

Chapter 3

Tea

LEARNING OBJECTIVES:

After reading this chapter learners would be able to:

1. understand the origin of tea.
2. understand the different types of tea.
3. know the process of manufacture of tea.
4. understand the different methods of rolling.
5. understand the different popular teas of the world.
6. understand different methods of storage of Tea.
7. understand the golden rules of tea making.

GUIDE TO BETTER LEARNING:

- 3.1. Origin of Tea.
- 3.2. Manufacturing of tea.
- 3.3. Different methods of rolling of tea.
- 3.4. Different types of tea.
- 3.5. Popular teas of the world.
- 3.6. How to store tea.
- 3.7. Golden Rules of tea making

3.1 ORIGIN OF TEA

Tea was discovered in about 3000 B.C. when leaves from wildy grown tea bushes fell in boiling water accidentally and a flavoured liquid was produced. Formerly tea was consumed for its medicinal benefits. From 1700 A.D. onwards tea is consumed as a stimulating beverage.

Tea is produced from evergreen bushes called '*Camellia Sinensis*' and only leaf buds and top leaves of the plant are plucked by the trained personnel to produce a good quality tea.

The tea beverage stimulates the central nervous system and helps in muscle relaxation. The normal tea produces Theine half the strength of Caffeine presents in coffee. There are certain qualities of tea which produces almost nil caffeine and





these teas are grown in China, Kangra (Himachal Pradesh), Kashmir (J & K) Dehradun (Uttarakhand). China is the oldest tea growing country in the world and the most common blends produced by China are Keemun, Green Tea, Lapsang Souchong and Oolongs.

India produces different types and qualities of tea and is not only the second largest producer of tea after Sri Lanka but also produces the maximum number and best variety of tea in the world. India produces about 30% of the world tea. India's tea is the most preferred in the world and the only country which gives us competition is Sri Lanka.

The tea plant is about 2 - 3 ft. in height and is in the form of shrubs. These shrubs are very strong and can also be used in furniture. The plants are pruned on yearly basis to restrict the height of shrubs to 3 ft. Tea is grown in humid climate with a lot of rain fall and is planted in hill slopes to ensure that water does not accumulate around plants and the weather is cool and never hot during the year.

3.2 TEA MANUFACTURING

To manufacture a good quality of tea, the tea leaves are plucked by professional tea leaves pickers. Only top leaves and the flowers are plucked and are called 'Pekoe'. The tea leaves should not be of very big size as big leaves have weaker crushing and hence weaker extraction.

BLACK TEA:

After plucking the tea leaves are allowed to dry and the process is called 'Withering Process'. The tea leaves are dried on perforated racks for about 24 hours, under sun. This is to ensure that the moisture content of the tea leaves must reduce to 50%. In case of high humidity or a rainy season, etc. the tea leaves are dried by blowing dry hot air through them.

After drying the tea leaves, they are passed through a crusher to roll the leaves. The crushing process brings out the moisture from the 50% dried leaves and this process again makes the leaves moist.





After crushing the leaves are fermented. The juice which comes out during crushing contains 'Tannin'. Tannin contributes to the thickness and flavours the tea. Black tea produces thick tea liquor but it is not very well flavoured. When its juice comes in contact with air, it gets oxidised and turn into red.

Next the moisture content of tea leaves is reduced to 3% by the process called 'firing'. These leaves turn into black colour. They are graded, and packed in foil lined tea chests and marketed. South Asian countries produce good grade of black tea and this method of making tea is called 'Orthodox method'.

GREEN TEA:

Green tea is considered to be a better quality of tea and is manufactured in Burma, China, Indonesia, Japan, Laos and Malaysia. Unlike black tea, Green tea is not fermented.

After plucking the tea leaves, they are dried (withered), steamed and then fired and packed. The consistency in terms of thickness, of green tea is medium but has the best flavour.

OOLONG TEA:

Oolong tea is manufactured in China and Taiwan. This tea is semi fermented (Black tea is fermented and green tea is not at all fermented). While plucking tea leaves, they are snapped into two and due to this snapping a little bit of tannin starts oozing out and oxidation occurs. These oxidized leaves are dried (withered) and fired. Oolong tea has a watery consistency and is medium flavoured (less flavoured than green tea but more flavoured than black tea).

