

## A Study on Consumers View on Food Waste and Food Packaging

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### ABSTRACT

Consumer food safety concerns storage facilities, family practices around meals and leftovers and planning capabilities influence the quantity of food waste created in the household. In this study a survey was conducted to determine how attitudes towards packaging might influence motivations to reduce food waste and to explore reasons for household food waste through the distribution of a structured questionnaire to households. According to this survey it has been shown that about 35% of consumers say that packaging of a product influence their purchase. Although consumers awareness is an important factor to reduce food waste.

**Keywords:** Consumer's behavior, Consumption, Food waste, Purchase, Packaging,

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### INTRODUCTION

During recent years there has been increasing in the international interest in the amount of wasted food and its negative consequences. Reducing the amount of food that is wasted is a key element in developing a sustainable food system. In fact, firstly, food waste represents a monetary loss, secondly, has a social impact as it contributes towards increases in food prices, making food less accessible for the poorest and increasing the number of malnourished people. Packaging is a pervasive element of modern consumption that provides a wide range of functionalities and consumer benefits. The role of packaging is perhaps of greatest importance in consumer packaged goods markets, which often strongly rely on packaging elements to maintain product quality, prevent product losses, facilitate transportation and storage, and provide marketplace differentiation. (Bovea et al., 2006). It is known that consumers avoid deformed food and foods close to the best before date in the choice situation, (Loebnitz & Grunert, 2014, Tsiros, 2005) while consumer food safety concerns storage facilities, family practices around meals and leftovers and planning capabilities influence the quantity of food waste created in the household. (Cappellini & Parsons, 2012) (Watson & Meah, 2013), (Terpstra et al., 2005).

#### Factors influencing consumer behaviour

- **Awareness:** Almost two thirds of consumers are aware of the fact that they waste food themselves. This awareness is highest among women and the elderly.
- **Intention:** 90% of consumers intend to reduce food waste.
- **Self-efficacy:** 72% of the public think they can contribute to reducing food waste. Seven in ten are prepared to do something about food waste.
- **Attitude:** The generations born after World War II show less concern, although they agree that throwing away food is simply unacceptable. Attitudes about food waste and food quality have a strong negative impact on wasteful behaviour.
- **Knowledge:** One in every five consumers, young people for the most part, says they would like access to more information or advice. They say that there is a particular need for better information on food storage, correct amounts and expiry dates.

- **Habits:** Previous attempts to prevent food waste and related habits are an important predictor of current behaviour and self-efficacy.
- **Involvement:** When people are more involved, they are more willing to tackle food waste. Households that engage in recycling, composting and sorting waste less food.

### How does product packaging influence consumer buying behaviour??

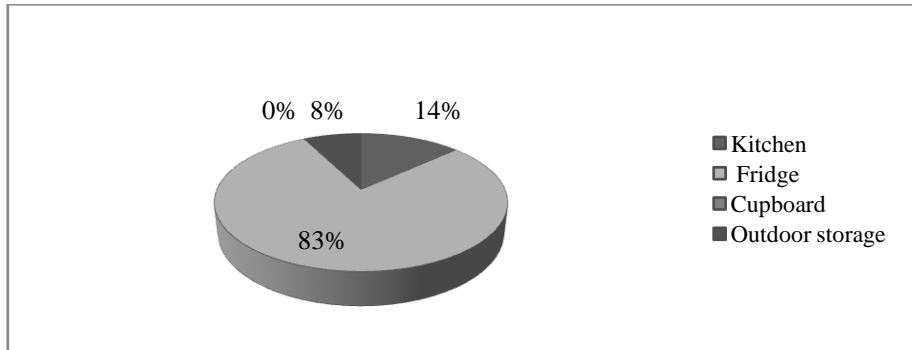
There are endless variations and options for structural design, but certain packaging elements are particularly influential in regards to how soon the product catches the eye. Among those are:

