

Chapter 4

Coffee

LEARNING OBJECTIVES:

After reading this chapter learners would be able to:

- understand the types of coffees.
- comprehend the rules of coffee making.
- understand the characteristics of good coffee.
- understand laced coffee.
- understand the origin of coffee.
- understand the coffee processing.
- understand the degree of coffee roasting.
- understand the common methods of coffee brewing.

GUIDE TO BETTER LEARNING:

- Origin of Coffee.
- Coffee growing and its history.
- Favourable conditions for growing of good coffee plants.
- Coffee Processing.
- The degree of coffee beans roasting.
- Methods of brewing coffee.
- Common varieties of coffee.
- Other types of coffees.
- Rules of making good coffee.
- Characteristics of good coffee.
- Reasons for Bitter, Weak and Flat coffee.





4.1 ORIGIN AND MANUFACTURE

As compared to tea, coffee is relatively a young beverage. Coffee shrubs were cultivated in about 1000 A.D. in Yemen. Though coffee was cultivated in 1000 A.D. but its commercial production started in 1400 A.D. in the districts of Arabia in Yemen. By 1550 A.D. coffee drinking had spread to Aden, Egypt, Syria and Turkey. In 1650 A.D., the first coffee house in England was opened. From England the coffee drinking spread to U.S.A. and various other countries under British Rule. In India coffee is more popular after meals but in South India, coffee is consumed more as compared to other parts of the country.

In India, Baba Budan, the Muslim Pilgrim, brought seven coffee seeds from Mecca in 1600 and plant them near his home in Mysore. In 1800, the commercial cultivation was started by British in Southern Part of India. The fertile soil and tropical climate were ideally suited to the crop. The Arabica and robusta are grown in three southern states and produce coffees that are mild, velvety and fairly acidic. Since the spices are also grown on the plantations, some of the coffees have a uniquely Indian spicy aroma and flavor. The coffee beans produced in Mysore are known for quality, long wide beans that give a mild body fair acidity & a subtle flavour.

Monsoonal Malabar coffee beans are stored for several weeks in order to give mature flavor that is similar to that developed naturally when coffee took several months to reach Europe and North America by ship. Monsoon Malabar coffee beans are similar to Old Java beans. These days, the modern process exposes the dried beans to the humid monsoon climate, giving them a special mellow flavor and a low acidity. Monsoon Malabar coffee beans come in the market during the month of January.

Coffee is grown in tropical and sub tropical area. The climate conducive to coffee growing is neither too hot nor too cold. It is grown from sea level to 1850 meters above sea level. It can be grown in different types of soil, at different altitudes and different basic climates. Coffee is grown in South Central America, Africa, and Asia. Brazil, Columbia, Ivory Coast and Indonesia are the first, second, third and the fourth respectively largest producer of coffee in the world.

Coffee Arabica and Coffee Canephora are the most popular amongst 50 different species which produce coffee. Arabica accounts about 75% of the world coffee production.



The coffee plant attains its height of 2 - 3 meters when ready for cultivation. Usually after 3 - 5 years the coffee plant starts producing fruit. The fruit of coffee is better known as 'Cherry' and is 1.5 centimetre in length. Each cherry contains two coffee seeds (oblong shape) in its fruit. Coffee plants yield crop for about 16 years. The flesh of coffee fruit is removed to take out coffee beans and these beans are dried.

The following conditions are required to have good growth of coffee plants.

- 1 High humidity
- 2 A lot of rainfall
- 3 Cool climate

Plants should be grown on slopes so that water does not accumulate around plants. In earlier times coffee exported from India to European Continent used to take many months through sea route. During the transportation the coffee beans absorbed a large quantity of salty moisture due to high humidity. To maintain the same taste and flavour, transported by air. However these days the coffee beans are spread around sea so that they can absorb the salty moisture from the sea. This coffee is widely known as 'Monsoon Coffee'.

COFFEE PROCESSING:

Coffee can be processed either by dry method or by wet method. The dry method is more common in countries where there is scarcity of water. After drying the coffee berries in Sun, they are put through hulling machines. This process removes pulp and parchment. These beans are less attractive than washed beans.

The de pulping machine removes fleshy part of coffee berries and takes out the coffee seeds. The seeds are allowed to ferment for 24 - 40 hours in fermenting vats. The fermentation process develop aroma in coffee beans. This process also removes the adhering pulp. Beans are washed and dried under Sun. Hulling machine is used to remove the parchment.

Blending is the most technical job. It is done before deciding which type of seeds should be blended to produce the desired quality of coffee. Manufacturers pick up two or more than two batches of coffee beans which are roasted to different degrees to have a desired colour, taste and aroma.





The degree of roasting of coffee beans depends upon the quality of beans.

- 1 **Light / Pale Roasting:** Mild beans are lightly roasted to preserve its delicate aroma.
- 2 **Medium Roasting:** Coffee beans with clearly defined character are roasted to have stronger flavour.
- 3 **Full Roasting:** It gives a bitter flavour and is common amongst Latin Countries.
- 4 **High Roasting:** It gives bitterness and the original flavour is lost.