3.3 METHODS OF ROLLING:

1. CUT-TEAR-CURL (CTC)
2. LEG CUT





1. **CUT-TEAR-CURL:** When the tea leaves are passed through grooved cylinders, then they get both cut, torn and curled. The CTC tea reduces the fermentation time by 2/3rd. Green tea and Oolong tea cannot be produced by this method.
2. **LEG CUT:** In this method, tea leaves are shredded into strips. This helps in maximum oozing out of tannin and make fermentation very fast.

3.4 TYPES OF TEA

Tea leaves plucking and manufacturing is a highly technical and professional job which involves the skill of precision. Today tea tasters are as much in demand as wine tasters. The tea leaves are termed as bushes of the tea plant. The flushes are two uppermost, tender young leaves; these young leaves are very tender and used for tea production.

Broadly there are three types of tea and these are:

1. BLACK TEA
2. GREEN TEA
3. OOLONG TEA

1. BLACK TEA:

This is also called fully fermented tea. The tea leaves are dried (withered), twisted and finally rolled through rolling machines with or without grooved cylinders (grooved cylinders produce CTC tea). The rolling process frees the natural enzymes and juices of tea. During fermentation process, the natural enzymes in tea are allowed to mix with oxygen.

Once the leaves turn into black, they are dried to stop chemical activity. Black tea produces thick liquor and yield a hearty flavour. Black tea leaves produce a red orange to deep red brown liquor. Popular black teas are:

INDIA	:	ASSAM TEA, DARJEELING TEA, NILGIRI TEA
SRI LANKA	:	CEYLON TEA
CHINA	:	KEEMUN



2. GREEN TEA:

Green tea is unfermented tea. To produce green tea, leaves are steamed immediately after plucking. The tea leaves are neither oxidised nor fermented. The leaves are then dried (withered) and rolled. Green tea has light colour, delicate taste and the liquor is light green or golden in colour. Well known varieties of Japanese Green Tea are:

- I CHANMEES
- II GUN POWDER
- III HYSON
- IV IMPERIAN
- V SOUMEEES

3. OOLONG TEA:

When the fermentation time is reduced as compared to black tea then Oolong tea is produced. China and Taiwan produce oolong tea in large quantity. The tea leaves are dried (withered) and oxidized for a much shorter time as compare to black tea. The taste and colour of oolong tea is between green and black tea. The tea liquor is amber in colour. Formosa Oolong is a famous tea of Taiwan.

3.5 OTHER POPULAR TEAS

INSTANT TEA:

Instant tea is made by freeze drying or spray drying on infusion of tea. It is packed in air tight containers and is used in automatic vending machines.

YERBA DE MATE:

This is made of leaves and small stems of species of a tree grown in Paraguay and Brazil. This is manufactured like black tea. This tea is consumed without milk and with or without sugar.

SCENTED TEA:

The flavour of Rose, Jasmine, Mint, Cinnamon, Orange zest, etc. is added to the tea to give the specific flavour. The flower leaves / petals are added during firing stage. Once the flavour of flowers is added, they are sieved out. These teas get





their name from the scent / flavour added like Cinnamon tea, Lemon tea, etc.

DIFFERENT TEAS CAN BE BLENDED TO PRODUCE SPECIALITY TEA.

3.3 HERBAL TEA OR TISANES:

This tea is made from flowers, berries, peels, seeds, roots, etc. instead of tea leaves. These teas are caffeine free. The name of the tea depends upon the plant from which the liquor is produced and the commonly known names are: Camomile, Peppermint, Rosehip, Mint, Rose marry, Lemon grass Ginseng, Milfoil, etc. This tea is usually served without milk and with or without sugar.

FRUIT TEA:

These are fruit flavoured tea. This tea is also caffeine free and is consumed for medicinal purpose. Common names are Cherry, Lemon, Black currant and Mandarin Orange. This tea is usually served without milk and with or without sugar.

3.6 STORAGE OF TEA:

If tea is not stored properly then it can kill its flavour and taste. The tea leaves should be stored:

- in a dry, clear, air tight covered container.
- the store / room should be well ventilated
- it should be free from moisture / humidity
- it should not be allowed to be kept near other strong flavoured food articles as tea absorbs other flavours very fast.

3.7 GOLDEN RULES OF TEAMAKING:

The guest may order any specific type or brand of tea depending upon his choice and pocket. Good tea bars / tea stores keep Indian, Chinese, Sri Lanka and other special types of teas and tea blends.