- Colour
  - Packaging material
  - Labelling
  - Design and font style
  - Printed information
- **Colour:** Colour is a great marketing tool that much influences consumer buying behavior. Marketers study the psychology of consumer behaviour that which colour mostly attracts consumer. It effects on consumer's mood and helps to draw interest. Like green colour is associated with nature and elicits feelings of positivity such as calmness and relaxation. Whereas yellow is associated with happiness, cheerfulness.
  - **Packaging Material:** Packaging material helps in sales promotion for many companies. It influences the consumer's buying behaviour decision. Consumer can attract by high quality more as compared to low quality. Study shows that an old package is an important aspect of archaeology like can is made by iron and tin plated in the starting of nineteen century. Late 19th century introduces the paper board cartons etc. In early 20th century advancements of packaging started. It helps in increasing processing efficiency and improving safety of food.
  - **Labelling:** Labelling on the product helps consumers to make choices on the product to purchase and also teach them in what way to use product, its name, and price, content and appropriate information.
  - **Design and Font Style:** Design also plays a very important role in attracting the consumer. Plain design is more effectual. The font style of packaging grabs customer attraction.
  - **Printed Information:** Printed material is one of the easiest and most effectual ways to provide information. The consumer can change his decision on the basis of information printed on the packaging. Printed information can be easily handed out and accepted away. It is significant at all levels of participation.

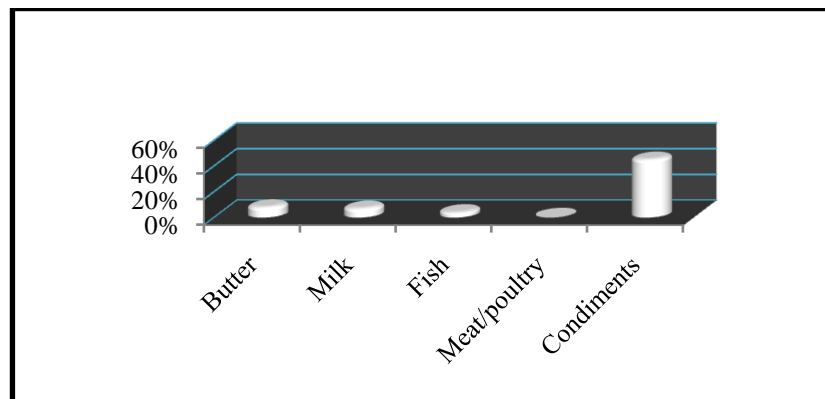
## MATERIAL AND METHODS

The buyer behavior of consumers is a dependent variable that is influenced by the independent variables used in the study. To achieve this objective a survey was conducted through the distribution of a structured questionnaire to households. The primary data was collected through a structured questionnaire during a three month period. Altogether 100 responses were obtained. The statistical tool Excel was used for data analysis.

## RESULTS AND DISUSSION

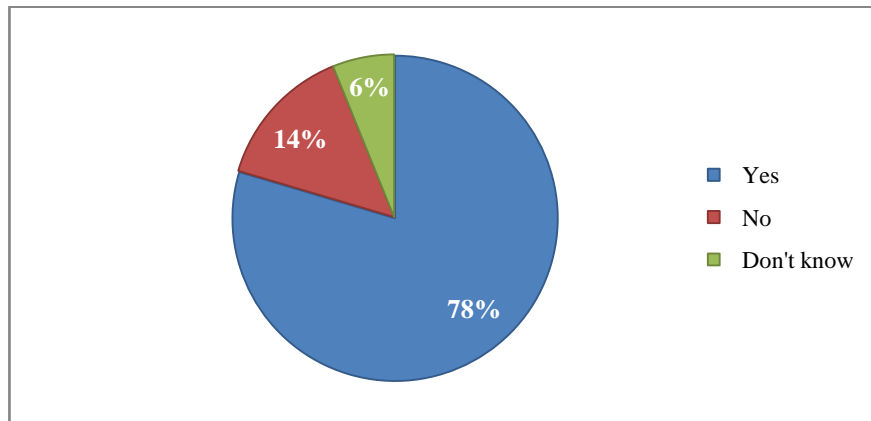
**Q.Where do you store the majority of fruits and vegetables within the home?****Pie chart showing percentage of consumer's perception**

It has been shown that about 14% consumers store majority of fruits and vegetables in kitchen, 83% of consumers store in fridge, 8% of consumers store in outdoor storage, and no one stores in cupboard.

