

Food Waste Meets Nutrition



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Food waste and nutrition are deeply interconnected, highlighting a paradox where an abundance of food is discarded while millions suffer from hunger and malnutrition. Globally, nearly a third of all food produced is wasted, amounting to around 1.3 billion tons annually. This loss is not just a waste of resources but also a missed opportunity to nourish those in need.

In many parts of the world, people struggle with food insecurity, lacking access to essential nutrients that support growth, development, and overall health. Meanwhile, perfectly edible and nutrient-rich foods – such as fruits, vegetables, dairy, and proteins – are thrown away due to cosmetic imperfections, over-purchasing, or improper storage. This disconnect between food waste and hunger represents a critical issue that needs urgent attention.

The paradox of food waste becomes even more troubling when considering the widespread issue

of global nutrient deficiencies. Many wasted foods are among the most nutritionally dense, including fresh produce, which is rich in vitamins and minerals necessary for preventing diseases like anaemia, rickets, and scurvy.

While consumers in wealthier nations discard food for convenience or due to confusion over expiration labels, people in low-income communities often lack even the most basic nutrients needed for survival. If a fraction of the food wasted globally were redistributed efficiently, it could help bridge the gap between surplus and scarcity, reducing both food waste and malnutrition simultaneously. Addressing this paradox requires systemic changes, from improving food distribution and donation networks to encouraging responsible consumption at the household level. By tackling food waste, society can take a significant step toward ensuring better nutrition and food security for all.

Stats on food waste

Food waste is a major issue in both the UK and Ireland, with millions of tonnes of edible food discarded each year across the supply chain. In the UK alone, around 9.5 million tonnes of food is

wasted annually, while in Ireland, the figure is approximately 1 million tonnes. This waste occurs at multiple stages, including farms, supply chains, supermarkets, and households, each contributing to the problem in different ways.

A significant amount of food waste occurs before it even reaches consumers. In the UK, an estimated 3.6 million tonnes of food is wasted on farms and during processing. Similarly, in Ireland, up to 40% of fruit and vegetables never make it to the shelves due to cosmetic standards imposed by supermarkets. These standards reject produce that is misshapen or slightly discoloured, despite being perfectly edible. Additionally, inefficiencies in the supply chain, such as overproduction and logistical issues, result in further food loss.

Retailers contribute to food waste through stock mismanagement and unrealistic expectations around product appearance. In the UK, supermarkets generate around 300,000 tonnes of food waste each year. "Multi-buy" promotions encourage over-purchasing, leading to food being discarded before consumption. In Ireland, supermarkets are also criticised for discarding unsold but still edible food instead of donating it to food charities. However, some progress has been made, with initiatives like surplus food redistribution schemes helping to reduce retail waste.

The largest proportion of food waste comes from households. In the UK, households account for 70% of total food waste, amounting to approximately 6.6 million tonnes per year. In Ireland, households waste around 250,000 tonnes annually, costing the average household around €700 per year. A major cause is over-purchasing, driven by supermarket deals and poor meal planning. Additionally, improper storage, such as leaving perishable foods at incorrect temperatures or not using airtight containers, leads to spoilage.

One of the biggest drivers of household food waste is confusion over food labelling. Many people mistakenly discard food once it reaches the "best before" date, even though these labels refer to quality rather than safety. The "use by" date, on the other hand, indicates when food is no longer safe to eat. A study in the UK found that nearly half of consumers misinterpret these labels, throwing away food that is still edible. The Irish government has encouraged supermarkets to adopt clearer labelling and introduce "smart" packaging to help reduce unnecessary waste.

Both the UK and Ireland have traditionally enforced strict cosmetic standards, leading

to vast amounts of perfectly edible food being rejected. Misshapen fruits and vegetables are often discarded before even reaching supermarket shelves. However, recent campaigns, such as "Wonky Veg" initiatives, have encouraged consumers to embrace imperfect produce. Retailers are gradually adjusting their policies, but there is still a long way to go in changing perceptions around food appearance.

