

Guide to Reducing Food Waste

in Supermarkets and
Hypermarkets

Food Safety Department

dm.gov.ae



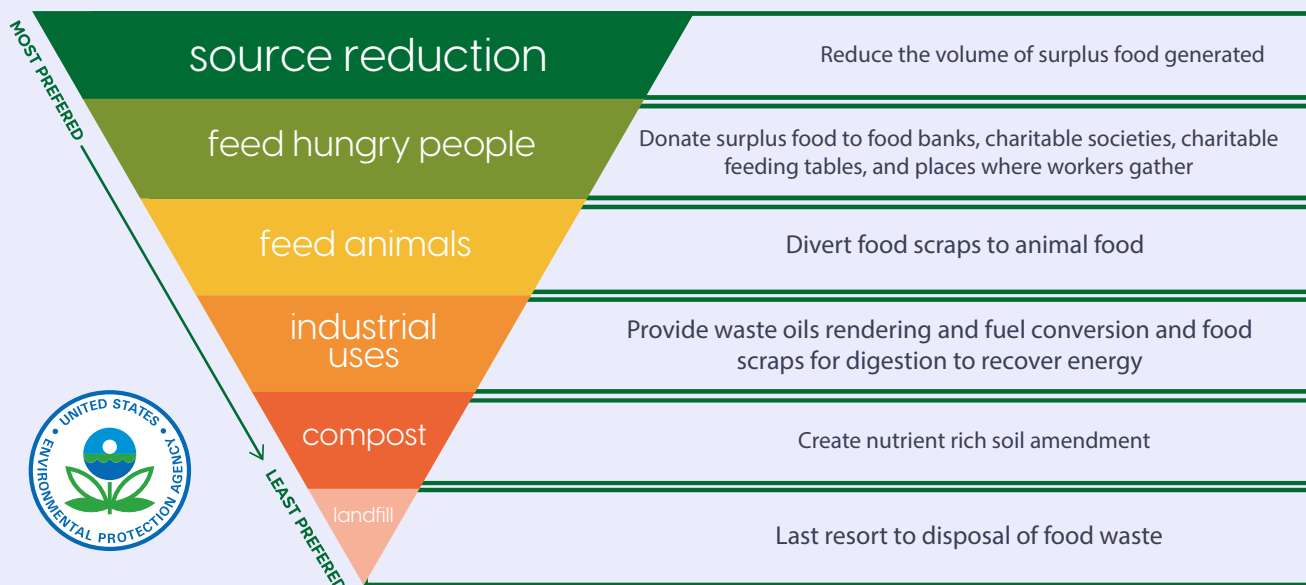
Why should we reduce food waste on a supermarket/hypermarket level?

- **Economic effect:** Food waste indicates inefficient use of resources, as it reflects lack of investment in agriculture, transportation, manufacturing, and energy sectors.
- **Social effect:** Low-income families may face difficulties in securing an adequate source of food.
- **Environmental effect:** When food goes to waste, so do all of the resources (water, Soil etc ..) making the environmental effects of wasted food more significant.

Guideline aim:

- Promote supermarket operators' contribution to protecting the environment by minimizing food waste through following the best practices in food safety and sustainability.
- Develop food supply plans according to their needs and take advantage of low cost.

Priorities of food waste reduction



*Source: U.S Environmental Protection Agency (EPA)

How:

How can supermarkets reduce food waste?



Steps detailed in this guide for food retailers to reduce food waste:





How can supermarkets reduce food waste?

1. Planning:

- ❖ Conduct waste audit
- ❖ Assess the cost of food waste.

Waste Audit:

conducted to analyze the composition of food waste and allow supermarkets to identify the main sources of and reasons for food wastage.

