



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 8.4  
IJAR 2022; 8(10): 181-184  
www.allresearchjournal.com  
Received: 26-08-2022  
Accepted: 29-09-2022

**Ramkrishna Jana**  
Assistant Professor, Amity  
University, Kolkata, West  
Bengal, India

## Waste management in hotel industry

**Ramkrishna Jana**

### Abstract

Waste, which is always a concern, must be properly regulated because all businesses, including food and beverage, account for most of the waste output. Scraps of food, non-edible goods, rubbish and swill account for the majority of waste products generated in the kitchen and service areas. This waste must be handled with care, as it contains valuable substances that can be used to enhance the soil with nutrients if properly treated under certain conditions. Several technologies have been established for converting food waste into useable product, and management must closely adhere to waste product control.

**Keywords:** Trash, sustainable, disposal, leftover, composting, sanitizer

### Introduction

Waste is produced because of industrial activity, some of which are harmful. For industrial activities to continue in the future, hazardous waste must be continuously and properly disposed of. India has many restaurants and hotels. These hotels significantly increase the amount of waste produced. A quarter to thirty percent of the waste produced comes from hotels and restaurants.

The trash produced by routine operations is a persistent problem for the hotel sector. In addition to paying for rubbish removal, hotels also must set aside priceless back-of-the-house space for waste to be kept and sorted. The health and safety of individuals who meet the waste as well as the noise made by waste compaction and collection are additional problems. Hotels and restaurants are destined to produce significant volumes of food waste given the nature of their employment. The appropriate authorities, such as management and the government, are undoubtedly very concerned about this. Control measures must be implemented in some way to guarantee that the hotels and restaurants prosper in a welcoming environment. At many stages of hotel and restaurant operations, food waste can occur. Food waste can result from tasks involving the processing and preparation of food resources for a variety of reasons, including unexplained demand, overstocking, inefficient production, poor communication, employee conduct, incompetent trimming, excessive merchandising, and expirations.

Large portion sizes ordered, ineffective service techniques, and menu approval by consumers can all contribute to waste after the food has been eaten. Depending on the sorts of food used, several types of waste are produced in hotels and restaurants. Egg shells, peels from potatoes and fruit, bones, meal leftovers, and packaging debris are a few examples.

### Waste management procedures in hotels

Internationally and within organizations, there are differences in how hotels handle their food waste. Prevention, reuse, recycling, and landfills are often the sequence of importance. Some people would rather optimize their preventative strategy if they find that it doesn't work for them. It follows that the garbage is now used to feed both people and animals. In any other case, the trash can be composted or used to create sustainable energy.

In general, hotel waste management techniques include prevention and reduction, recycling, donating, composting, tracking, enhancing ingredient buying and storage, smart food merchandising, menu design, employee training, customer interaction, portion control, and service model modifications.

**Corresponding Author:**  
**Ramkrishna Jana**  
Assistant Professor, Amity  
University, Kolkata, West  
Bengal, India

### **Approaches to cut down on food waste in eateries**

There will inevitably be alarming quantities of food waste because of the preparation and consumption of food in restaurants. There are several other issues to be concerned about, notwithstanding the fact that food wastes lower restaurant profitability. Examples of such difficulties include the generation of greenhouse gases and disagreeable odors in restaurants.

### **Ways to lessen food waste at restaurants**

There will inevitably be alarming quantities of food waste because of the preparation and consumption of food in restaurants. There are several other issues to be concerned about, notwithstanding the fact that food wastes lower restaurant profitability. Examples of such difficulties include the generation of greenhouse gases and disagreeable odors in restaurants.

### **Reduce food waste as a top issue for restaurant management by using techniques like**

#### **1. Conducting audits of food waste**

Analyzing and following the movement of food waste from its origin to its disposal are required for this. The quantity of food wasted and the number of customers entering the restaurant are the two main variables to be considered when tracking. With the aid of this information, management is better able to identify the primary cause of food waste. Using two techniques, it is possible to track food waste. The first is a system for tracking food waste, which keeps track of the kinds of food that are thrown away, the reasons for doing so, and the quantity of waste produced.

