

# Final Submission - Review 3

*By Sourav Sharma*

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**A STUDY ON EFFECTIVE USE OF WASTE MATERIAL FOR REVENUE  
GENERATION IN FOOD PRODUCTION DEPARTMENT IN  
HOTEL CROWNE PLAZA, GREATER NOIDA**

**3**  
*Project Report submitted in partial fulfillment*

*For the award of the degree of*

**BACHELOR IN HOTEL MANAGEMENT**

*Submitted by*

**NAME: - SAURABH SHARMA**

**(18GSOH1010028)**

**IN**

**PROJECT WORK**

**SCHOOL OF HOSPITALITY**

**Under the supervision of**

**Mr. Rohit Jaswal**

**(Assistant professor)**



(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

**May - 2021**



## **SCHOOL OF HOSPITALITY**

### **BONAFIDE CERTIFICATE**

Certified that this project report “**A study on effective use of waste material revenue generation in food production department in hotel Crowne Plaza Greater Noida**” is the bonafide work of Saurabh Sharma who carried out the project work under my supervision.

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## APPROVAL SHEET

This thesis/dissertation/report entitled “A study on effective use of waste material for revenue generation in food production department in hotel Crowne Plaza, Greater Noida” by “Saurabh Sharma” is approved for the degree of BACHELOR SCIENCE IN HOTEL MANAGEMENT (School of hospitality)

Examiner

**Mr. Rohit Jaswal**

Supervisor (s)

Chairman

Date:

Place: Galgotias University, Greater Noida. (U.P)

## **STATEMENT OF PROJECT REPORT**

### **PREPARATION**

Report title “**A study on effective use of waste material for the revenue generation in food production department in hotel Crowne Plaza Greater Noida**”

1. Degree for which the report is submitted: Bachelor Science in hotel management
2. Project supervisor was referred for preparing the report
3. The content of the report has been organized based on the guideline.
4. Specification regarding the report format has been closely followed.
5. The report has been prepared without resorting to plagiarism.
6. The entire source used has been cited appropriately.
7. The report has not been submitted elsewhere for a degree.



Signature of the student

Name: Saurabh Sharma

Roll no: 18GSOH1010028

Statement of preparation

Every student has to submit the statement of the report preparation

## Abstract

Indian Hospitality industry was growing good and was one of the top revenues earning sectors in India. After covid -19, everything become change. it ruined our industry very badly. Still, we are managing to run it so that at least it touches its breakeven point. If this industry stops completely then lots of people become jobless because this industry provides lots job opportunity. It comes under top 10 sector who provide job facility to new generation.

Hence, during this time hotel must show so concern toward waste management and how to reduce it and how we can generate revenue from it. In this research paper we are going to know about the waste management in food production department and how can we generate revenue from the food wastage.

The 3 main cause of food wastage are over production, not sold, and left over. Production of food in excess quantity leads to food wastage for example if chefs have to cook food for 50 pax and they cooked food according to 100pax then excess food will be get waste. So, they should prepare food according to the number of pax. Food not sold means that chefs prepared food on the bases of bookings but at last moment many booking got canceled, so it leads to less or not sold of food items and hence cause food wastage. Leftover food means that food items which is prepared for guest but they haven't tasted it or tasted in very small quantity. Hence it also leads to food wastage.

**Keywords:** - Hospitality, Revenue, wastage, management, food, spoilage

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## **ACKNOWLEDGMENT**

This research was conducted with the assistance of several employees of the hotel Crowne Plaza, Greater Noida. I really appreciate that they make out time for me from their busy schedule. I really want to thank all my chefs with whom worked and learned lifelong skills and experiences of kitchen department and who helped me in making this research a success.

First of all, I would like to give credits by mentioning the names of my few kitchen staff of hotel such as: - Chef Khan, Chef Gaurav, Chef Shubhank, Chef Ankit, and Chef Waseem and also each and every person of hotel who helped me a lot in understanding the concepts and also guiding me in many outstanding ways for completing my training and this project. Moreover, I also want to thank my faculties, mentor's dean sir, batch mates, seniors, juniors and especially my guide Mr. Rohit Jaswal for motivating, encouraging and keep reminding in every stage of completing this journey. You really helped me a lot and guided me in every step.



## Introduction

A very warm welcome. I Saurabh Sharma chose to prepare research paper on this topic because I felt that food is one of the necessary products and some people don't even get it even one time a day. Hotel do generate some waste material which can be someone wastes or can be someone gold.

I have completed my job training in hotel Crowne Plaza Greater Noida. I am trying to understand how can we reduce wastage and can generate revenue from waste materials in food production department.

To increase the profit, we can either reduce wastage or we can find out different ways to earn more revenue. As we all know covid 19 has ruined our economy and act as a barrier for our hospitality industry so it very important to do optimum utilization of resources and to decrease the cost. Reducing waste is not only good for hotel but it is very important for our society and environment. In hotels food production department plays very important role in generating revenue by reducing the costing and wastage.

