you do to make a difference?

By taking small individual actions, we have the potential to make a big impact on food waste prevention and reduction.

It starts with understanding the issue. **Consider keeping a food waste diary for a week to assess the amount of food you waste and the reasons behind it. Please find a diary at the end of this guide to support you on this journey.**

After the week is over, you may want to continue tracking and recording your food waste in the diary to see how you have improved or to adjust your actions further. Additional solutions may be available for the way you buy, store and prepare your food.

**Any action you take, big or small, can have a positive impact on the bigger picture.**



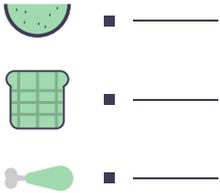
## When the week is over and you've completed your diary, review the results:

1

### Find the pattern.

Review your diary to see what, when, and where food is being wasted.

The cost column will help you calculate your financial loss.



2

### Recognize the reasons.

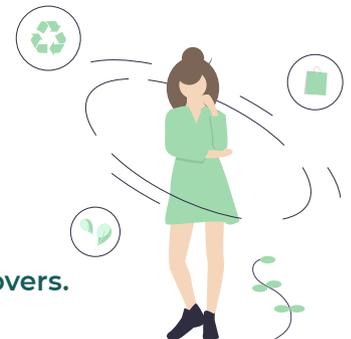
Knowing why your food is thrown out can help avoid the situation in the future. Examples might be making meals that are too large, over-pouring beverages, and buying too much food.

3

### Give it a thought.

What actions can you take to prevent or reduce food waste in your household?

For instance: **buying less, making smaller portions, and learning to repurpose leftovers.**



# At the store



Here are some tips to help you make a difference at the store.

## Shop smart

- **Planning a meal menu for the week** may help you organize your food behaviour and cut back on waste.
- **Buying only the food you really need** is the simplest way to reduce waste. Before you go shopping, check your fridge, freezer, and pantry. **Make a shopping list** and **avoid impulse buys. Do not shop when you are hungry!**
- If you are not into writing shopping lists, **take a photo of what you have in your fridge and pantry** to refer to when in the store.
- Consider **shopping for perishable products** such as meat and fresh vegetables **more frequently**, instead of buying in bulk and letting the products spoil. This way you enjoy fresh products all week long.
- **Be mindful when buying discounted perishable foods** such as fruits, vegetables and salads. No matter how cheap, they are of no value if they end up in your bin.





Here are some tips to help you make a difference at the store.

## Buy 'funny' food

Don't judge food by its appearance! **Oddly shaped or bruised fruits and vegetables** are often thrown away because their size, shape or colour don't meet cosmetic standards. Don't worry; they **taste the same and are as nutritious!** For instance, you could use mature fruit for smoothies, juices and desserts.



## Support local food producers

By **buying local produce**, and especially from young farmers and women farmers, **you support the community**. You also **help fight pollution and reduce impact on the environment** by shortening delivery distances for trucks and other vehicles and reducing storage time.



## Check the date marking

When buying food, **make sure to check the date on the label**. If you do not plan to consume the food right away, consider buying foods with a later expiration date.



# At home



Here are some tips to help you make a difference at home.



## Understand food labelling

Check the different date marking in your country. Learn about the difference between “best before” and “use by” dates. Food may still be safe to eat after the “best before” date, whereas it’s the “use by” date that tells you when it is no longer safe to eat.

The **“best before” date** relates to the quality of the food - its freshness, taste, colour, aroma or nutrients. **It does not mean that the food is no longer safe to eat** after the date has passed.

The **“use by” date** relates to the safety of the food. It **signifies the date after which the product should not be consumed** due to reasons of safety and quality.



Here are some tips to help you  
make a difference at home.

