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# UNIT 9 FOOD ADULTERATION AND PRECAUTIONS

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In this Unit you will study about the adulteration of food done by the sellers to increase the weight and as a result make profit. Precautions against buying the adulterated food are also given.

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## 9.0 OBJECTIVES

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This Unit will help you to:

- explain adulteration in foods and its dangers,
- recognise the methods followed in adulterating different food items, and
- advise the consumers on the precautions to be taken in avoiding the purchase of adulterated foods.

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## 9.1 INTRODUCTION

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In the present days of uncertainties, ensuring the safety of food is of utmost importance. The dangers of consuming food which is mixed with material which is not edible, are very great and may lead to different types of stomach disorders, diseases etc., which may take a very serious turn. Hence, it is very important that you should safeguard yourself from these dangers. Unscrupulous merchants (shopkeepers) mix up your food items with many unpalatable materials. They do so with the intention of either increasing the weight of the commodities sold or simply to earn more money from the commodities they sell. When you buy such commodities at prices as quoted by the sellers, you not only buy poor quality commodities but also spend more money per unit of the actual commodity bought.

The following illustration clarifies the point. Suppose you buy one kg of rice at Rs. 4/kg. Let us assume that this rice is mixed with some foreign matter which is not consumable and the extent of this mix in the rice you buy is 10 per cent (i.e. 100 gm in a kg of rice). You will necessarily clean this rice before cooking and remove this 100 gm of foreign matter. Thus, you have paid Rs. 4/- only for 900 gm of rice. Hence, the actual price paid by you for a kg of rice is =  $\frac{4}{900} \times 1000 = \text{Rs. } 4.44$  per kg (1 kg = 1000 gm).

So, when you buy the food which is not to the expected cleanliness or quality, you are exposing yourself to health hazards as well as loss of hard earned money.

Now we shall try to understand how adulteration is practised and how to avoid adulterated food.

## 9.2 FOOD ADULTERATION AND ITS DANGERS

### 9.2.1 Adulteration

Adulteration is the process or act of mixing (into the main commodity) some other commodities which are not fit for consumption or which are of poor quality. Adulteration also includes mixing of one quality of the commodity with a lower quality of the same commodity. For example groundnut oil, in the present day, is selling at about Rs.30/- per kg. Another edible oil Palmolein is selling at about Rs.15/- per kg. The shopkeeper now finds it profitable to mix some quantities of palmolein with groundnut oil and sell the mixture as groundnut oil. It is difficult for you, as consumers, to differentiate between groundnut oil and palmolein oil just by sight. Hence, the sellers can make huge profits by taking advantage of the consumer's ignorance.

### 9.2.2 Methods of Adulteration and its Dangers

Adulteration is very easily done when the same commodity is sold in different grades. Adulteration of food items is done when some foreign matter which is very small in size and similar to that of the food item itself in colour, shape, size is available. Let us now understand how adulteration is done in different commodities.

### 9.2.3 Adulteration in Foodgrains

Adulteration is done in different ways in the case of foodgrains. In the case of rice, small stones which are white or brownish in colour are mixed in small quantities mainly with an intention of increasing its weight. These will be of such size and colour that it is very difficult to separate them in spite of cleaning the rice. If such substances are consumed along with rice, it may harm the digestive organs. Many times you also observe that waste matter is mixed with foodgrains like rice, wheat, jowar, etc. These may be in the form of small pieces of straw, small mud clots, seeds of unwanted plants etc. You can understand that in the process of cleaning you lose a lot in terms of the actual commodity. Thus, you will be paying more money for less quantity of these commodities.

Such adulteration can be seen in almost all foodgrains including pulses (dals). In the case of pulses which are meant to be sold without husk, the husk is left back delicately to some extent so that the weight of the commodity is more. Another example is Kesari dal (a harmful dal) which is mixed with other dals like channa, arhar, etc.

#### ☛ Check Your Progress

1 What do you understand by adulteration?

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2 A consumer pays higher price than what is quoted by buying adulterated food. Explain with the help of an example.

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3 Why are foods adulterated by sellers?

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4 Give examples of two commodities in which adulteration cannot be detected.

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**9.2.4 Adulteration in other Commodities**

You have already read the example of adulteration in the case of edible oil. Such adulterated oils are sold in the market. Ghee is frequently adulterated. If the ghee you buy in the market is mixed with some quantities of 'dalda', you will never be able to differentiate a genuine product from an adulterated one. Similarly, in the case of butter (which is selling at Rs. 75/- a kg in major cities), the adulterants (material used to adulterate) used could be bananas and maida. So when you buy a kilo of butter and try to process into ghee at home, you will be getting hardly 250-300 gms of ghee and the price you have paid is Rs. 75/-. So you can imagine the amount of money wasted. Similarly, the milk you buy can easily be adulterated with water and you may not be aware of adulteration.