**Keywords:** - Hotel, Waste Management, Kitchen, COVID 19

## **Objectives**

- 1.** A study of various type of waste material generates in kitchen and can be reused somewhere again?
- 2.** To understand how can we generate revenue from waste material which we generate in almost every department specially food production daily?
- 3.** To understand the procedures which we can opt and reduce wastage, also the best practices for waste management in hotel ?

## **Literature Review**

- The research by Seyed Mohsen Hashemi Hezaveh consists of introduction and wastage in hotel industry of Indian. In his research it is also mention about type of waste. He also wrote about how to dispose the waste.
- A case study by Janeen tang consists of solid waste management. In this he mentions about the effect of improper solid waste management on society and how it will affect tourism. He also suggests doing optimum utilization of resource in hotel. How can waste be recycling?
- A research by Nguyen khanh linh, in his research he mentions about the food wastage which take place in hotel. What are the reasons behind food wastage and how can we reduce it. He also stated that how can someone waste can be someone's need.

## Methodology

In this research paper I used two data collection methods, therefore this research is based on both quantitation and qualitative options. I have done survey with the help of google form and circulate it with hotel staff and non-hotelier just to get ideas and suggestions.

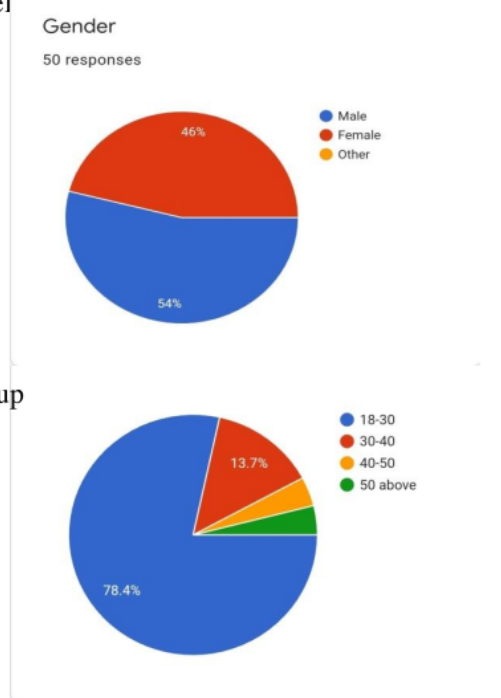
### **Primary data source: -**

To make this research a success I gather qualitative information from regular staff that have great experience and great suggestion, I did random field survey, did sel

In this pie chat we get to know about number of girls

And boys who had participate in this survey. Percentage of female is 46% and percentage of male is 54%. Percentage of boys is more as u can see above shows that there are more number of male in hotel.

Here we can see the age group of participants. It also shows that my maximum number of participants comes under 18-30 age group and their percentage is 78.4%. 13.7% of them are in age of between 30 – 40 years. This show that there are more youngsters which mean there are more chances of new ideas and new ways to reduce wastage and to do food waste management.



### **Secondary data source:**

For better understanding I opted the secondary data and I read some qualitative research on this topic. I gather some information through Google, read hotel policy, magazines, articles and gone through with internet to collect information.

## QUESTIONNAIR

### DEMOGRAGHC QUESTIONS

- Name : 5
- Gender :- Male, Female, Other
- Age group :- 18-30 , 30-40 , 40-50 , 50above
- Marital status :- Married, Unmarried, Divorced
- How often you go hotel? :- Once a week, once a month, daily, occasionally

### MAIN QUESTION

- Is waste management a good thing?
  - A) Yes
  - B) No
- 6 We can generate revenue from waste?
  - A) Agree
  - B) Disagree
  - C) Strongly agree
  - D) Don't know
- What percentage of waste does hotel produce?
  - A) Less than 5% 2
  - B) Between 5%-10%
  - C) Between 10%-20%
  - D) More than 20%
  - E) I don't know

- On an average what percentage of the guest does not finish their meal?
  - A) Less than 10%
  - B) 10%-20%
  - C) 20%-30%
  - D) Above 30%
  - E) Don't know
  
- Do you think stealing food come under food wastage?
  - A) Yes
  - B) No
  - C) Don't know
  
- Should we dispose food wastage according to their type?
  - A) Agree
  - B) Disagree
  - C) Strongly agree
  - D) Strongly disagree
  - E) I don't know
  
- Rechauffe of food is a good way to reduce food wastage?
  - A) Agree
  - B) Disagree
  - C) Strongly agree
  - D) Strongly disagree
  - E) I don't know
  
- Which of the following comes under 3R in context to waste management?
  - A) Refuse relocate recycle
  - B) Reduce reuse refuse
  - C) Recycle relocate reuse
  - D) Reduce reuse recycle
  - E) I don't know

- Should hotel invest time and capital in waste management?
  - A) Yes
  - B) No
  - C) I don't know
  
- Do you think HACCP help in preventing food wastage?
  - A) Agree
  - B) Disagree
  - C) Strongly agree
  - D) Strongly disagree
  - E) Don't know
  
- Is it correct to share the leftover food with needy people?
  - A) Yes
  - B) No
  - C) No idea
  