# Store food wisely

- Set your **fridge temperature** to 4°C and **learn the coldest**

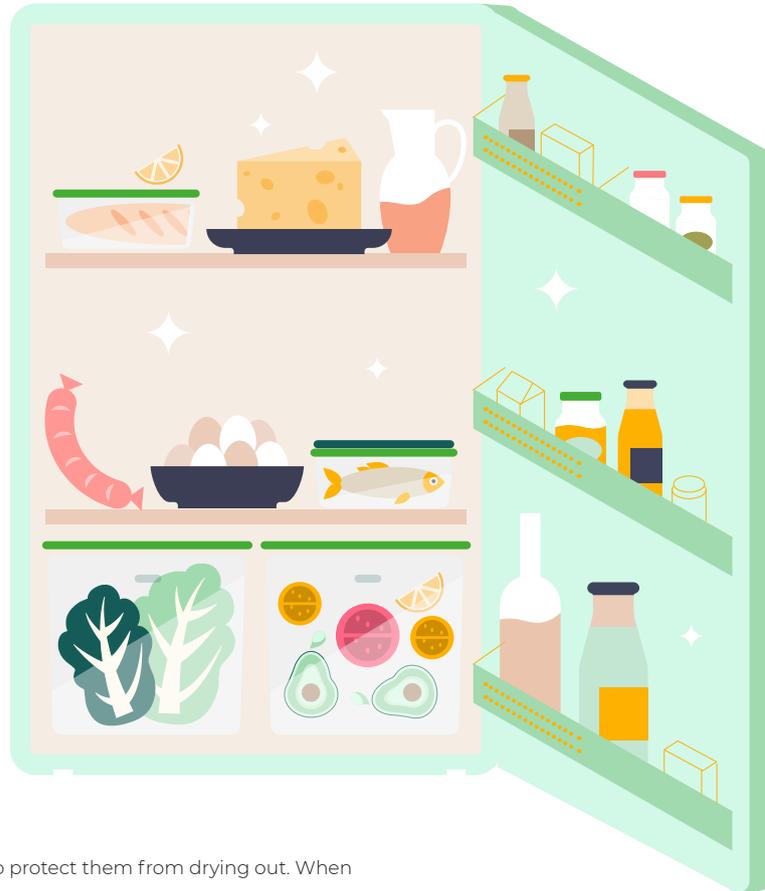


**parts of your fridge.** The door is the warmest part in your fridge, so only keep food in there that does not spoil easily. The bottom shelf is generally the coldest spot; use it to store fish, meat and eggs.

- Store products in the original packaging as much as possible. **Once they are opened, products should be stored in reusable food containers.**



- Pickling, drying, canning, fermenting and freezing** are all methods you can use to **make food last longer, thus reducing waste.**



- Store leftovers in a sealed container** to protect them from drying out. When handling leftover food, remember to **apply good hygiene practices.**<sup>2</sup> Do not leave cooked food at room temperature for long periods. You can **use stickers to write down the content and date on the container.** That way you know exactly how long it's still safe to eat!



<sup>2</sup> For more information on good hygiene practices, please refer to the Five keys to safer food manual from the World Health Organization, available at: <https://www.who.int/publications/i/item/9789241594639>



2 HOURS

- Leftovers can be stored in the refrigerator** in airtight containers **for up to four days** after preparation. Allow hot dishes to cool down thoroughly before putting them in the fridge. Divide them into small portions, if necessary, to cool leftovers faster. **Put them in the fridge within two hours.**



- Move older products to the front** of your cupboard or fridge and **new ones to the back.**



- Raw products must be kept separate from cooked foods** or ready-to-eat food products. This is especially important with meat and fish.



- Remember that you can still **freeze most products before their expiration date.** Thaw them when you need them and then consume them within 24 hours.



- If you freeze a product that is not in its original packaging, **put it in a closed container or freezer bag** and **label it with the name and freezing date.**



Here are some tips to help you  
make a difference at home.

# Useful tips and ideas

- **Extend the shelf life of leafy greens and citrus** by storing them in the crisper drawer or in a mesh bag in the refrigerator.

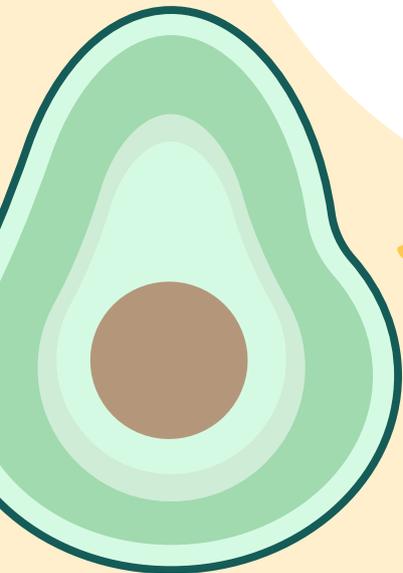


- **Blueberries, blackberries, strawberries and raspberries** are delicate and **should not be washed until ready to eat**. Keep in the refrigerator in dry, covered containers.



- **Tropical fruits**, such as bananas, avocados and mangoes, **should be stored at room temperature**. They also will ripen better this way. **Once they are ripe, you can move them to the fridge to prolong their lifespan.**

- Store cereal, bread and fresh nuts in **airtight – preferably glass – containers** to keep them fresher longer.





Here are some tips to help you  
make a difference at home.

# Useful tips and ideas



- **Older bread**, when diced, can become **croutons** to be added to a salad or soup.



- **Tonight's leftover** chicken roast can be part of **tomorrow's sandwich**.

- **Less-fresh vegetables** can still be used in **soup**.



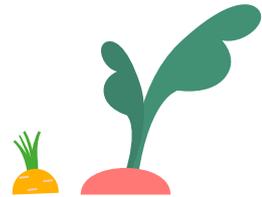
- Process **overripe fruit** into a dessert or a **smoothie** or prepare **homemade jam**.