The second is a traffic log system, which considers the volume of customers the restaurant receives, changes in the weather, and other data that can be used to prepare for future customers and the food to be ordered. The two main forms of food waste in restaurants are that which occurs before serving customers and that which occurs after the diners have finished their meals. Potato peels, roots from green vegetables, bones, incorrectly prepared food, and spilt food are some examples of the waste that can be produced during the meal preparation process at restaurants. According to estimates, 4–10% of the raw food served in restaurants fits under this category. The waste includes any food items or packaging materials that visitors were unable to finish.

#### **2. Avoiding the practice of throwing out ingredients before using them**

It is necessary to conduct an inventory review exercise so that restaurant management can determine how long food supplies must be stored before they may be used in the establishment. By doing this, the likelihood of ordering too much and losing perishable food items is decreased. Additionally, the staff at restaurants needs to receive the necessary training to develop their food waste management skills. The training ought to equip the staff with the skills they need to create efficient food waste management plans, such as repurposing ingredients.

#### **3. Planned preparation of leftovers**

When waiters give customers food that they can't afford to finish, leftovers result. Enhancing the accuracy of customer orders would help to tackle this issue. The popularity of each dish must be understood by managers so that production schedules may be made in accordance with

demand. If there is any food left over, the consumers might be invited to take it home. If food is still available, it might be served to the waitstaff or given to others in need.

#### **4. Raising awareness and enlisting the appropriate food teams**

When putting food waste management ideas into practice, restaurant staff members should collaborate. The group must be properly educated on the issues caused by restaurants' inadequate food waste management. Members should also receive training on how to track, store, and recycle food waste. Before being incorporated into the teams, new employees should always get training on the restaurant's policy for managing food waste. Teams should ideally be made up of individuals who have analytical ability. They would be able to gain a better understanding of the issue of food waste in hotels and restaurants as a result. The group should select a leader to oversee the initiative for managing food waste. The other members should assign their positions accordingly.

#### **5. Composting the food trash**

Hotels and restaurants can plan to compost any compostable food wastes that occur in their premises. For this purpose, they would need an appropriate restaurant composting equipment like the popular Kwik Composter machine. They can choose to do the composting alone or with suitable partners.

#### **6. Quantifying the various types of food waste**

The activities listed below assist in recognizing various forms of food waste in hotels and restaurants:

- Having discussions with the workers
- Designating distinct containers for disposing of various sorts of food waste
- Keeping track of the various types and quantities of food waste
- Examining invoices and other pertinent paperwork
- The willingness of the staff to implement these measures is crucial to success. They must comprehend the significance of each and every action made.

#### **7. Sorting and weighing food waste**

Utilizing several containers, each for a specific type of food waste, makes sorting food trash simple. Organic waste, such as food scraps and uncooked food ingredients that can be composted, can be collected separately from recyclable items such as food packaging, glass, paper, and plastic bottles. The following subcategories can be used to further organize these primary categories: meat, fresh fruit, vegetables, plastics, glass, and others. Planning for disposal benefits from knowing how many of each category or subcategory will be needed.

#### **8. Other strategies for reducing food waste in hotels and restaurants include**

- Modifying the menu
- Modifying how you procure food supplies, Informing your team of the operating guidelines.
- Changing your dishes in a way that will limit the amount of food served, Purchasing high-quality kitchen equipment
- Fruits and vegetables should be stored properly to prevent loss due to perishability.

- Issuing raw food materials using the "first in, first out" technique.
- Regularly taking inventory of raw food supplies to prevent overstocking.

### Disposal of restaurant food waste

Disposal of food waste is a topic that has in the past caused concern among various parties. Finding secure ways to dispose of garbage has been the problem. Another crucial aspect of responsible business behavior is adhering to legislation for the disposal of restaurant food waste.

Most of the trash produced in hotels comes from the kitchen (organic food waste, packaging, cans, bottles, corks, and cooking oils) or the housekeeping department (cleaning materials and plastic packaging). Public spaces, hotel gardens (which may contain engine oils, insecticides, paints, and preservatives as well as grass and hedge cuttings), offices, and other areas also produce garbage (toner cartridges, paper, and cardboard waste). The garbage produced by the hotel property is further increased by the remodeling and renovation work carried out there. The following seven requirements must be met by hotels:

Waste reduction

Reuse/recycling

Energy Savings

Management and conservation

Waste management of hazardous materials

Socially and environmentally conscious purchasing practices

Management of freshwater resources

### Types of Hotel waste

Biodegradable (Wet) waste and Non-biodegradable (Dry) trash are the two types of hotel waste. Food, vegetable, and non-vegetable trash are included in the wet waste, whereas plastic bottles, papers, plastic wrappers, HDPE and LLDPE bags, among other items, are included in the dry waste.