There are many ready-to-eat foods (like ketchup, jams, pickles etc.) which are sold under different brand names in the market. Well-known brands of these products are expensive and there is a tendency to sell other commodities under these brand names, if possible. Otherwise, sellers of cheaper qualities of the commodities imitate the name, shape, colour or size of the standard commodity. This is also one form of adulteration where the consumer becomes the victim of exploitation by the sellers.

Tea can be adulterated with used tea and turmeric powder with metanil yellow, which is a poisonous compound. Coffee powder can be adulterated with roasted tamarind seed powder. As you have seen, adulteration may come in many forms. The main aims of adulteration is making huge profits in a very short period of time and with very little money investment. But you should remember that it is always the consumer who stands to suffer in terms of health and money. Hence, you as a consumer, must be cautious when you buy your food supplies from the market.

You may ask a simple question. Is the Government turning a blind eye to these ills? No. Under the laws of the land, any form of adulteration is a crime which is punishable. But you as consumers, must take the case to the Governmental agencies/authorities in a proper manner and with sufficient evidence. But most of the consumers do not like to get caught in these cases because they think it is a waste of time and money and there is no use in putting in all the effort needed. This is a wrong impression that most people have in their minds. Another thing is that they always consider sellers as a well organised group. This is also a wrong impression because nobody is above the law.

## 9.3 PRECAUTIONS AGAINST ADULTERATION

As you have learnt earlier, you will not even be in a position to recognise that the food you are consuming is adulterated. So, it is very difficult even to take precautions against adulteration and avoid it. However, you can overcome the problem of adulteration by following certain procedures in buying your food requirements.

### 9.3.1 Packed Foods

As far as possible you can buy your food items in packed form. For example edible oils, ghee, dals, etc., are all available in packages of different quantities. You can choose the quantity you need. Even if the packet contains more than your requirements for immediate purposes, you can use them for longer periods like 1½ months or two months. By doing so, you will not only save on per unit cost of the commodity, but also ensure that the commodity is not adulterated. You should remember that when you buy the commodities in loose form, the chances of adulteration are more.

### 9.3.2 Familiar Shops

It is better to buy the commodities from the shops which you are familiar with and the shopkeepers in whom you have confidence. Regular buying from the same shop introduces some sort of interpersonal and friendly rapport between the seller and the buyer. This leads to the buyer earning the confidence and goodwill of the seller. Hence, the seller does not want to deceive the buyer either in the form of price or quality.

### 9.3.3 Buying from Co-operatives

Co-operative consumers federations have developed very well in almost all the states. These federations run a chain of retail stores. These are known by different names like Janata Bazar, Super Bazar, Apna Bazar, etc. These consumer stores buy the commodities in bulk from the wholesale markets, clean them, pack them and sell them to the consumers through their retail outlets. Here, there is little scope for adulteration because there is no individual with a personal interest of profiteering. Any benefit derived out of the transactions done will be passed on to the consumers themselves. Such retail outlets can be seen in all the states and major cities and towns.

Consumer co-operative societies are also working in different forms. Consumer co-operative stores are established by many organisations like workers' organisations, or people of a particular locality. Here, the simple principle followed is self-help through mutual help. The profits earned by the society are shared by all the members. Thus, in these cases also, there is little scope for adulteration, since nobody's personal interests are involved.

### 9.3.4 Other Types of Purchases

Another important way of ensuring purchase of unadulterated food is to look for a quality control mark in those cases where they are available. But here also you have to make sure that you buy the commodities in packed form.

You should buy your supplies from established shops of your locality/town. Merchants are very particular about their reputation with their customers. Hence, they do not risk selling adulterated food items in their stores. If they lose their reputation, they will face the risk of consumers not coming to their shops, thereby their turnover and hence their profits will fall. So they will not risk such actions.

Though a number of measures have been suggested above, it is for the individual consumer to decide the best course of action depending upon his resources and the facilities available.

#### ● Check Your Progress

- 5 Selling mixed grades of the same commodity is also adulteration. — Discuss.

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6 List some important measures to be taken to avoid buying adulterated foods.

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7 What is a Janata Bazar? Why is there no adulteration in Janata Bazars?

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8 How does packed food help to avoid adulteration?

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## 9.4 LET US SUM UP

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Food adulteration is done by the sellers mainly to increase the weight of the commodity and to make higher profits. The consumer will not be able to realise that food is adulterated.

Adulteration is done either by mixing up different grades or adding foreign matter.