The quantity of tea leaves used to produce a good cup of tea depends upon the type of tea and the taste of the guest.

85 - 113.4 grams of dry tea is used to produce 9 litres of tea (about 45 cups)



1 litre of milk is used to prepare 9 litres of tea (about 45 cups)

225 grams of sugar is used to prepare 9 litres of tea (about 45 cups)

The quantity of tea should be measured, in case of loose tea, to produce the standard tea at all times. It is advisable to use the tea bags to produce the standard cup of tea.

To make a good tea following golden rules are followed.

1. Tea cup, tea pot, should be heated before pouring tea in them.
2. Measure the tea leaves exactly.
3. Use freshly boiled potable water.
4. The boiling water should be poured in pre-heated tea pot / tea cup.
5. The tea should be allowed to brew for 3 - 6 minutes depending upon the type of tea and the guest's taste.
6. Strain / Remove the tea leaves before serving / drinking.
7. All pots, utensils, cups etc. should be clean and odour free.

Without careful moisture and temperature control during manufacture and packaging, the tea may grow fungi. The fungus causes real fermentation that may contaminate the tea with toxic and sometimes carcinogenic substances, as well as off-flavors, rendering the tea unfit for consumption.

Almost all teas in bags and most other teas sold in the West are blends. Blending may either occur in the tea-planting area (as in the case of Assam), or teas from many areas may be blended. The aim is to obtain better taste, higher price, or both, as a more expensive, better-tasting tea may cover the inferior taste of cheaper varieties.

Some teas are not pure varieties, but their taste or flavour may be enhanced through additives or special processing. Tea is highly receptive to inclusion of various aromas; this may cause problems in processing, transportation and storage. On the other hand, this also allows for the design of an almost endless range of scented and flavored variants, such as bergamot (Earl Grey), vanilla, caramel, and many others.





SUMMARY / RECAPITULATION:

1. Tea was discovered in about 3000 B.C.
2. Since 1700 A.D. tea consumed as a stimulating drink.
3. Tea is produced from evergreen bushes called 'Camellia Sinesis'.
4. India produces approximately 30% of world tea.
5. The juice during crushing of tea leaves contains 'Tannin'.
6. The tea plant is 2 - 3 ft. in height and is called a 'shrub'.
7. Only top leaves and flowers are plucked from tea plants for the manufacturing of tea and these are called 'Pekoe'.
8. Drying process of tea leaves is called 'Withering Process'.
9. By firing process the moisture content of tea leaves is reduced to 3%.
10. Black, Green and Oolong are the three important types of tea.
11. Other types of tea are: Instant, Yerba De Mate, Scented, Herbal and fruit tea.
12. Tea should be stored properly otherwise its taste and flavour gets destroyed.

IMPORTANT TERMS

- Stimulating
- Camellia Sinesis
- Withering Process
- Pekoe
- Tannin
- Caffeine
- Herbal Tea
- Oolong Tea
- Keemun Tea from China
- Cut-Tear-Curl (CTC)
- Legg Cut



MULTIPLE CHOICE QUESTIONS

- i. Tea was discovered in
a) 1000 B.C., b) 1700 A.D., c) 3000 B.C. d) 2000 B.C.
- ii. The height of a tea plant is
a) 2 - 3 ft., b) 1 - 2 ft. c) 4 - 5 ft., d) 6 - 7 ft.
- iii. Keemun is tea fromcountry.
a) India, b) Sri Lanka, c) China, d) Indonesia
- iv. India produces of tea of world.
a) 30%, b) 10%, c) 50%, d) 20%
- v. The largest producer of tea in the world is
a) India, b) Sri Lanka, c) China, d) Indonesia.

ANSWERS

1. c) 2. a) 3. c)
4. a) 5. b)

SHORT ANSWER QUESTIONS

1. What is the role of tannin in tea?
2. Name the important types of tea produced.
3. Explain in brief Green Tea
4. Explain in brief the difference between Green Tea and Black Tea.
5. Write the brief history of tea.

LONG ANSWER QUESTIONS

1. What is the importance of tea storage: Explain in detail the points kept in mind while storing the tea.
2. What are the different types of tea? Explain in detail.
3. Write in detail the Golden Rules of tea making.
4. What do you understand by the word tea rolling? Explain the different methods of rolling.