- The wastage should be distinguished by wet and dry wastage?
  - A) Agree
  - B) Disagree
  - C) Strongly agree
  - D) Strongly disagree
  - E) No idea
  
- Can colored bin be used to distinguished different type of wastage?
  - A) Agree
  - B) Disagree
  - C) Strongly agree
  - D) Strongly disagree

E) No idea

- <sup>2</sup>he wet food waste can use for feeding animal?  
A) Yes  
B) No  
C) I don't know
- For cleaning purpose paper roll is better option or duster?  
A) Paper roll  
B) Duster  
C) No idea



## SAMPLES OF THE SURVEY

Sample 1: -

The screenshot displays a survey management interface. At the top, there are two tabs: "Questions" and "Responses", with the "Responses" tab selected and showing a count of 55. Below the tabs, the text "55 responses" is prominently displayed. To the right of this text are a green plus icon and a vertical ellipsis menu icon. Below this, there is a toggle switch labeled "Accepting responses" which is currently turned on. Underneath the toggle, there are three view options: "Summary", "Question", and "Individual", with "Individual" being the active view. At the bottom of the interface, there is a navigation bar showing a left arrow, the text "38 of 55", a right arrow, a printer icon, and a trash can icon.

SAMPLE 1

Name

Gaurav Singh khati

Gender

Male

Female

Other

### Age group

- 18-30
- 30-40
- 40-50
- 50 above

### Marital status

- Married
- Unmarried
- Divorce

How often do you go to hotel?

- Once a week
- Once a month
- Occasionally
- Daily

Is waste management a good thing?

- Yes
- No

Can we generate revenue from waste?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea

In your opinion What percentage of waste does kitchen department produce?

- Less than 5%
- 5%-10%
- 10%-20%
- No idea

On an average what percentage of guest don't finish there food?

- Less than 10
- 10%-20%
- 30%above
- I don't know

Do you think stealing food comes under food wastage ?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- I don't know

Should we dispose food wastage accordingly to their type?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea

Rechauffe of food is a good way to reduce waste and to generate revenue?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea

What is 3R in context to waste management

- Refuse reuse relocation
- Recycle reduce reuse
- Reduce relocation recycle
- I don't know

Do you think proper temperature helps in reducing food wastage ?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea



Is it correct to share the left over food with needy people?

- Yes
- No
- No idea

The wastage should be distinguished by wet and dry waste?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea

Can coloured bins be used to distinguish different type of wastage ?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- I don't know

The wet food waste can be used for feeding animals ?

- Yes
- No
- I don't know

Which of this is a better option paper roll  
/Duster

Paper roll

Duster

No idea

**Sample 2 :-**

---

Name

Annie Thomas

---

Gender

- Male
  - Female
  - Other
-

### Age group

- 18-30
- 30-40
- 40-50
- 50 above

### Marital status

- Married
- Unmarried
- Divorce

How often do you go to hotel?

- Once a week
- Once a month
- Occasionally
- Daily

Is waste management a good thing?

- Yes
- No

Can we generate revenue from waste?

Can we generate revenue from waste?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea

In your opinion What percentage of waste does kitchen department produce?

- Less than 5%
- 5%-10%
- 10%-20%
- No idea

On an average what percentage of guest don't finish there food?

- Less than 10
- 10%-20%
- 30%above
- I don't know

Do you think stealing food comes under food wastage ?

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- Strongly disagree
- I don't know



Should we dispose food wastage accordingly to their type?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea

Rechauffe of food is a good way to reduce waste and to generate revenue?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea

What is 3R in context to waste management

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- Recycle reduce reuse
- Reduce relocation recycle
- I don't know

Do you think proper temperature helps in reducing food wastage ?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea

Is it correct to share the left over food with needy people?

- Yes
- No
- No idea

The wastage should be distinguished by wet and dry waste?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- No idea

Can coloured bins be used to distinguish different type of wastage ?

- Agree
- Disagree
- Strongly agree
- Strongly disagree
- I don't know

The wet food waste can be used for feeding animals ?