### Waste disposal procedures currently in place for hotels

Currently, hotels dispose of their own waste, which includes food scraps from surrounding small eateries, at nearby collection points. The large amount of food waste thrown at these collection locations is mixed with all the other types of dry and wet garbage, giving the locations an unsightly appearance with a lot of filth and odor.

Large four- and five-star hotels typically use private contractors to transport their waste to the dumping site.

To compensate the hotels for the rubbish they produce, some private contractors levy Trade Refuse Charges (TRC). The TRC is based directly on the hotel's location and grade and is assessed in multiples of license costs. Bars and permit rooms are typical features of grade one hotels, which have their busiest times at night. Compared to food-only restaurants, establishments with bars and permit rooms produce a lot less waste. But compared to regular restaurants, which produce significantly more garbage, the TRC charged by pubs and restaurants is much greater.

According to observations of the hotel garbage produced by hotels in a few wards, between 70 and 75 percent of the hotel waste is biodegradable and is blended with all other types of rubbish when placed at the collecting places. Additionally, at the disposal site, all other types of non-biodegradable garbage are combined with the waste that is directly collected by private contractors.

### Recommended Action Points

Management of garbage produced by all 3, 4, and 5-star hotels and dining establishments that produce more than one tonne of rubbish on their own: These accommodations may want to consider options like installing tiny on-site bio-methanation plants or doing in-situ composting.

### Various management techniques

Bio Sanitizer along with bio sanitizer, machines with daily capacities of 500 kg, 1 tonne, and 3 tonnes are also available. With the aid of these devices, food waste can be reduced to 1/3 of its original volume, and the resulting odorless compost can then be aged and utilized as manure.

Bio-methanation: Bio-methanation if sufficient room is available, plants with daily outputs ranging from 100 to 500 kg can be erected on hotel property. Cooking can be done with the generated gas.

Composting/Vermicomposting - Options for composting/vermicomposting could be investigated.

### 1. Duty of care Regulations

Regulations governing the duty of care apply to all garbage that is removed from the property. All commercial garbage must be removed by registered waste carriers, either for disposal or recycling, and transfer notes must be prepared and kept on file, according to these laws. Every year, the company should receive a transfer note from any garbage contractor it has engaged, including the council. The minimum retention period for transfer notes is two years.

### 2. Recycling

Recycling benefits the environment by minimizing the amount of garbage sent to landfills and can minimize waste expenses if fewer general waste pickups are required. As fewer pickups of general waste are required because of recycling, waste costs will decrease.

### 3. Incineration

The food waste is burned in this process. This technique is mostly employed for the disposal of poisonous and hazardous food wastes. As a waste product, ash can provide crops with important nutrients.

### 4. Composting

This entails the microbial breakdown of organic food waste. You can do it by utilizing a composting machine or by storing the food waste in a pit for a long time. The resulting compost can be applied to plants as fertilizer.

### 5. Landfill

This involves dumping of the food waste in a landfill with a protective lining at the base. The lining prevents toxic chemicals from filtering into underground water zone. This method is the least preferred because it is the source of harmful greenhouse gases such as methane.

Food waste management remains a complicated issue because there are several factors involved. Restaurant food waste facts available point to many serious impacts on environment, revenue, and quality of life in the society. It is apparent that the issue of solid waste management in hotels and restaurants is yet to be tackled with the most fitting solution. However, it is evident that appreciable efforts are being made by stakeholders to effectively handle the challenges relating to food waste in hotels and restaurants.

**Conclusion**

A sound waste management plan benefits hotels by improving operational efficiency and promoting energy and water conservation. Recycling and trash elimination at the source help to lower greenhouse gas emissions during the production process. These actions also keep garbage out of landfills, which lowers landfill methane emissions. In comparison to producing the same amount of paper from trees, recycling one tonne of office paper results in a 95% reduction in air pollution and a 60% reduction in energy use. Three hours' worth of television can be run on one aluminum can's worth of energy-saving recycling.

**References**

1. <https://study.com>
2. <https://study.com>
3. <https://www.netsolwater.com>
4. <https://www.businesswaste.co.uk>
5. <https://www.researchgate.net>