

From Tree to Tea

The many different phases involved in getting tea leaves from the tree to your cup are carefully judged and handled by tea-makers. Not all teas undergo all the same processes, and the way in which they go through them differs: some teas are "withered" longer than others or not at all; "bruising" is done lightly or more vigorously; "oxidation" doesn't always happen; "fixing" and "drying" are done at different temperatures for different teas. This explains not only why the main types of tea have their own distinctive characteristics, but also why the many different teas within the types are so individual.

Plucking or picking

Picking happens typically twice a year during early spring, late spring and/or early summer, though some teas are picked more often. Autumn or winter pickings are much less common. Picking of leaves or "flushes" (a "flush" is the bud and the first two leaves) is generally done by hand; if done by machine, the quality of the tea leaves is likely, though not definitely, to be reduced. "CTC" teas are cut, torn and curled by machine, and are usually destined for teabags.

Withering or wilting

The fresh-picked leaves start wilting soon after picking, and the process of enzymatic oxidation begins. The withering process removes excess water from the leaves and allows a very slight amount of oxidation: leaves are either spread out in the sun, or have warm air blown over them. For how long depends on which tea is being produced and will affect its flavour. Some teas (green and yellow teas, for instance) are rushed straight from the field to the factory and therefore wither only for as long as the truck ride.

Bruising, rolling or shaking

After withering, the leaves are bruised at their edges in order to encourage and quicken the oxidation (or fermentation) process. They might be shaken and tossed in a bamboo tray or tumbling baskets, or "disrupted" more extensively by kneading, rolling, tearing and crushing by machine. The enzymes activated and the leaf juices released affect the flavour profile.

Oxidation or fermentation

Not all teas are oxidized, but if they are, they are spread out in a climate-controlled environment for a certain amount of time (sometimes the leaves are also agitated), and the oxidation process will turn them progressively darker. Oxidation has a big influence on the depth of taste and needs to be carefully judged.

Fixing or "kill-green"

Oxidation needs to be stopped at the desired level for the type of tea, and this is achieved by steaming the leaves or "panning" them in a wok (white tea is sometimes baked instead), which deactivates the oxidative enzymes. Fixing can also be done in a rolling drum.

Smothering, sweltering or yellowing

Only yellow teas go through this process, in which warm, damp leaves, once fixed, are lightly heated in closed containers or under cloths, in a moist environment and at a temperature similar to body heat, which causes the leaves to turn yellow and undergo particular chemical changes that give yellow tea its characteristic taste.

Rolling or shaping

Before the final drying, the tea leaves are rolled and formed by hand or in a rolling machine, causing some of the sap, essential oils and juices of the leaves to seep out, which intensifies the flavour of the tea. Leaves can be rolled into spirals, kneaded and rolled into pellets, or in the case of some oolongs, rolled into spheres or half spheres. Puerh teas are shaped at this stage into cakes, or bell, brick or mushroom shapes.

Drying or firing

Leaves are stacked in hot-air rack dryers, or spread out and exposed to the natural heat of the sun. In this way the moisture content of the leaves is reduced to the desired level – as little as 3% in black teas – and black tea is now fixed, having skipped it at the earlier stage. It is crucial that the leaves are not overcooked. Oolong teas undergo a second firing.

Curing, aging or post-fermentation

Additional aging, "secondary fermentation" or "curing" can help enhance flavour. Oolongs are fired a second time for this reason, and Puerh teas, which can be bitter and harsh, become sweet and mellow through aging.

TEA PROCESSING

	Withering	Bruising	Oxidation	Fixing	Smothering	Rolling	Drying	Curing
WHITE TEA	Hardly any Withering	Light rolling	---	Baking (Chinese) Steaming (Japanese)	---	Light rolling	Drying	---
GREEN TEA	---	---	---	Steaming or panning	---	Rolling or forming	Drying	---
OOLONG TEA	Both sun wilting and indoor wilting	Shaken and tossed in baskets	Partial oxidation	Panning or baking	---	Rolling or ball rolling	Drying	Firing
YELLOW TEA	---	---	---	Steaming or panning	Heated in moist conditions for hours or days	Rolling	Drying	---
BLACK TEA	Withered for several hours	Light crushing or CTC	Full oxidation	---	---	Rolling	Drying	---
PUERH TEA	---	---	---	Steaming or panning	---	Rolling and/or shaping	Drying	Natural aging

Sorting and Grading Tea

After the final firing, tea-makers sort their teas by sifting them through a series of graduated mesh screens. Whole leaves are separated out for the best-quality teas. The next sized particles are called "broken" (commonly sold as medium-grade loose teas), followed by "fannings" and "dust", which are useful in teabag teas because the greater surface area allows for a fast, complete diffusion of the tea into the water and a nice strong brew. It is important that all the pieces of leaf used for one brew are the same size, so each packet must contain leaves or pieces that are uniform.