If coffee is roasted more then the bitterness in coffee is produced and it reduces its acidity. The coffee roasters can roast coffee beans either to produce instant / soluble coffee or prepare it to be marketed as roaster / ground beans.

THE GRIND:

Coffee beans are ground to different degree of fineness depending upon the method of brewing.

For common methods of brewing coffee, the most suitable grinds are:

METHOD	GRINDING GRADE
FILTER / DRIP	FINE TO MEDIUM
JUG	COARSE
TURKISH	FINE POWDER
CAFETIERE / PERCOLATOR	MEDIUM
VACUUM INFUSION	MEDIUM FINE TO FINE
ESPRESSO	VERY FINE

4.2 TYPES OF COFFEE SEEDS

The following are the common varieties of coffee:

1. ARABICA:

These coffee beans are produced in Brazil, Colombia, Costa Rica, India, Jamaica and





Kenya. This is one of the best qualities of coffee and its beans have very good flavour. Arabica Coffee beans are uniform, bold and regular.

2. CANEPHORA/ROBUSTA:

The climate of East and West Africa is conducive for this coffee. The beans are smaller in size and have neutral flavour, but gives higher yield than Arabica.

3. LIBERICA:

It is grown in Guyana and Malaysia. Though these beans are large in size but the quality is poor.

TYPES OF COFFEE:

1 INSTANT COFFEE:

Coffee made from processed powder (frozen dried) mixed with hot water served with or without milk.

2 TURKISH / EGYPTIAN COFFEE:

Intense type of coffee made with finely ground coffee in special jugs (copper) with a few grains of potassium permanganate. This coffee is mostly used in Middle East. This coffee is very strong.

3 HENNA COFFEE:

This coffee is from Austria. Along with coffee seeds figs are roasted and powdered.

4 ESPRESSO COFFEE:

In Europe, Espresso Coffee means traditional short strong black coffee. But in India it is steamed coffee prepared with milk and has a thick layer of froth, usually prepared through Espresso machine. But the International coffee chains like Cafe Coffee Day, Barista, etc. in India, prepare Espresso Coffee in the traditional European method of short strong black coffee. Cocoa or Chocolate powder is sprinkled on top. Cinnamon powder is sprinkled on coffee to make it a Capuchino Coffee.

5 COFFEE PONA:

It is filtered very finely and served with hot water.





6 HAWAIIAN COFFEE:

It is black cold coffee mixed with pineapple juice and topped with cream.

7 CONA COFFEE:

It uses coffee powder made from freshly crushed roasted coffee beans. It is usually prepared in Cona Coffee percolator / apparatus. It is a very strong coffee and is served with cream and milk.

8. CAFFEINE - FREE COFFEE / DECAFFEINATED COFFEE:

Caffeine is the stimulating property of coffee and is the alkaloid substance found in the coffee. Caffeine up to 87% can be removed by processing the green beans under steam in vacuum. The caffeine is removed to reduce the stimulant content from coffee. The low caffeine coffee is suitable drink for heart and blood pressure patients.

4.3 RULES OF MAKING GOOD COFFEE:

Methods of brewing coffee can vary from instant coffee brewed by the cup to large quantity that may cope with large functions. Coffee beans are roasted and ground according to requirements. The beans should be ground just before requirement to be used to have the best coffee flavour and strength from the oils within the coffee bean. The freshly ground coffee will always have layers of suspended particles no matter how carefully one may filter it. Probably Instant Coffee is the only coffee which will have negligible suspended particles and is the most perfect colloidal solution. Filters used are paper filter of 3 - 10 microns of perforations. The paper filters are kept in metal bowl which is perforated so that coffee in quantity can be held and drips down to lower bowl slowly.

The rules to be observed when making coffee in bulk are as follows:

- 1 Buy the required quality of coffee beans.
- 2 Roast the coffee beans to desired degree to have the best and required flavour
- 3 Ground seeds just before use.
- 4 To have the desired fineness of the coffee powder uses the right grinding machine.
5. Ensure all utensils, machines; equipments, etc. are clean before use.



6. Measure the coffee powder and water to have the right quality of coffee drink
7. The infusion time should be fixed according to the type of coffee powder being used and the method of coffee making.
8. The coffee should never be allowed to boil as it spoils the taste and develops bitterness.
9. Strain and serve hot / cold.
10. Milk, cream, sugar etc. should be served separately.
11. Coffee should be best served at 82 degree centigrade (180 degree Fahrenheit) and milk at 68 degree centigrade (155 degree Fahrenheit).

Characteristics of good coffee:

- 1 Good flavour
- 2 Good colour
- 3 Good body
- 4 Good aroma
- 5 Good appearance

Reasons for producing bad coffee

Reasons for bitter coffee:

- 1 Too much coffee used. Use the right quantity of coffee.
- 2 Infusion / brewing time is very long or brewed at high temperature.
- 3 Coffee is not roasted to required degree.
- 4 Sediments are not strained properly or Coffee is not strained properly.
- 5 Coffee may have been left for very long before use.

Reasons for Weak coffee:

- 1 Water is not boiled properly.
- 2 Quantity of coffee used is not sufficient.
- 3 Infusion / brewing time is too short.