- Yes
- No
- I don't know

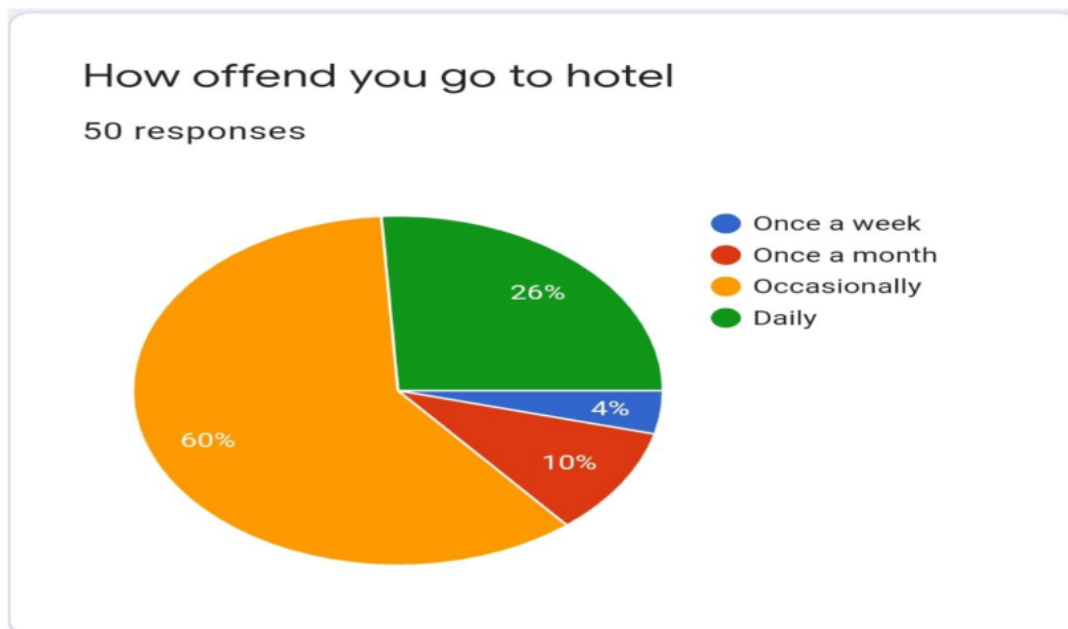
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Which of this is a better option paper roll  
/Duster

- Paper roll
  - Duster
  - No idea
-

## GRAPHICAL REPRESENTATION

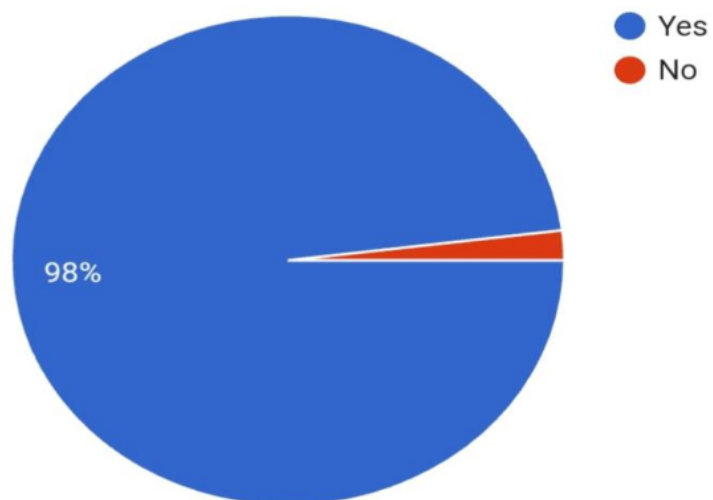
### Research analysis data and screen shots of the responses collected



With the help of this pie chart we can get to know that 60% of people visit hotel occasionally and 26% people are may be employee, who visit hotel daily. 4% of them visit hotel once in a week and remaining 10% visit hotel once in a month.

## Is waste management a good thing?

51 responses

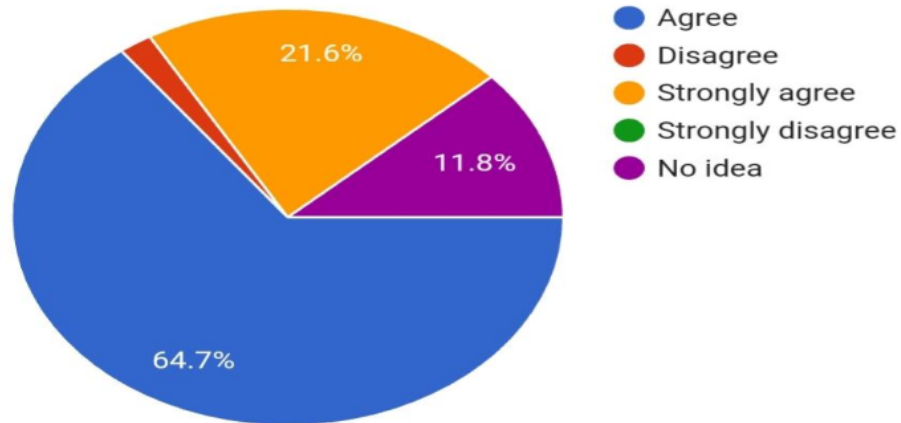


This shows that number of people who really think and concern about the waste management.

98% of then think that yes waste management is a good thing. This mean people are aware and seriously think that food waste management is a major issue.