Varying amounts of information will be offered on a tea label, from detailed to minimal. A label might state the type of tea, the year and season of harvest, the origin (country, district or province, estate and garden), and perhaps also the tea bush cultivar, the firing style, oxidation level and level of roasting.

Of the six different classes of tea, the only one to have a fairly universal grading system is Indian black tea. Broadly, tea is classified as Orthodox (traditional methods used) or CTC (Crush, Tear, Curl by machine). The grading system then goes on to classify teas according to leaf size. Although whole-leaf teas are considered superior, there are some outstanding broken-leaf teas too.

Classifications

Whole-leaf	SFTGFOP	<i>special fine tippy golden flowery orange pekoe (smallest whole leaf and the highest grade)</i>
	FTGFOP	<i>fine tippy golden flowery orange pekoe (medium whole leaf)</i>
	TGFOP	<i>tippy golden flowery orange pekoe (medium whole leaf)</i>
	GFOP	<i>golden flowery orange pekoe (large whole young leaves whose tips are golden)</i>
	FOP	<i>flowery orange pekoe (extra-large whole leaf)</i>
	FP	<i>flowery pekoe</i>
	OP	<i>orange pekoe</i>

"Golden" refers to golden hues in the leaves, testifying to their quality; "tippy" signifies an abundance of young tea buds; "flowery" refers to the flowers of the tea plant. A number 1 is often added after the grading letters to denote top-quality tea.

Broken-leaf	GFBOP	<i>golden flowery broken orange pekoe</i>
	GBOP	<i>golden broken orange pekoe</i>
	FBOP	<i>flowery broken orange pekoe</i>
	BOP 1	<i>broken orange pekoe one</i>
	BOP	<i>broken orange pekoe</i>
	BPS	<i>broken pekoe souchong</i>
	OP	<i>orange pekoe</i>

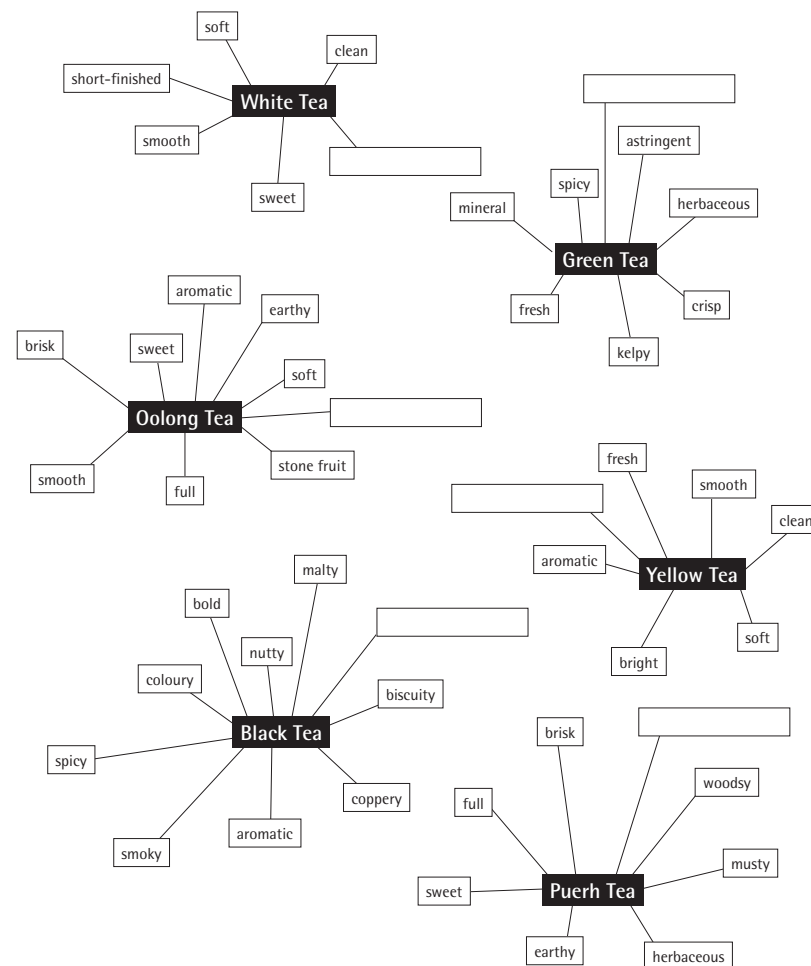
CTC broken-leaf, fannings and dust follow a similar scheme. Very occasionally, grades can be mixed (M). For example, BOPSM could be used to represent a broken-leaf mix of Orange Pekoe (BOP) and Souchong(S).