**Q. What food products are wasted in your home?****Figure-: Percentage of consumer V/S perception**

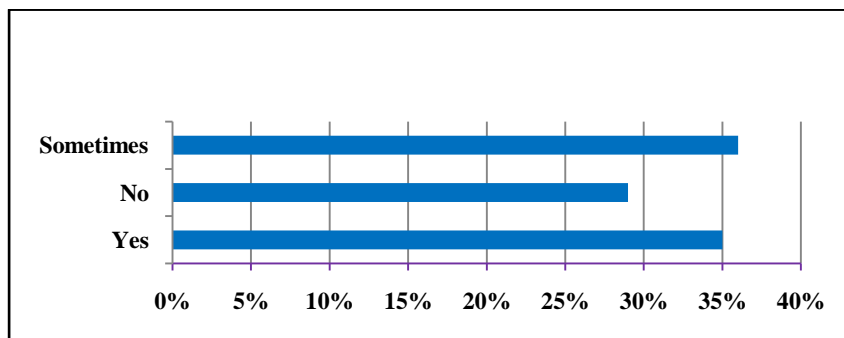
According to this survey it has been shown that about 8% of consumers waste butter, 7% of consumers waste milk, 4% of consumers waste fish, 4% of consumers waste meat/poultry, and 45% of consumers waste condiment.

**Q. Are you aware that the majority of fruits and vegetables are kept in cool in order to extend shelf life?**

**Figure-: Pie chart showing percentage of consumers' perception**

It has been shown that about 78% of consumers say yes that the majority of fruits and vegetables are kept in cool, 14% say no, and 6% of consumers say they don't know.

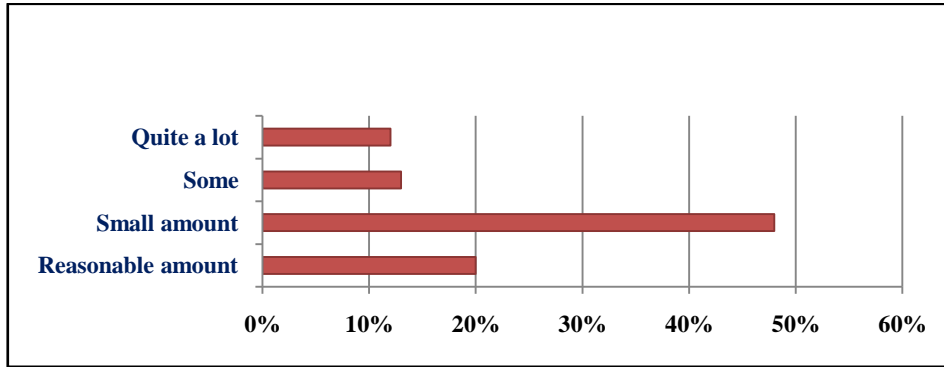
**Q. Does the packaging of a product influence your purchase?**

**Figure-: Percentage of consumers V/S perception**

According to this survey it has been shown that about 35% of consumers say yes that packaging of a product influence their purchase, 29% of consumers say no, 36% of consumers say sometimes.

