



## MANAGEMENT OF BIODEGRADABLE WASTE AND NUTRITIONAL STRATEGIES

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### **Abstract:**

The important food groups provides nutrition to our body for healthiness. Excessive food materials which are not used by anyone automatically become wastage of food. Food waste or food loss is food that is discarded or cannot be used. One can call it biodegradable waste. Biodegradable waste is a type of waste which can be broken down, in a reasonable amount of time, into its base compounds by micro-organisms and other living things, regardless of what those compounds may be. It includes food waste also. Everyone should avoid the wastage of food by managing the reduction and preventing the food waste to get benefit from that. Food reduction and prevention strategies like cutting cost for disposal of food, reduce over-purchasing of food materials are very helpful to overcome the problem of food waste.

**Keywords:** *food waste, food disposal*

### **Food is essential for our bodies to:**

- develop, replace and repair cells and tissues;
- produce energy to keep warm, move and work;
- carry out chemical processes such as the digestion of food;
- Protect against, resist and fight infection and recover from sickness.

Food is made up of nutrients. Micronutrients such as vitamins and minerals are needed only in small amounts. Macronutrients such as carbohydrates, protein and fat are needed in larger amounts. The body cannot function properly if one or more nutrients are missing. A healthy and balanced diet provides foods in the right amounts and combinations that are safe and free from disease and harmful substances.

**Food waste or food loss** is food that is discarded or cannot be used. The causes of food waste or loss are numerous, and occur at the stages of production, processing, retailing and consumption. Food that is wasted has several environmental, financial and social impacts. Food waste leads to a





waste of resources used in food production and distribution, including land, water, energy, fertilizers, pesticides, labour and capital.

### **Why do we waste food?**

We all waste food for different reasons. Sometimes it is because there has been a change of plans and it is out of our control but most of the time we waste the same types of food for the same 2 main reasons: we have bought or prepared too much, or we have forgotten to use it on time.

The impact of food waste is not just financial. Environmentally, food waste leads to wasteful use of chemicals such as fertilizers and pesticides; more fuel used for transportation; and more rotting food, creating more methane – one of the most harmful greenhouse gases that contributes to climate change.

Turning biodegradable waste such as food scraps and yard trimmings into compost or recycling them through your local yard waste collection facility, eliminates a large portion of any household or business's waste stream.

Biodegradable waste is a type of waste which can be broken down, in a reasonable amount of time, into its base compounds by micro-organisms and other living things, regardless of what those compounds may be. Biodegradable waste can be used for composting or a resource for heat, electricity and fuel by means of incineration or anaerobic digestion. Swiss Kompogas and the Danish AIKAN process are examples of anaerobic digestion of biodegradable waste.

**Waste management** is the "generation, prevention, characterization, monitoring, treatment, handling, reuse and residual disposition of solid wastes". Solid waste includes food waste.

### **Food Waste Reduction and Prevention**

Food waste source reduction or prevention is the strategy of preventing food waste before it is created. An example of food waste prevention for a buffet is tracking which dishes generally have more leftovers, and either make less of the dish or substitute it with a more popular dish, rather than continuing to throw the leftovers away.





### **Benefits of Reduction & Prevention:**

- **Cut Down on Your Disposal Costs** - By decreasing the amount of food wasted, businesses pay less to dispose of their trash.
- **Reduce Your Over-Purchasing & Labor Costs** - To prevent food waste, reduce costs by purchasing only the food that will be used, or by decreasing improperly prepared foods.
- **Reduce Resource Use Associated with Food Production** - There are many inputs to grow food, including water, fertilizers, pesticides, and energy. By wasting food, wasting the resources that went into growing it.
- **Reduce GHG Emissions** - Less food being wasted means less food being composted or landfilled; landfilled food produces methane, a very potent green-house gas.

### **Reduction and Prevention Strategies:**

**Do a Food Waste Assessment** – The first step to reducing food waste is to measure and track the amount, type, and reason for its generation.

#### **Reduce Your Food:**

- Reduce over-purchasing of food.
- Reduce prep waste and improperly cooked food.
- Consider secondary uses for excess food.
- Ensure proper storage techniques.

**Reduce Plate Waste** - Consumer kitchen waste includes all food wastes generated once the food reaches the customer.

- Modify menu to increase customer satisfaction and reduce food left uneaten.
- Change serving sizes and garnishes.
- Encourage guests to order or take only the food they can consume.
- Go Tray-less.

#### **Reduction and disposal:**

Response to the problem of food waste at all social levels has varied hugely, including campaigns from advisory and environmental groups, and





concentrated media attention on the subject. As alternatives to landfill, food waste can be composted to produce soil and fertilizer, fed to animals, or used to produce energy or fuel.

### **Prevention:**

One way of dealing with food waste is to reduce its creation. Consumers can reduce spoilage by planning their food shopping, avoiding potentially wasteful spontaneous purchases, and storing foods properly.

- **Landfills and greenhouse gases:**

Dumping food waste in a landfill causes odour as it decomposes, attracts flies and vermin, and has the potential to add biological oxygen demand (BOD) to the leachate. Starting in 2015, organic waste from New York City restaurants will be banned from landfills.

In countries such as the United States and the United Kingdom, food scraps constitute around 19% of the waste dumped in landfills, where it ends up rotting and producing methane, a greenhouse gas.

- **Municipal collection:**

Food waste is usually managed by the same governmental organization as other waste collection. Most food waste is combined with general waste at the source. Separate collections, also known as source-separated organics, have the advantage that food wastes can be disposed of in ways not applicable to other wastes. Separate curbside collection of food waste is now being revived in some areas.

- **Animal feed:**

The feeding of **food scraps** to animals is, historically, the most common way of dealing with household food waste.

It is now widely believed by scientists that the domestication of the dog was related to food scraps. Indeed, some believe that dogs "self-domesticated" by following around hunter-gatherer bands in order to eat their scraps. In fact, taking leftovers home from a restaurant is often called a **doggy bag**.

Chickens have traditionally been given mixtures of waste grains and milling by-products in a mixture called **chicken scratch**.





- **Composting:**

Inevitable waste: peels of potato, onion, lemon, tangerine, banana, kiwi, egg. Food waste can be biodegraded by composting, and reused to fertilize soil. Food waste can be composted at home.

- **Anaerobic digestion:**

It produces both useful gaseous products and a solid fibrous "compostable" material. Anaerobic digestion plants can provide energy from waste by burning the methane created from food and other organic wastes to generate electricity, defraying the plants' costs and reducing greenhouse gas emissions.

Food waste coming through the sanitary sewers from garbage disposal units is treated along with other sewage and contributes to sludge.

- **Commercial liquid food waste:**

Food waste in the form of wastewater coming from commercial kitchens' sinks, dishwashers and floor drains is collected in holding tanks called grease interceptors to minimize flow to the sewer system.

**Last but not the least:** looking ahead, solutions that help to avoid food waste will become-

- Increasingly important for everyone.
- Reduction of food waste offers huge potential for everyone to increase their profits.

Food waste reduction measures are not only to the benefit of the User's bottom line, but also convey a social responsible and environmentally friendly image.

**References:**

- [en.wikipedia.org/wiki/food\\_waste](http://en.wikipedia.org/wiki/food_waste)
- [https://www.google.co.in/#q=food\\_waste](https://www.google.co.in/#q=food_waste).
- [www.stopfoodwaste.ie/food\\_waste/why\\_we\\_waste\\_food](http://www.stopfoodwaste.ie/food_waste/why_we_waste_food)
- [www.unep.org/wed/2013/quickfacts](http://www.unep.org/wed/2013/quickfacts)

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