- 4 Coffee may be old.
- 5 The fineness of coffee is not of desired type.

Reasons for flat coffee

- 1 Coffee kept at wrong temperature.
- 2 Equipments might not be clean.
- 3 Water may not be potable or fresh.
- 4 Coffee may have been re-heated.

4.4 STORAGE OF COFFEE:

The following points must be kept in mind while storing the coffee.

- 1 Coffee should always be stored in ventilated storerooms.
- 2 Coffee should always be stored in air-tight containers so that the oils of coffee do not evaporate. This will reduce the flavour and strength of coffee.
- 3 The room where coffee is stored should never be humid.
- 4 It should be stored away from other items especially those which have strong flavour as coffee absorbs other flavours very fast.

4.5 LACED COFFEE:

IRISH COFFEE:

This coffee is served in Brandy Balloon. Sugar with Irish whiskey is heated and then flambéed. Instantly hot coffee is poured in the glass and served with the whipped cream.

GERMAN COFFEE:

Hot black coffee served with cream and Kirsch liqueur.





ALEXANDER COFFEE:

Iced coffee served with cream, 45 mls of brandy and crème de cacao.

JAMAICA COFFEE:

It is served like Irish coffee but instead of Irish whiskey, Brown Rum is used.

GLORIA COFFEE:

Hot coffee served with sugar cube and cognac brandy flavoured with vanilla essence.

MARNISSIMO COFFEE:

Hot coffee served with sugar, Grand Mariner and topped with whipped cream.

CALYPSO COFFEE:

Hot black coffee served with cream and Tia Maria Liqueur.

CARIBBEAN COFFEE:

Hot black coffee served with cream and Rum.

GAELIC COFFEE:

Hot black coffee served with cream and Scotch Whisky.

MONK COFFEE:

Hot black coffee served with cream and Benedictine.

PRINCE CHARLES COFFEE:

Hot black coffee served with cream and Drambuie

ROYALE COFFEE:

Hot black coffee served with cream and cognac.

SUMMARY / RECAPITULATION:

- Coffee is grown in tropical and sub tropical area.
- Coffee trees were first cultivated in 1000 A.D. in Yemen.
- In 1650, the first coffee house was commissioned in England.





- d) Coffee plants are cultivated from sea level to 1850 meters above sea level.
- e) The height of coffee plant is 2 - 3 meters when they start giving fruits.
- f) The fruit of the coffee is known as 'Cherry'.
- g) Coffee plants yield crop for 16 years.
- h) Methods of coffee Processing: Dry method and Wet method.
- i) Coffee seeds are allowed to ferment from 24 - 40 hours in fermentation vats.
- j) The degree of roasting of coffee seeds depends upon the quality of coffee seeds.
- k) Coffee beans are ground to different fineness depending upon the quality of coffee beans and the method of brewing.
- l) Common varieties of coffee seeds are Arabica, Canephora / Robusta, Liberica.
- m) Types of coffees are Instant, Turkish / Egyptian, Henna, Espresso, Pona, Hawaiian, Cona and Caffeine free coffee.
- n) Low caffeine coffee is good for heart and blood pressure patients.
- o) Coffee should be stored carefully to protect the delicate coffee seeds / powder.

IMPORTANT TERMS

- Tropical and Sub Tropical land
- Cherry
- Cultivated
- Laced Coffee
- Humid
- Paper Filters
- Monsoon Coffee

MULTIPLE CHOICE QUESTIONS

1. The fruit bearing coffee tree's height is
 - a) 1 - 2 m.
 - b) 2 - 3 m.
 - c) 1 - 2 ft.
 - d) 2 - 3 ft.



2. Inthe first coffee house was started.
a) Yemen b) England c) America d) China.
3. The coffee plants can be cultivated from sea level tometers above sea level.
a) 1000 m. b) 1500 m. c) 1800 m. d) 1850 m.
4. Coffee can be processed in many ways.
a) 2, b) 1, c) 3. d) 4
5. Coffee plants yield crop foryears.
a) 5 years b) 8 years c) 14 years d) 16 years

ANSWERS

1. b 2. b 3. d 4. a. 5. d.

SHORT ANSWER QUESTIONS

1. Write in brief the origin of coffee.
2. In what type of area are coffee plants cultivated?
3. What type of conditions is conducive to the better growth of coffee plants?
4. Why Indian coffee was known as Monsoon Coffee?
5. Explain in detail the dry and wet coffee processing methods.
6. Explain in brief the fermentation of coffee seeds.
7. Write In brief the rules for coffee making.
8. What rules should be remembered for making coffee in bulk.
9. Write in brief the reasons for weak, bitter and flat coffee.
10. Write about Caribbean and Prince Charles coffee.





LONG ANSWER QUESTIONS

1. Write in detail the origin, manufacturing and processing of coffee.
2. How to grow the best quality of coffee? Write with examples.
3. Why coffee beans are roasted? Explain.
4. How do you make a good coffee? Why coffee becomes bad?
5. What do you mean by coffee - stimulating beverage? What are the different types of coffees?
6. What do you mean by Laced Coffee? Explain with five examples of laced coffee.