## We can generate revenue from waste

51 responses

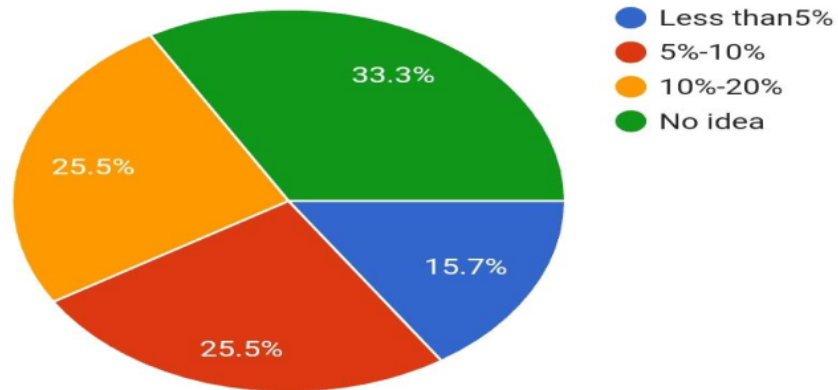


Participant's opinion about can we generating revenue from waste. 64.7% of them are agreeing, 21.6% are strongly agreed and 11.8% have no idea about it. This gives hope that yes, we can generate revenue from waste and to do optimum utilization of resources. During the conversation with many participants, I also make to know about many other ways and technics through which hotel not only resolves the wastage issue and also creates the revenue in different departments, I also came to know about many CSR activities in which hotel is engaged and doing many outstanding activities for society as well.



## What percentage of waste does kitchen department produce?

51 responses



Participant opinions on wastage take place in kitchen.

15.7% of them think that it should be less than 5%.

25.5% of them think that it is between 5% - 10%.

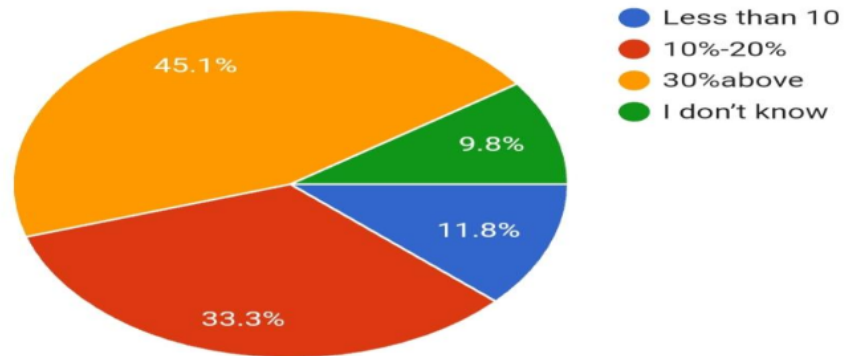
25.5% of them think that it is between 10% - 20%.

33.5 % of them have no idea about it.

This shows that people think that food production department in hotel produces 5%-20% of wastage, which is not so high but they should definitely find some way to reduce waste and to increase revenue.

## On an average what percentage of guest don't finish there food

51 responses



This pie chart clearly states that most of guests do not finish their food and do food wastage.

11.8% of them think it is less than 10%.

33.3% of them think that it is between 10% - 20%.

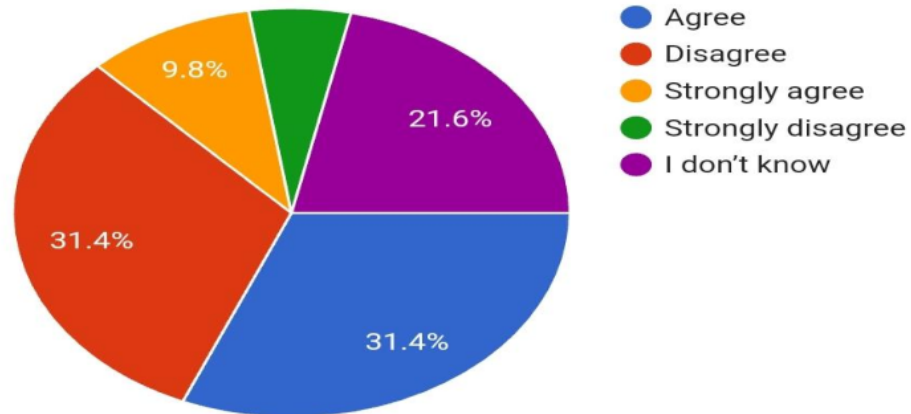
45.1% of them think that it is above 30%.

9.8% of them have no idea about it.

Guests do play important in wasting food though they had paid for it. Mostly food waste take place in buffet system because guest over fill their plates and don't finish it. To reduce it we can place notice boards stating do not waste food and another way is to decide the portion size of food items.

## Do you think stealing food comes under food wastage

51 responses



In this pie chart we can see people's opinion that majority of them agree that stealing food comes under food wastage and can affect revenue generation.

31.4% of them are agreed

31.4% of them are disagreed too.

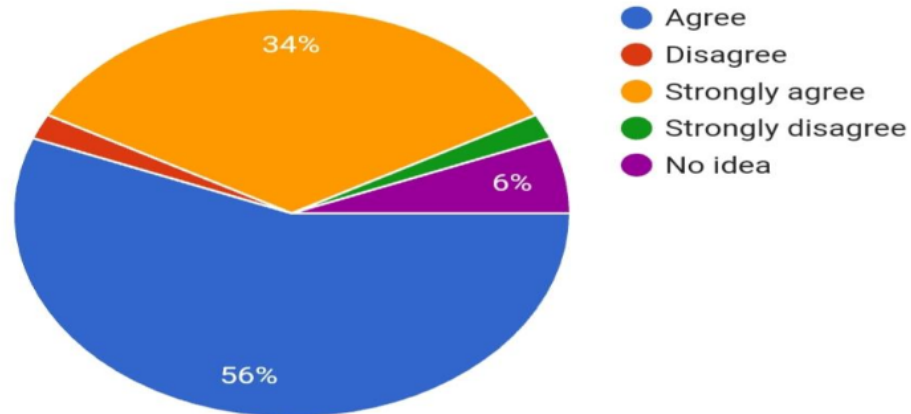
9.8% of them are strongly agree.