**Q. Thinking about food waste in your household, how much food would you say you throw away in general?**

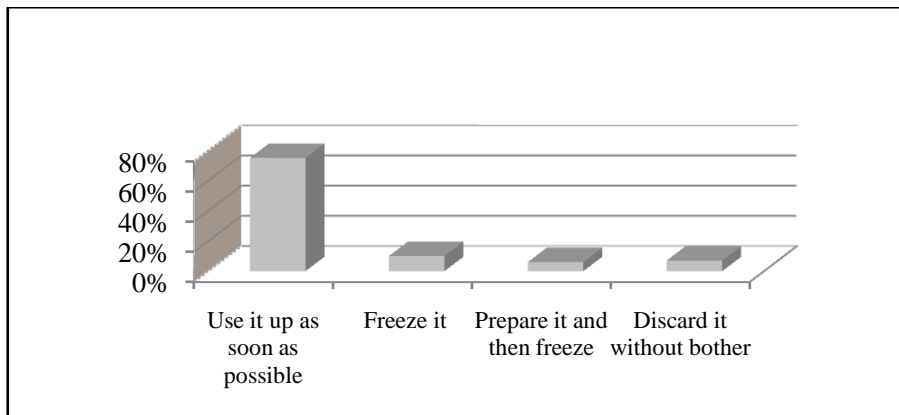
**Figure-: Percentage of consumers V/S perception**



It has been shown that about 20% of consumers say that they throw away reasonable amount, 48% of consumers say small amount, 13% say some and 12% of consumers throw away quite a lot.

**Q. If you notice that an item of food is coming close to its best before date to you- what will you do?**

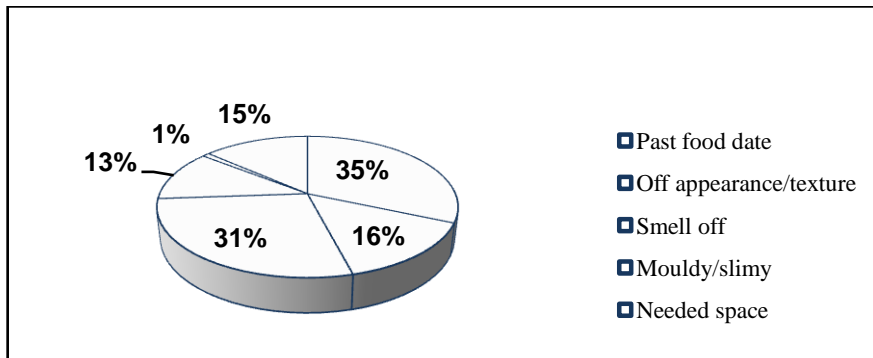
**Figure:- Percentage of consumers V/S perception**



According to this survey it has been shown that about 75% of consumers use it up as soon as possible, 10% of consumers freeze it, 6% of consumers prepare it and then freeze and 7% of consumers discard it without bother.

**Q. What is the common reason for throwing out food?**

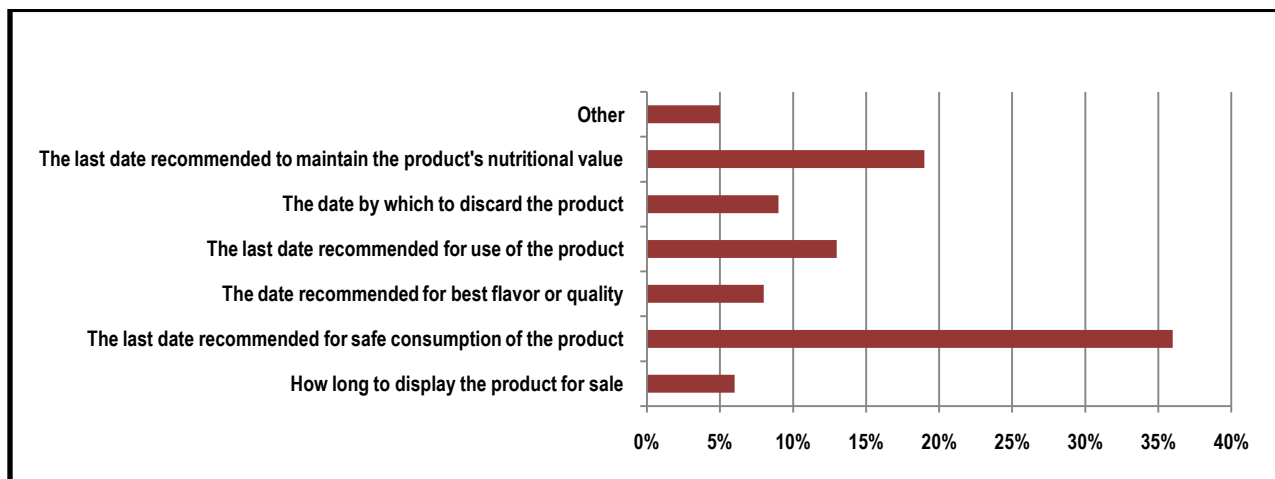
**Figure-: Pie chart showing percentage of consumers' perception**