Precautions against adulteration include buying in packed form, buying from familiar shops or the co-operative stores.

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## 9.5 GLOSSARY

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**Adulteration:** Making a commodity impure or inferior by adding substance(s) which are either not fit for consumption or are of poor quality.

**Bulk Purchase:** Purchasing large quantities of a commodity at one time.

**Co-operative Stores:** Stores (shops) run by workers' organisations, people of a particular locality etc., based on mutual co-operation.

**Foreign Matter:** Substance present in a commodity which is not the natural substance.

**Janata Bazar:** Retail outlets run by co-operative consumers' federations.

**Packed Foods:** Food items which come in sealed containers from the producers.

**Waste Matter:** Unwanted substances (like straw, small mud clots, seeds of unwanted plants etc.).

## 9.6 ANSWERS TO CHECK YOUR PROGRESS

- 1 Adulteration is the process or act of mixing in the main commodity, some other commodities which are not fit for consumption or which are of poor quality. Adulteration also includes mixing of one quality of the commodity with an inferior quality of the same commodity. For instance, pure ghee is adulterated with Dalda, groundnut oil with Palmolein, turmeric powder (haldi) with Metanil yellow etc.
- 2 The consumer pays a higher price for a food when it is adulterated because the food is mixed up with unwanted material which could be either waste matter like straw, clots of mud, unwanted seeds, grains of inferior quality etc. or with some foreign matter which looks very much like the original food in colour, shape and size. The consumer is, therefore, buying the waste matter or foreign matter alongwith his food by paying the rate of a particular food item. To cite an example, take the case of rice which is mixed with some foreign matter and waste matter to the extent of 10%. The consumer would pay say Rs. 4 for one kg of rice whereas he would be getting only 900 gm of rice, 100 gm being the waste matter which in any case he has to pick and throw. Hence the actual price he had paid for the rice is Rs. 4.44 per kg instead of Rs. 4 per kg.
- 3 Food adulteration is done by the sellers mainly to increase the weight of the commodity with a view to make higher profits. The adulteration is done in such a way that it is difficult for the consumer to realise that the food is adulterated and the sellers get the higher price for the adulterated food. Adulteration may be in many forms, for instance, mixing water with milk, inferior quality of grain, straw and unwanted seeds with the good quality grains or similar looking materials, colouring matter with a view to give a better colour, etc. In all such cases, the intention of the seller is to obtain higher price by giving less commodity or selling an inferior product at a higher cost.
- 4 The two commodities in which it is difficult to identify adulteration by just looking at them are pure ghee and milk. Pure ghee is invariably mixed with dalda while water is added into milk. However, there are certain laboratory tests through which adulteration can be detected.
- 5 Selling mixed grades of a commodity is adulteration. The prices of different grades of a commodity vary depending upon quality. The best quality products would always be having a higher price than the inferior quality products. Therefore, if the inferior quality product is mixed with a superior grade product, it is adulteration because the seller is trying to cheat the consumer by charging a higher price for his inferior product mixed with the superior product.
- 6 One can avoid buying adulterated food by taking the following precautions:
  - i) Packed foods — packed and sealed containers cannot be easily mishandled by the retailers and hence such foods are usually safe.
  - ii) Familiar shops — There is a rapport built up between the seller and the buyer over a period of time. This prevents the seller from adulterating the food with a view to protecting his goodwill.
  - iii) Buying from co-operatives — Since co-operatives are run by societies and the benefit derived is shared or passed on to the consumers, no single person is interested in profiteering.
- 7 Janata Bazar is a co-operative store run by the Co-operative Consumers' Federations of the States. Almost all the States have developed these federations and run a chain of retail stores which are known by different names such as Janata Bazar, Super Bazar and Apna Bazar, etc. The chances of adulteration in Janata Bazar are not there since nobody's personal interests are involved and profits earned by the societies are shared by all members.
- 8 Packed foods help to avoid adulteration because it is very difficult for the retailer to break open the seal of the packed food and mix up with the inferior quality because it will be evident to the consumer. Various companies seal their products and insist on the consumers to look for the seal when they buy because they do not want bad quality products to be sold by the retailers under their name. On the other hand, when the commodities are sold in loose form, the chances of adulteration are very high.

**Practical Exercises**

- 1) Visit a retail shop and list down any ten items of food available for purchase both in the packed form and loose form. Record their prices per unit (per kilo or 100 gm) and give your observations regarding the quality and price of the commodities.
- 2) Collect the data on prices of food items available from your nearest Janata Bazar/ consumer store and compare them with the prices of the same commodities available in a private retail store.

**(Note: Do not consider the fair price shops for this analysis).**