When evaluating quality, tea experts consider the variety of tea, the growing region, the stage at which it was plucked and the manufacturing process. The most widely accepted means of evaluating tea, however, is still the subjective appreciation of the flavours, the aromas, and the appearance of the leaves.

Types of Tea

Today India and China are still the giant tea producers, providing 1 million tonnes or more a year, but in the band of medium-to-big producers (which includes Japan, Indonesia, Turkey, Iran, Bangladesh, Thailand and Malawi), Kenya now provides 40% of Great Britain's tea, and Argentina 40% of North America's. There is a spread of small-to-medium producers throughout Africa, Asia and South America, and a clutch of really small producers in Australia, North America and Russia, and even Europe has a handful, including one in the UK.

The countless different types of tea available today include flavoured and scented, fruity and medicinal, but there are only six types of "genuine" tea that come from the original tea bush, *Camellia sinensis*. The flavours and quality depend on the region in which the tea is grown, the climate, the altitude and the tea-maker's interpretation of the production methods, but each of the six types has its own distinct characteristics.



White Tea

The Chinese have enjoyed white tea for over a thousand years, but only recently has the rest of the world come to know it. Authentic white tea is grown mainly in the Fujian province of China, where the exact method of processing is kept secret, and it can only be picked for a few weeks each year in early spring, which increases its rarity. White tea gets its name from the fine silvery white hairs on the unopened buds of the tea plant, which are picked, with carefully selected leaves, at an earlier stage than other teas.

The qualities of white tea come from the bud, which holds particularly delicious flavours in the springtime. The buds or "tips" are plucked 7-10 days before they unfurl into leaves. They are then "withered" or "air-dried", during which they turn from light green to iridescent silver. Because the tea undergoes minimal processing, more nutrients are preserved than in black or green teas, and its antioxidant and detoxifying benefits are well known.

The four main varieties are:

Silver Needle (Bai Hao Yin Zhen) is the highest grade of white tea – a prized delicacy as only the finest top buds are used, producing a light, creamy, gentle flavour with sweet notes.

White Peony (Bai Mudan), the next highest quality, consists of buds and the two top leaves. A smooth and mellow tea, fresh with soft fruit notes.

Long Life Eyebrow (Shou Mei) is made from the leaves left over after the Silver Needle and White Peony harvest and has a sweet but slightly stronger taste reminiscent of light oolongs.

Tribute Eyebrow (Gong Mei) is made from a particular tea bush and is processed slightly more than the others, making it mellow and thick with a clean and sweet taste.

Green Tea

Green tea is not as rare as white tea, but it is the purest, most unadulterated tea – the crucial factor in its production is preventing oxidation of the fresh leaf, thus preserving the natural green colour. It is produced year-round in subtropical locations all over the world (though chiefly China, Japan and India), but only at specific times in the warm months in temperate zones. The quality of leaf is related to the number of plucks (harvests) per year and the time of year at which it is plucked.

Whereas white tea is made chiefly from buds, green teas are made using mature leaves that have not just been air-dried but cooked – this preserves the colour and enhances flavour. Chinese green teas tend to be lighter and less intense, whereas Japanese green teas are more mouth-filling. They have no sugariness, whereas Chinese green teas have subtle sweet notes. The Chinese "fix" the tea with blasts of hot air; the Japanese steam the leaves.

There are a great number of green tea varieties to choose from, and for this reason they are often classified not only by their specific name, but by the region from which they are harvested. Some of the main types are:

Gunpowder (China). One of the most popular types, it is grown in Zhejiang province. After processing, it looks like pellets, which open up into the original leaf shape during brewing. An easy-drinking soft, fresh tea with a hint of sweetness and a dry aftertaste.

Dragonwell ("Long Jing" – China). Grown in Zhejiang province, this is mainland China's favourite, with a fresh green taste.