It has been shown about 35% of consumers throw out food due to past food date, 16% of consumers due to off appearance/texture, 31% of consumers due to smell off, 13% of consumers due to mouldy/slimy, 1% due to needed space, and 15% of consumers throw out food due to other reasons.

**Q. Which type of information is most useful to you? A product date that tells the consumer-**

**Figure-: Percentage of consumers V/S perception**



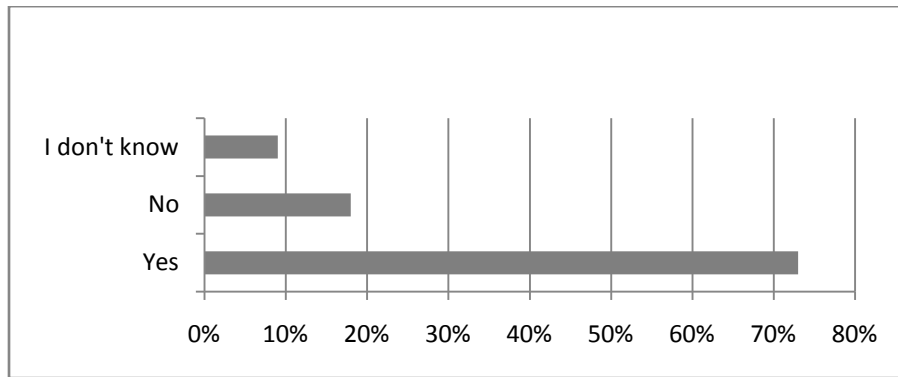
About 6% say how long to display for sale, 36% say last date recommended for safe consumption, 8% date recommended for best flavor, 13% the last date recommended for use and 9% date by which to discard the product, 19% say last date recommended to maintain product's nutritional value, and 5% say other.

**Q. Would you change your purchasing or preparation habits if this saved your money on your grocery bill?**

**Table : Percentage of respondents giving opinion**

Yes	No	Don't know
73%	18%	9%

**Figure-: Percentage of consumer V/S perception**



According to this survey it has been shown that about 73% of consumers say yes that they would change their purchasing or preparation habits if this saved their money on grocery bill, 18% of consumers say no, 9% of consumers say they don't know.

**Q. Which of the following do you think best describes the ‘used - by –date’ that is found on the packaging of some products?**

**Table: Percentage of respondents giving opinion**

The last date recommended for safe consumption	The last date recommended for use	The last date recommended for best flavour	How long to display the product for sale	The last date recommended to maintain the product's nutritional value
32%	25%	14%	6%	20%

**Q. What information are you interested in?**

**Table: Percentage of respondents giving opinion**

Brand information	Product information	Other ranges
12%	64%	10%

**Q. Do you follow the recommended storage information on packed goods?**

**Table: Percentage of respondents giving opinion**

Yes	No
56%	42%



**Q. Which type of packaging material do you recycle?**

**Table : Percentage of respondents giving opinion**

Glass	Plastic	Tin	Cardboard
17%	34%	5%	13%

**Q. Are you aware of how much food you are putting in the bin?**

**Table: Percentage of respondents giving opinion**

Yes I am very aware	Yes I am aware but I don't care	I try not to think about it	No I am not aware
68%	14%	11%	6%

**Q. Do you use your leftovers?**

**Table : Percentage of respondents giving opinion**

Yes I always use	Yes I occasionally use	No, I throw what is left over in the bin
23%	39%	34%