During the audit:

- Collect source-segregated food waste samples daily over a specific period (e.g., for a typical week). If food waste is mixed with other waste, the waste will need to be sorted first to extract the food waste portion.
- Analyze food waste to determine the types and quantities of food waste (e.g., vegetable, chicken/ fish bones) generated at each stage of the retail and service process.
- Identify the reasons for the food waste e.g., whether it is excess food from over-production or food that has gone bad due to poor inventory management, etc.
- Record how the food waste is managed, e.g., whether the food waste is discarded or recycled.

Assess the cost of food waste:

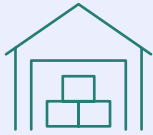
- Waste Collection & Disposal Costs
- Staff & Utilities Cost



2. Purchasing:

- ❖ Improve inventory management (poor inventory management may result in overstocking).
- An electronic inventory management system or software may help tracking stock levels more effectively.
- Use data analytics tools and work with suppliers to carry out demand forecasting and take into account factors such as weather changes, competition, economic situations and consumer confidence; as these can affect consumers' purchasing patterns.
- Forecasting the changes in demand patterns can help supermarkets better manage their stocks.
- Understanding demand patterns (supermarket operators will be able to order food stock right before they are to be used or sold, and consider bulk purchases only when needed).

How can supermarkets reduce food waste?



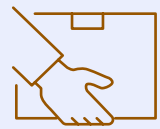
3.Storage:

- Inspect incoming goods.
- Control storage conditions: temperature control, ventilation, cleanliness, and pest control.
- Adopt First –In – First out (FIFO) and First Expire First Out (FEFO) policies.
- Storage places such as refrigerators and shelves should be cleaned regularly to prevent pest infestation and microbial growth.



4. Handling and transportation:

- ◊ Following transportation requirement (temperature control and using approved transportation vehicles) as per Dubai Food Code.



5.Sales and Service:

- **demand-based production:** some supermarkets produce meals in big quantities to enhance visual appeal. It is recommended to produce food in batches or tag them (as per order) to avoid any food wastage at the end of the day, specially perishable food.
- **Different approaches for the display and sale of food products:** Supermarkets operators think that full shelves or overfilled baskets indicates product freshness. Alternatively, they can use dummy layers to prop fruits up, giving the impression of abundance.
- **Near expiry items can be displayed at a lower prices.**
- **Encourage customers to reduce wastage during shopping:** help customers be more aware of food waste and pass on positive messages such as handling food with care (do not squeeze fruit to check freshness).

How can supermarkets reduce food waste?



6. Staff training:

- **Provide adequate staff training:** staff should be trained on proper food storage and handling procedures as per Dubai Food Code requirements.
- **Ensure a high level of hygiene standards:** provide proper training on hygiene practices. Refrigerators and shelves should be cleaned regularly and adequately.
- **Keep staff motivated:** In order to keep staff motivated, supermarket operators could:
 1. Foster a food waste reduction culture.
 2. Set food waste reduction goals.
 3. Encourage innovative solutions for food waste reduction.
 4. Make adoption of food waste reduction practices a key performance indicator for employees evaluations.
 5. Recognize staff who undertake food waste reduction initiatives.



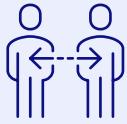
7. Redistribution:

1. **Resale:** Supermarket operator can resale or redistribute overstocked and near expired food to other retailers to avoid food waste.
2. **Donation:** In collaboration with Food banks, supermarket operators can donate their overstocked food before it is expired or spoiled.



8. Recycling :

- ❖ Since food waste is inevitable, there are times when food items cannot be donated for human consumption. In such cases, supermarket operators can consider recycling the food waste instead. Supermarket operators can collaborate with recycling organizations or install on-site food waste treatment systems to manage food waste.
- ❖ These systems are capable of converting food waste to non-potable water or compost/ fertilizers and other solutions; hence helping supermarket operators cutting down disposal costs.



How can supermarkets reduce food waste?

9. Partnership:

- Explore possible cooperation with the government to support circular economy strategies.
- Improve the collaboration with food industry partners (suppliers, retailers)
- Explore ways of working with food distribution entities to donate surplus and edible food safely.
- Explore food waste recycling/treatment options.



