

TEA

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INTRODUCTION

- Tea is the morning queen of all households, especially in India.
- Tea beverage is prepared by using freshly boiled water and further putting leaf buds and young leaves into it.
- The leaves used might be unfermented or fermented.
- It is the most common non-alcoholic beverage, used by more than one-half of the world's population.

TEA

- Scientific name --Camellia sinensis
- Family ---Theaceae
- Vernacular name -- Chai

- **ORIGIN**

- It has a long history which actually been started from 2700 BC.
- The exact geographical centre of origin has been doubted and it is believed to be originated in Indo-Chinese area.



DISTRIBUTION

- Wild tea in Assam (Scott 1826).
- In Nepal (Gardner 1820).
- Lieutenant Andrew Charlton (1831) brought tea samples to Calcutta.
- Agriculture and Horticultural society of India presented gold medal to Charlton (1841).
- Brahmaputra & Surma valleys of Assam, Darleejing & Jalpaiguri district of North Bengal (70%).
- Mountain slopes of Nilgiris and Annamalais, Kerala, Karnataka, Ranchi, Kangra, Kumaon regions.
- China, India, Ceylon, Indonesia, East Africa, Peru, Brazil, Argentina.

MORPHOLOGY

- Evergreen perennial shrub/ small tree.
- Tea of commerce consists of tender leaves and buds.
- 9.1 to 15.2m height in natural condition.
- The bushes are always prune to encourage maximum leaf production.
- The leaves are alternate generally elliptic to lanceolate, with toothed margin.
- The older leaves are leathery, bright green in colour and 5-30cm long.
- The young tender leaves is densely covered with soft hairs and they vanish as the age increases.

- The characteristic fragrance of the leaf is due to the presence of numerous glands.
- They have a strong aroma and are present in single/ or in groups of 2-4.
- The flower is yellow in colour.
- They produce fruit which are woody capsule.

CLIMATIC CONDITION

- It is grown in all sub-tropical and tropical mountainous region.
- Deep well drained friable loam soil/ forest land.
- Temperature 24-30 degree celsius.
- Annual rainfall of 100-150cm.
- Requires shade for faster growth, excessive dry period not suitable.
- Plants are raised from seeds.
- Seedlings raised in nurseries are ready for transplantation in about a year.

HARVESTING

- Regular pruning is maintained and after a certain initial growth 'Plucking level', new leaves are harvested.
- Water logging is harmful.
- Shady trees like *Albizia procera*, *Derris robusta*, *Dalbergia assamica* could be planted in tea gardens.
- Periodic appearance of new leaves is called Flush.
- In northern India, plucking is done 3-4 times a year; not in winters and in South India, plucking continues throughout the year at weekly.
- Leaves are plucked by hand/ scissors by women.
- Young tender shoots, terminal bud, 2 to 5 leaves immediately below are plucked.
- A skilled worker can pluck up to 50 kg of leaves everyday.

PROCESSING OF TEA

- 4 main types of tea are recognised.

1. Black tea.
2. Green tea.
3. Oolong tea.
4. Brick tea.

- **Black tea --**

- Fresh leaves are plucked.
- Undergo four processes
 1. Withering.
 2. Rolling.
 3. Fermentation.
 4. Drying.

1. Withering

Removal of moisture from fresh tea leaves by spreading over withering racks for 12-18 hours, sometimes heated air is forced over the racks.



2. Rolling

Peculiar twisting of leaf to break the cells by machines and exposing juices to air for start of fermentation to get completely dried leaves with dull green colour -- Green/unfermented tea.



3. FERMENTATION

- Its done in special fermentation chambers with regulated temperature, humidity and air circulation.
- Polyphenol and orthoquinones are produces giving dark colour to leaves.
- It completes in three hours and less fermented tea is more pungent whereas longer fermented tea is soft and deeper in colour.



4.DRYING

- For stopping fermentation, drying is done in special ovens with hot air is at 90 to 100 degree C for 20-25 minutes, careful drying is done to produce typical black colour tea with pungent property.



2- Green tea

- It is made by hitting the freshly picked leaf in an iron pan.
- The leaves are then rolled and dried like black tea.
- The final product is dull green with an even texture and quality.
- **3- Oolong tea** -- It is partially fermented product and an intermediate between green and black tea having the flavour of the former and the colour of the later (black).
- **4. Brick tea** -- This tea is of low grade which is generally prepared from the waste left after the preparation of black tea.
- It may consists of leaf and twigs.

ECONOMIC IMPORTANCE

- Tea has stimulating property due to theine and alkaloid.
- Black tea is rich in antioxidants such as phenols and catechins.
- It protect the oxidative damage of cell membrane and celullar DNA thus preventing some form of cancer.
- Tea leaves contains fluoride which makes the enamle of the teeth strong.
- Over consumption should be avoided as it contain oxlate which may cause kidney diseases. However intake of green tea increases the overall health.



Thank You!