Nutrient Loss Due to Food Waste

Food waste not only leads to economic and environmental consequences but also results in a significant loss of essential nutrients that are vital for human health. Many of the most commonly wasted foods—fruits, vegetables, dairy, and proteins—are among the most nutrient-dense. When these foods are discarded, so are the vitamins, minerals, and other nutrients they contain, contributing to dietary imbalances and potential public health issues.

Globally, fresh produce makes up the largest portion of food waste. In the UK, for example, nearly half of all food waste comes from fresh fruits and vegetables. These foods are rich in vitamins like vitamin C, vitamin A, and folate, which are crucial for immune function, vision, and cell growth. Dairy products, such as milk, cheese, and yogurt, are also wasted in large quantities, resulting in the loss of key nutrients like calcium, vitamin D, and protein, which are essential for bone health. Protein-rich foods, including meat, fish, eggs, and legumes, are another major category of waste. These foods provide iron, B vitamins, and essential amino acids that are



necessary for muscle function and overall energy levels. The loss of these foods means that valuable sources of nutrition are being thrown away rather than consumed.

When nutrient-rich foods are wasted, dietary diversity suffers. A well-balanced diet relies on a variety of foods to provide all the essential nutrients the body needs. However, food waste contributes to a reduced intake of fresh, whole foods, particularly among low-income populations who may already struggle to access nutritious meals. This can lead to an over-reliance on processed foods, which are often calorie-dense but nutritionally poor, increasing the risk of obesity, heart disease, and diabetes.

At a broader level, food waste exacerbates global malnutrition. While vast amounts of food are wasted in high-income countries, millions of people in lower-income regions suffer from nutrient deficiencies. Addressing food waste through better food distribution systems, improved storage methods, and consumer education could help bridge this gap, ensuring that nutrient-rich foods reach those who need them most. Public health initiatives promoting food waste reduction, along with policies that encourage donation of surplus food, could play a significant role in improving nutritional outcomes on both a local and global scale.

Tackling food waste

Tackling food waste requires action at multiple levels, from individual consumers to large-scale industries and government policies. By addressing waste throughout the food system, we can improve nutrition, reduce environmental impact, and make food more accessible to those in need.

At the Consumer Level: Smarter Shopping & Cooking: Consumers play a crucial role in reducing food waste through better planning and storage habits. Meal planning helps households buy only what they need, preventing unnecessary purchases that may go to waste. Proper storage techniques, such as refrigerating perishables at the right temperature and using airtight containers, can extend the shelf life of food. Another key strategy is the creative use of leftovers, turning surplus ingredients into new meals rather than discarding them. Simple actions like making soups from vegetable scraps, freezing excess food, or repurposing stale bread into breadcrumbs can significantly reduce household waste while maintaining a nutritious diet.

At the Industry Level: Reducing Waste Across the Supply Chain: Food waste at the industrial level can be mitigated through better redistribution and innovative practices. Supermarkets and restaurants can donate surplus food to food banks and charities instead of discarding it. More businesses are also



embracing 'ugly' produce - misshapen fruits and vegetables that are perfectly edible but often rejected due to cosmetic imperfections. Additionally, adjusting portion sizes in restaurants and catering services helps prevent uneaten food from being thrown away. Some businesses now offer smaller portion options, allowing consumers to choose what they can realistically finish.

At the Policy Level: Government & Community Initiatives:

Governments and policymakers are increasingly recognizing the need for systemic changes to combat food waste. Many countries have introduced legislation to reduce waste in supply chains, including incentives for food donation and penalties for excessive disposal of edible food. School and community programs also play a key role in promoting food waste awareness, teaching students and families how to store, cook, and repurpose food effectively. In some places, mandatory composting and waste tracking initiatives encourage businesses and individuals to be more conscious of their food consumption habits.