- Rather than letting the chicken carcass or meat bones left over from your dinner go to waste, simmer them with vegetables and herbs to **make a homemade stock**. You can freeze it, too, for use in preparing other dishes.



- **The tops of beets and carrots**, as well as **broccoli stalks**, are packed with fibre and nutrients, making them **a great addition to smoothies, salads and soups**.





Here are some tips to help you  
make a difference at home.

## Love your leftovers

- **If you don't eat everything you cook, freeze what is left over for later** as an ingredient in another meal.



- Designate one dinner each week as a **“use-it-up” meal**. Instead of cooking a new meal, **look around in the cupboards and fridge for leftovers** and other food that might otherwise get overlooked. Get creative!

## Improve disposal



Find out how food waste is currently disposed of in your area. **Learn about options for recycling and recovery**, which allow energy and nutrients to be recovered from food waste.

## Put your food waste to use

**Instead of throwing away your food scraps, compost them.** Compost is rich in nutrients and is great for your garden, shrubs or even indoor potted plants. Inform yourself on composting options for households.



# When eating out



Here are some tips to help you  
make a difference when eating out.

## Be mindful about portions

- **Inquire about the portion size** before ordering.
- **Ordering only the food you will eat** when dining out is an easy way to prevent food waste.

## Take your leftovers home

Ask your restaurant to pack up your extras so you can eat them later. **Few of us take leftovers home from restaurants, but this could become a great habit!**

## Share

Share a bigger meal.

## Check ingredients

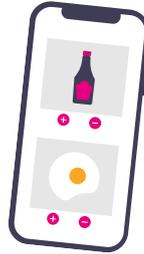
You can also **make sure that a meal you ordered does not contain ingredients you do not enjoy.**





Here are some other tips to help you make a difference.

# In addition



## Sharing is caring

**Donate food that would otherwise be wasted.** For example, **apps can connect neighbours and local businesses** to share surplus food. Safe products also can be donated to **local food banks, soup kitchens and shelters.**



# How food-waste-free are you?



#YourActionsMatter  
#savefood

## For one week, keep track of all food waste using the proposed diary below.

Identify what food was wasted the most and why. Consider what waste easily could be avoided by implementing simple changes in your everyday habits.

### Note

**Inedible parts of food products** (e.g. eggshells, fruit and vegetable pips and stones, tea bags, coffee grounds, etc.) **are not considered food waste**, so there is no need to put it in the diary.

**However, food that could have been eaten but was thrown away is waste.** This includes leftovers, food that is past its “use by” or “best before” date, or food that has gone off or become mouldy.

# Your food waste prevention diary



Day 1

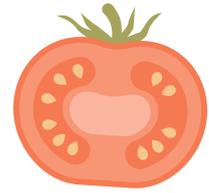
Meal	Food	Amount	How disposed	Reason	Cost
Breakfast	Milk	1/2 cup	Kitchen sink	Left over	
Lunch					
Dinner					
Snack / Other					

Your food waste prevention diary



Day 2

Meal	Food	Amount	How disposed	Reason	Cost
Breakfast	Milk	1/2 cup	Kitchen sink	Left over	
Lunch					
Dinner					
Snack / Other					



Day 3

Meal	Food	Amount	How disposed	Reason	Cost
Breakfast	Milk	1/2 cup	Kitchen sink	Left over	
Lunch					
Dinner					
Snack / Other					



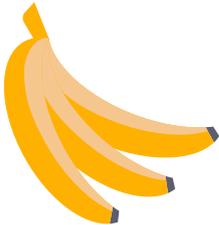
Day 4

Meal	Food	Amount	How disposed	Reason	Cost
Breakfast	Milk	1/2 cup	Kitchen sink	Left over	
Lunch					
Dinner					
Snack / Other					



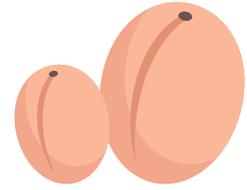
Day 5

Meal	Food	Amount	How disposed	Reason	Cost
Breakfast	Milk	1/2 cup	Kitchen sink	Left over	
Lunch					
Dinner					
Snack / Other					



Day 6

Meal	Food	Amount	How disposed	Reason	Cost
Breakfast	Milk	1/2 cup	Kitchen sink	Left over	
Lunch					
Dinner					
Snack / Other					



Day 7

Meal	Food	Amount	How disposed	Reason	Cost
Breakfast	Milk	1/2 cup	Kitchen sink	Left over	
Lunch					
Dinner					
Snack / Other					



# Stop food waste, for the people and for the planet.

Share your tips and solutions

Tag **#savefood** and **#YourActionsMatter**  
to inspire your friends and community to take action too.

**Regional Office for Europe and Central Asia**

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[www.fao.org/save-food/regional/easterneurope/en/](http://www.fao.org/save-food/regional/easterneurope/en/)

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