**Q. Do you follow the recommended storage information on packed goods?**

**Table: Percentage of respondents giving opinion**

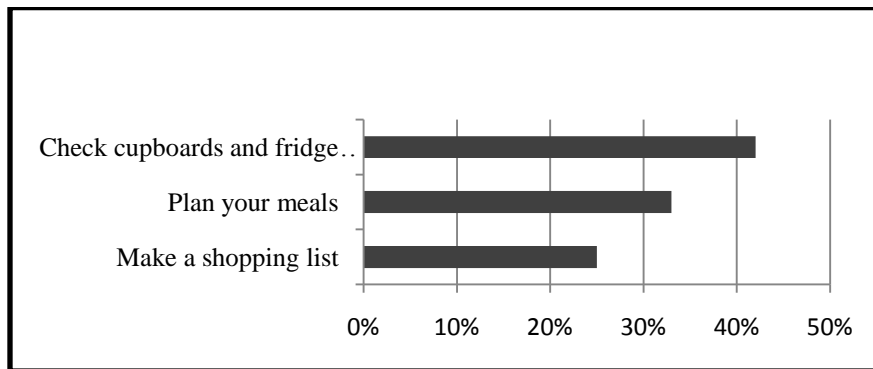
Yes	No
56%	42%

**Q. What measures will you take to reduce your food waste?**

**Table : Percentage of respondents giving opinion**

Make a shopping list	Plan your meals	Check cupboards and fridge before shopping
25%	33%	42%

**Figure-: Percentage of consumer V/S perception**



It has been shown that about 25% of consumers say that they will make a shopping list, 33% of consumers will plan their meals, and 42% of consumers will check cupboards and fridge before shopping.

## **CONCLUSION**

According to this survey it can be concluded that about 99% of consumers are aware to stop food waste. Some respondents say that they can reduce food waste by purchasing and preparing food products as per need, by stopping the overbuying of food and to consume food as soon as possible, by keeping a balance between purchasing and use. Others say that they can stop food waste by proper handling and storage of food, by making a shopping list, to make a meal plan based on the number of heads in the family. According to some respondents, they can stop food waste by distribution of food among needy people. Other respondents say, to reduce food waste they will change their cooking patterns regularly, and try to cook new food for their children. According to some respondents to avoid food waste food should be stored at proper place and should be consumed before expiry date. Although consumer's awareness is an important factor to reduce food waste.

Packaging is an important element to reduce food waste and also effects consumer buying behaviour. Only few respondents agree that keeping food in original packaging keeps food fresher, longer, and packaging also protects foods from external influences. Mostly consumer wants products that have attractive shape and which are easy to use and carry. It also implies that using attractive packaging shape can capture customer attention. So attractive packaging shape can make a brand unique, can create an iconic brand image, supports in affirming brand name, retain its distinctiveness, and stands out on the shelf. Shape adds value in the physical appearance of a brand and intensifies its aesthetics components. Package size, that is one of the utmost accessible and easy-to-process product cues to which customer are exposed, can have a significant impact on consumer buying pattern. Increase in size can increase the sales volume by increasing the number of consumer who purchases a product. The information which is properly delivered can hold powerful influence on consumer buying preference which in result boosts the reliability of a product. Labeling on the product could help consumers to make choices on the product to purchase and also teach them in what way to use product, its name, and price, content and appropriate information.

## **FUTURE SCOPE**

The main aim of the study is to determine consumer's food waste behaviour, purchase habits, attitudes and life style. This study helps to know how consumers respond to a variety of messages around packaging. The main purpose of this study is to overcome food wasting behaviour and point out options to design prevention measures. However this study has certain limitations. The study does not reveal how packaging negatively influences consumers purchasing habit, attitude, and decision, how consumer's psychological behaviour affects in food waste and helps to take preventive measure. The study does not also reveal the effect of market price, market place, transport on buying decision. So this study needs further research.

### **Conflict of Interest**

I have declared that no competing interests exist.

## **ACKNOWLEDGEMENT**

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