Green Snail Spring ("Pi Lo Chun" – China). Grown amongst fruit trees, it picks up their scents. "Green Snail" historically refers to the shape of the leaf when steeped. Refreshing and sweet with fruity undertones.

Snowy Mountain Jian (China). A tea grown at an extremely high altitude in Yunnan province. Its leaves are extraordinarily long, and it has a fuller flavour reminiscent of black teas, due to the processing methods.

Chun Mei (China). Translated as "Precious Eyebrows", this fresh, astringent tea with a sweet finish is grown in Yunnan province.

Oolong Tea

Oolong means "Black Dragon", and the best oolongs come from China or Taiwan. It is semi-fermented, a cross between green and black tea, and is widely prized for its digestive benefits. Chinese and Taiwanese tea experts say oolong is the most intricate and complex tea to manufacture, and as a group, these teas are exceptionally diverse, each with a unique set of characteristics depending on leaf style and colour, oxidation level (which varies from 20% to 80%), and the degree (if any) of roasting. It is considered highly sophisticated to be able to navigate your way knowledgeably around this class of tea.

It comes in two main types – striped (long, narrow, twisted leaves) and balled (tightly rolled shoots or leaves). A famous example of the balled type is "Iron Goddess of Mercy", which is also grown in the high mountains of Taiwan. The third type is the semi-balled teas, of which an example is Pouchong ("Bao Zhong"). They have a shorter fermentation period and a lighter and more floral liquor than most other oolongs.

The highest-grade oolongs of all are "Monkey Picked" oolongs. Legendarily, monkeys were trained to climb high up into the tea tree to pick the youngest leaves. Some of the other more popular and more available types are:

Ti Kuan Yin. Tightly pelleted and grown in China, it is known as "Iron Goddess" and has stout, crinkly leaves and a sturdy yet soft floral flavour.

Tung Ting. Considered one of the best teas from Taiwan, it is lightly fermented and has a light and gentle taste.

Formosa Oolong. Also from Taiwan, this tea is picked in the spring and is well known to have a sophisticated, delicate peachy flavour with woody and nutty undertones.

Darjeeling oolongs. A variety of oolong teas grown in special conditions in the Darjeeling region of India and diverse in character: mellow or robust, smooth or pungent, usually with sweet and floral notes.

Hou Kui (China). Also known as "Monkey Tea", it is grown in Anhui province, around orchid plants, which infuse an orchid flavour into the tea.

Xin Yang Mao Jian (China). Known as "Green Tip", and grown in Henan province. Its leaves are particularly fine, producing a delicate and light flavour.

Sencha (Japan). Three-quarters of all the green tea harvested in Japan is Sencha. Made from a higher quality leaf than other Japanese teas, it is often called "guest tea". It has a sweet and clean, astringent flavour.

Gyokuro (Japan). Japan's highest-quality green tea, due partly to its complex growing and harvesting process. It is allowed to mature in a way that enhances the leaves' health benefits, aromas and flavours. It is much sweeter than other green teas.

Matcha (Japan). Made from finely milled Tencha leaves, this is the tea used in the Japanese tea ceremony; it has an intense sweetness and deep flavour.

Bancha (Japan). One of the few teas that is harvested late in the season. Both stems and stalks are picked with the leaves, producing a subtly vegetal, less intense flavour than most.

Makaibari Tea Estates (India). An award-winning green tea, flavourful but still light.

Craigmore Estate (India). This is grown at extremely high altitudes in India's Blue Mountains, and is very fragrant and sweet.

Yellow Tea

Yellow tea is an endangered species and is grown, not widely, in China. It combines the big sweet buds of white teas, the gentle vegetal flavour of green teas, but subtler, the bright and various aromas of oolongs and the mild sweetness and slight bite of the finest Chinese black teas. They are very hard to find – some on the market are not genuine, and some are mis-categorized as green teas. Be careful to get it from a reputable source.

Yellow tea is unique to the high mountain regions of the Chinese provinces of Anhui, Hunan and Sichuan. The spring buds are used for their juicy and tender qualities, and the leaves are basket-fired and then "smothered" before finish-firing. It is the smothering that defines yellow tea. After light steaming and removal from the heat source, it is covered with a cloth, which encourages the leaf to reabsorb its own aromas whilst also being able to breathe. Over several hours or days, this creates a characteristic sweetness and fragrance. It is because the process is complex and time-consuming that this tea is so rare.

A long time ago there were hundreds of varieties of yellow tea. Now there are three main types:

Jun Shan Yin Zhen is grown on Junshan Island in Hunan province and has a unique flavour – smooth, light and sweet with a fleeting smokey note.