21.6% of them have no idea about it.

In my opinion "yes" I do feel that stealing food counts in food wastage because it reduces the availability of food and reduction in profit.

## Should we dispose food wastage accordingly to their type?

50 responses



Majority of people that is 56% are agree that we should dispose food wastage according to their type.

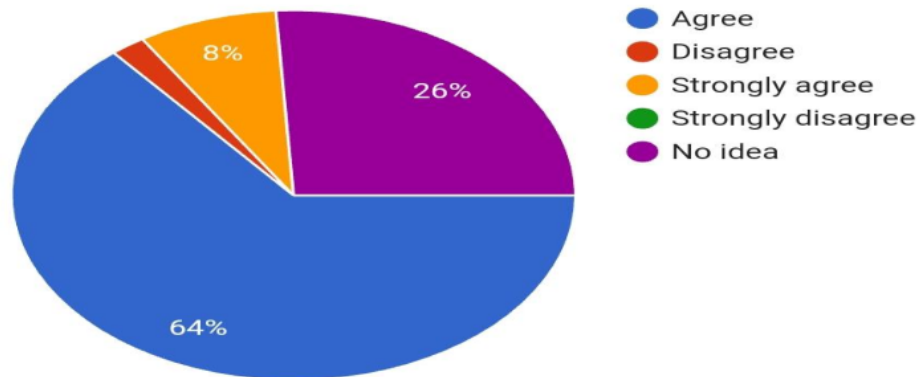
34% of them are strongly agreed with this statement.

6% of them have no idea about the same.

Yes, it is very important to dispose food according to their type solid items should be dispose in green dustbins and liquid waste should we drained out. It also helps in easy transportation of waste and less chances of spillage.

## Rechauffe of food is a good way to reduce waste and to generate revenue?

50 responses



Pie chart clearly state that réchauffé is a good way to reduce food wastage and hence help in revenue generation. For my readers I would like to explain this term that réchauffé is the basic activity which we do use on daily bases in hotels, in this we do you the recyclable food of buffet in another courses or in staff kitchens.

Majority of them that is 64% are agreed with the idea.

26% of them have no idea.

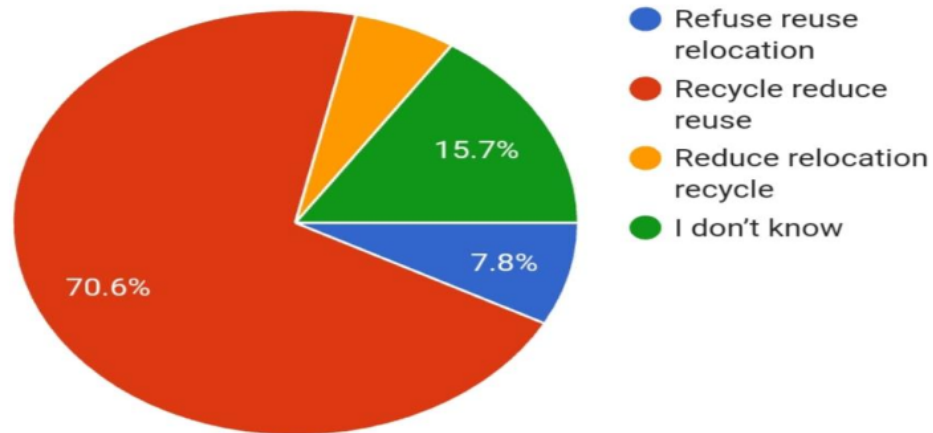
8% of them are strongly agreed with the idea.

Yes it one of the good way but in this we must keep lot to factor in mind related to food health and hygiene.

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## What is 3R in context to waste management

51 responses



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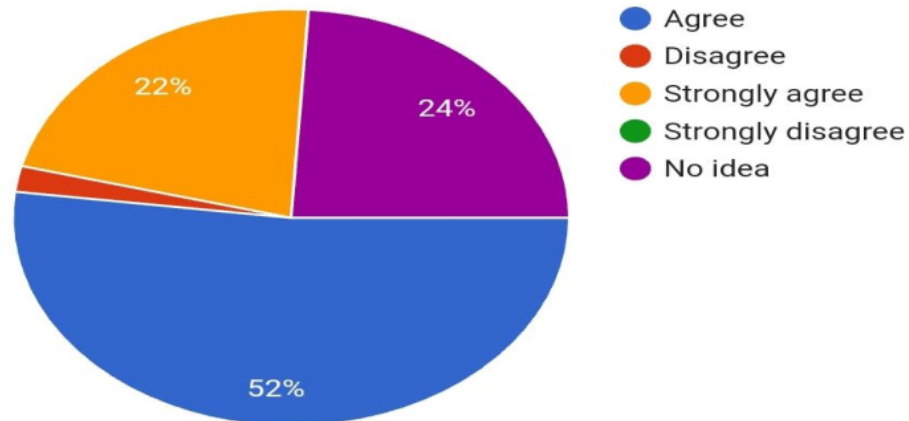
With the help of this pie chart I want to know that how much people know about 3R with help them not only in hotel industries but in their day-to-day activities.