Upcycling & Sustainable Eating Trends: In recent years, upcycling has emerged as an innovative solution to food waste, where businesses transform discarded food into nutritious products.

Companies are now using surplus fruit to create dried snacks, brewing leftover bread into beer, and repurposing vegetable pulp into high-fiber flour. These initiatives help reduce waste while offering consumers sustainable food options.

In Sodexo we practise root-to-stem and nose-to-tail cooking, where our chefs use every edible part of an ingredient. For example, vegetable peels, stems, and leaves can be used in soups and stir-fries, while meat cuts that were traditionally discarded are now being incorporated into flavourful dishes. These approaches not only minimize waste but also maximize the nutritional value extracted from each ingredient.

Education is key to changing consumer habits and making food systems more sustainable. Schools, media, and community programs can teach people how to use all parts of food, from using bones for broth to repurposing citrus peels for zest. Encouraging mindful eating—such as taking smaller portions, eating seasonally, and understanding food labels—can help individuals make better food choices. Cooking workshops, recipe-sharing platforms, and awareness campaigns also play an essential role in spreading sustainable habits, ensuring that food is valued and not wasted.



HOMEMADE CHICKEN FREEZER STOCK BAG RAMEN USING KITCHEN SCRAPS

Ingredients

For the Stock:

- Saved chicken bones & carcasses (from roast chicken, drumsticks, wings, etc.)
- Collected vegetable scraps (onion skins, carrot peels, celery ends, garlic peels, mushroom stems, etc.)
- 1 tbsp oil (for roasting)
- 2-3 dried bay leaves
- 1 tbsp whole peppercorns
- 1-inch piece ginger (or ginger peels)
- 3 cloves garlic (or garlic skins)
- 2 tbsp soy sauce
- 1 tbsp apple cider vinegar (helps extract nutrients from bones)
- Water (enough to fill the slow cooker)

For the Ramen Bowl:

- Cooked rice noodles
- Shredded or sliced cooked chicken (leftovers work great!)
- Stir-fried vegetables (like mushrooms, bok choy, carrots, or whatever scraps you have)
- 1 boiled egg, halved (optional)
- Chopped spring onions & sesame seeds for garnish
- Chilli flakes or sriracha for spice (optional)

- To make this rich and flavourful ramen while reducing kitchen waste, start by saving chicken bones and vegetable scraps over time. Store leftover bones from roasted chicken, drumsticks, or wings, along with vegetable peels and ends (such as onion skins, carrot peels, celery ends, garlic peels, and mushroom stems) in an airtight container or freezer bag until you have enough to fill a slow cooker.
- Once you've collected enough scraps, roast the bones and vegetables to enhance the depth of flavor. Preheat your oven to 200°C (400°F), spread the frozen bones and scraps on a baking sheet, drizzle them with a little oil, and roast for about 30-40 minutes, or until they are nicely browned. This step gives the broth a deep, rich taste.
- Next, transfer the roasted bones and scraps to a slow cooker and add a few aromatics such as bay leaves, peppercorns, ginger, and garlic. Pour in 2 tablespoons of soy sauce for umami and 1 tablespoon of apple cider vinegar, which helps extract nutrients from the bones. Fill the slow cooker with water, ensuring everything is submerged, then let it cook on low for 12-24 hours (or on high for 6-8 hours). The longer it simmers, the more flavourful and nutrient-rich your broth will be. Once done, strain the stock, discarding the solids, and skim off any excess fat if desired.
- To assemble the ramen, start by cooking your rice noodles according to the package instructions. In a bowl, add the noodles along with shredded or sliced cooked chicken (leftovers work perfectly) and a mix of stir-fried vegetables like mushrooms, bok choy, or carrots—whatever you have on hand. Ladle the hot broth over the top, making sure everything is well covered. For extra richness, add a boiled egg, sliced in half, and garnish with chopped spring onions, sesame seeds, and chili flakes or sriracha for some heat.