Types of Tea in Nepal

Generally two types of tea are produce in Nepal, they are **orthodox and CTC Tea.** The orthodox tea is produced in the Hills namely Ilam, Dhankuta, Panchthar, Terathum, Sindhupalchok, Nuwakot, Ramechhap District, while the CTC tea is produced in the Jhapa District of Terai.

Orthodox Tea

Orthodox tea, made through traditional methods, involves plucking, withering, rolling, oxidizing, and drying. It offers multilayered flavors and is crafted into various types like white, green, oolong, and black. Handpicked leaves undergo withering to soften, rolling for shape, oxidation for flavor, and drying before packaging.

Importance:

Rich in antioxidants, it aids cardiovascular health, mental clarity, and offers authentic taste due to organic processing.

CTC Tea

CTC (Crush, Tear, Curl) tea is processed by machines for efficiency. Leaves are crushed, torn, and curled into small, uniform pellets. This method focuses on speed and consistency rather than delicate flavors. It's mainly used for black tea, resulting in a strong taste. Quick to brew and bold in flavor, it's often used in tea bags. However, it may lose some antioxidants due to machine processing. While not as complex as orthodox tea, CTC tea offers convenience and a robust flavor loved for its efficiency.

Differences between orthodox and CTC tea

Orthodox Tea	**CTC Tea**
Handcrafted, traditional method.	Mechanized, efficient processing.
Leaves remain intact(whole), rolled gently.	Leaves are crushed, torn, and curled
Offers gentle, multilayered flavors	Yields bold, strong flavor
Takes longer to brew(steeping in hot water) for optimal taste.	Convenient for tea bags, quick brewing.
Rich in antioxidants and authentic taste.	May lose some antioxidants, less complex flavor.
Orthodox methods are used for white, green, yellow, and oolong teas	CTC processing is primarily associated with black tea production
Examples; Himalayan Golden Tips Black Tea. Guranse Estate Oolong Tea.	Examples: Kanchanjangha Estate CTC Black Tea. Eastern Nepal CTC Tea.

Planting season: planting is done either in spring(June-July) after first shower of rain or in autumn (October-November) when the soil is moist and areas has irrigation facility.

Manure and fertilizer: The fertilizer required for tea is about 140:100:140 kg NPK/ha to get more than 2500 kg of tea leaves. The nutrient requirement per plant is 8 gm DAP, 14 gm urea and 20 gm MOP for both CTC and Orthodox tea in Nepal.

Land planning and site preparation: topographical layout of drains, bunds, culverts, and plucking access along with soil water management, easier supervision and maintenance should be feasible.

Layout, methods of planting and spacing: the advisable spacing is 105cm*65cm, 105cm*75cm or 105cm*60cm.

Pit digging and refilling of pits: after site clearance and layout, pit is dug with 45 cm diameter and 45 cm depth. The pit is filled with soil mixed with 40gm MOP and 2-3 kg organic manure and FYM.

Propagation of Tea: can be done both sexually and asexually

- Sexual propagation through seed is common
- Asexual propagation- budding, grafting, layering, cutting can be adopted.

Planting: common method is single row hedge system. Well grown robust plants of 45-60 cm height with basal diameter of 0.5-0.8 cm and 8-10 leaves should be planted in the main field.

Mulching: After planting, the area is thoroughly mulched using grass, water-hyacinth, etc. if paddy straw is used, 20KgN/ha in the form of urea is to be sprayed. Mulching helps to conserve soil moisture, prevent erosion, reduce weed growth and add organic matter to soil.

Planting of shade trees: planting of shade tree is very important for tea cultivation so shade trees are planted along with planting tea. Leguminous crops are suitable for first three years along with this permanent shade. Trees like- Albizzia Lebbeck (sirish), Jacaranda mimosafolia (Gulmohar) etc can be planted.

Topping and pruning: Topping in tea involves removing the terminal bud to encourage lateral growth, while pruning entails selectively removing old branches to rejuvenate the plant. These practices promote bushier growth, better sunlight penetration, and increased yield, contributing to healthier tea bushes and improved quality and quantity of tea leaves.

Tea plant is pruned after 1 year when height of 45 cm is attained. Main stem is cut a few cm above the ground. In next 4 or 5 years, the plant become mature bush of 45-60 cm height and is ready to yield a crop. To encourage lateral spread, all shoots growing through the center of bush should be removed. After a cycle of pruning, the bush is cut back to 2-3 cm below the ist cut. This encourage fresh laterals and maintain yield at high levels.

Harvesting (Plucking)

It consists of collecting the newly grown vegetative shoots i.e harvesting of tea involves the regular removal of young shoots comprising an apical bud and 2-3 leaves immediately below it, usually this type of plucking is called ‘fine and light plucking’. Coarse plucking includes 1-2 extra leaves.

Time of plucking:

- Best time to pluck shoots is the morning hour as it contains more soluble proteins and produce good quality tea
- At afternoon, insoluble protein will be increased and at night time, breakdown and formation of amino acid will be in tea shoots and leaves.

The processing of tea involves several key steps: (for both orthodox and CTC)

1. Withering: Freshly harvested tea leaves are spread out to wilt for 28-24 hours, reducing moisture content.
2. Rolling: Leaves are rolled to break their cell walls, initiating oxidation and shaping the leaves.
3. Oxidation/Fermentation: Leaves are left to oxidize for 8 hrs at 27 to 105 degree Celsius, enhancing flavor and color development.
4. Fixation/Kill-green: Oxidation is halted by heating the leaves to preserve flavor and color.
5. Drying: Leaves are dried to remove remaining moisture, stabilizing flavor and quality.
6. Sorting/Grading: Leaves are sorted based on size and quality.
7. Packaging: Packaged for distribution and sale.

Yield: average yield-1200-1500 kg/ha

Pest:

- Tea aphids
- Tea mosquito bugs
- Leaf roller
- Mites
- Caterpillar

Diseases:

- Blisters blight
- Red rust
- Red root diseases
- Brown root disease
- Wood rot