Majority of them that is 70.6% know about the 3R, and this makes it more easy and reliable source of waste management, as we all know that as more people are aware of it, it will definitely help to prevent the wastages.

## Do u think proper temperature helps in reducing food wastage



50 responses



Yes, temperature plays an important role in preventing food from spoilage. Reduce in spoilage of food hence lead to less wastage and less loss of revenue. As per my academic knowledge I can easily relate it with the HAZARD Zone, which I studied in the starting of my course and understood clearly the role of bacteria in the food spoiling procedure and over here also we can see that pie chart also relates it with my study, where

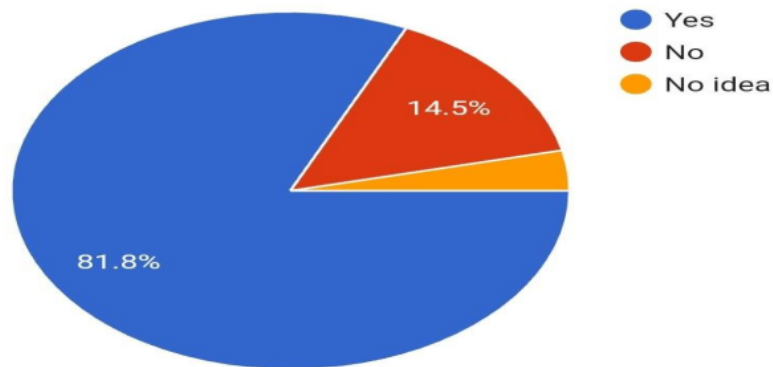
52% of them are agreed with it.

22% of them are strongly agreed.

24% of them have no idea.

## Is it correct to share the left over food with needy people?

55 responses



As u can see in this pie chat 81.8% people agree to share leftover food with needy people.

81.8% of them say yes.

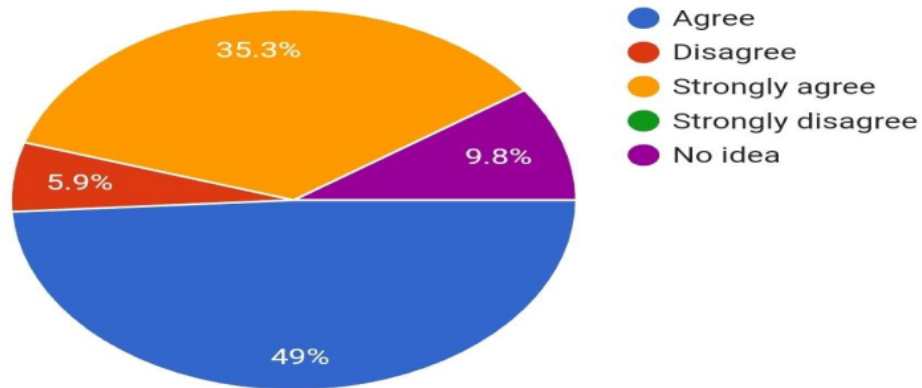
14.5% of them say no

Yes, I do feel if we have excess amount of food good left than we should gave it to needy people or we can send it to staff cafeteria. This will also help in reduction food wastage.



## The wastage should be distinguished by wet and dry waste

51 responses



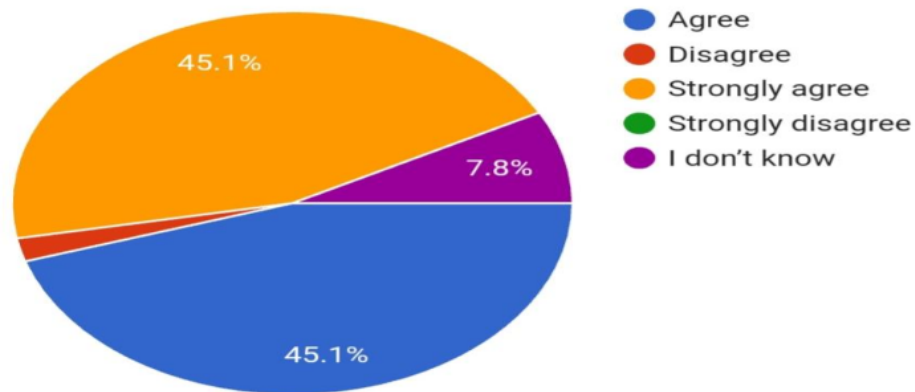
The wastage should be distinguished by wet and dry waste 49% of people agree with this statement and even i am also with the above statement.

5.9% of them are disagreeing with this.

Mostly in food production department we dispose non degradable items like clean warps, tin cans, aluminium foil etc. so it would much easier for them to differentiate non degradable waste and degradable waste.

## Can coloured bins be used to distinguish different type of wastage

51 responses

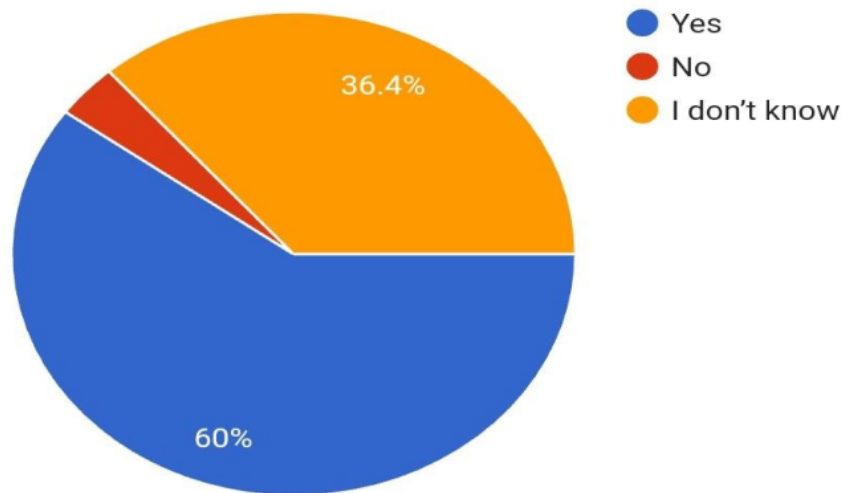


Yes, this chat clearly states that in hotel we must use coloured bins to dispose different waste. It will help in different ways like save time, save manpower etc. 45.1% of them are both agree and strongly agree.

7.8% of them have no idea.

## The wet food waste can be used for feeding animals ?

55 responses



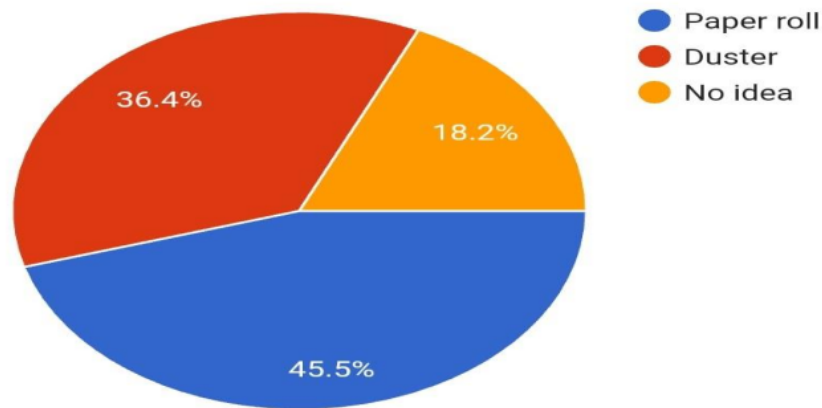
As we can see clearly that as per pie chart 60% of people say that we should give wet food waste to animal so that they can fill their stomach., where as 36.4% of them have no idea.

In my opinion yes, we can give food to those NGOs who feed animals.

## Which of this is a better option paper roll /Duster



55 responses



In people opinion paper roll is better option than duster but, in my opinion duster would be the better option because it will reduce paper wastage and it will save cost of company because we wash it and reuse it.

45.5% of them think paper roll is better option

36.4% of them think duster is the better option.

18.2 % of them have no idea.

## **Conclusion: -**

With the help of above survey, we can conclude that waste management plays an important role in every sector especially during covid time. As covid-19 badly affect our hospitality industry. So, it's very important to utilise to the fullest.

Now day's people not only take care of each other but also concern about street animals. They are showing attention towards environment by practicing eco-friendly habit like not using plastic bags.

In hotel Crowne Plaza Greater Noida decomposable items are used to make manure which they use in their horticulture department. In kitchen used oil are collected then sell it out to some company which use that oil in making bio diesel. Oil tins and glass bottle are collected and then sell it out. Réchauffé of food is the best way to reduce wastage and to generate revenue from it.

## **Food Recovery Hierarchy: -**

- **Adjusting supply:**

This mean we have to adjust the supply of the raw material in case we order in excess quantity giving them to hotel other food outlets .

- **Feed the hungry:**

This means that hotel must donate the food to the needy people who really want food. We can donate food to orphanages, can sent it to staff cafeteria.

- **Feed the animal:**

We can give good food which we don't need to those NGOs who do care of animals or we can give that food to pottery farms.

- **Industrial uses:**

If we can use that food in any way inside the hotel it is the best way to reduce food wastage.

- **Composting:**

As I had already mention that composting is the also one of the methods to reduce food wastage. In return we get manure which we use in horticulture or we have good contacts we can sell it.

**Reference: -**

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