Huang Ya is grown at very high elevations in Anhui province and is famed for its health benefits and amazingly delicate flavour – smooth and slightly nutty with a gentle sweet finish.

Meng Ding Huang Ya, possibly the most famous yellow tea, has been grown since the Tang Dynasty (AD 618-907). It has a delicate floral aroma with a hint of nuttiness.

Black Tea

Black tea is the least-consumed class of tea in China, but the favourite among European tea drinkers. Tea lovers in the United Kingdom and parts of Europe often drink it in teabag form, "strong" with milk and sometimes sugar. In North America, black tea is the most popular for both hot and iced tea. The largest quantities of black tea are produced by India, Sri Lanka and Kenya.

Black tea is not fixed after harvesting as with green tea; instead the leaves are allowed to darken. During this process of oxidation, flavonoids (antioxidants) are produced, and it is the level of these that define the tea's colour, body and flavours. The slower the oxidation, the mellower the tea.

There are two main methods of production. The "CTC" method (Crush, Tear, Cut) produces "fannings" (small pieces of tea leftovers) or "dusts" that are commonly used in teabags and processed by machines. The process achieves a better quality tea from lower quality leaves. "Orthodox" processing can be done by machine or, for high quality teas, by hand and involves withering, rolling, oxidation and drying.

Black teas are widely grown. In leaf form there is a huge number of different types. Some of the most popular are:

Keemun: this is China's best-known black tea. "Keemun" is an older Western spelling of the town now known as "Qimen", in a region between the Yellow Mountains and the Yangtze River. Keemun tea has a rich aroma and a light but complex flavour.

Lapsang Souchong: the oldest and most beloved of black teas from China, it now also comes from all over the world. Its leaves are infused with the smokey flavour at two stages during processing.

Yunnan: Yunnan tea, from Yunnan province, China, is a particularly large-leafed tea which goes back two thousand years. Historically it was highly regarded for its unique malty, peppery taste. Much of the cultivation and harvesting of Yunnan teas is done by hand, which makes them costly.

Darjeeling: tea from this region of India is famous for its three seasons: First Flush in spring (characteristically fragrant, lively and floral), Second Flush in early summer (full-bodied with distinct muscatel tones) and Autumnal in the late summer and autumn (aromatic and fresh).

Nilgiri: its name means "Blue Mountain" and refers to part of the western Ghats mountain range in India. It is generally a brisk and bright-tasting tea, dark and aromatic.

Assam: grown in subtropical conditions in north-eastern India in one of the wettest places on the planet, the tea bushes draw from the rich soil to produce thick, big leaves which have to be processed quickly in the humid air. The leaves are withered for very little time, which results in a muted, soothing flavour.

Ceylon: this tea from Sri Lanka benefits from the unique topography and climate, and comes in three categories according to the elevation of the tea garden: low-grown (can be unremarkable), medium-grown (fruitier, mellower teas) and high-grown (lighter and brisker). It is the high-grown teas that make Sri Lanka's reputation.

Orange Pekoe: the term applies to a genre of teas which, though originating in China, are now largely grown outside China (chiefly India and Sri Lanka) – a basic, medium-grade black tea consisting of many whole tea leaves of a certain size. There is a complex grading system based on the quality of the leaf and the proportion of leaves to tips. It can be described as having a rich, forest-like scent with a hint of bitterness and a sweet finish.

Blended teas: blended teas are created by combining various teas from one country (for instance Ceylon Morning Blend), or from several countries (English Breakfast Tea, Russian Caravan Tea). Some have other elements added: Earl Grey, a blend of Indian and Ceylon teas, is flavoured with oil of bergamot (a small, acidic orange), and jasmine tea is flavoured by the addition of jasmine flowers. Blended teas are constructed for complexity of flavour and may or may not suit the addition of milk and/or sugar. Master blenders combine the best components of several teas into a perfect union.

Puerh Tea

Puerh tea, also known as aged or vintage tea, is one of China's great treasures and has only recently been discovered in the West. Production is closely regulated to ensure the highest quality and authenticity. It comes from Yunnan province and if Chinese tea-drinkers talk about black tea, it is most likely this tea they are referring to.

It comes in two varieties – green (sheng – "raw, green") and black (shou – "cooked"). Both follow the same steps of withering, rolling, drying, steaming and shaping, but the black variety goes through the additional step of "cooking", in which the leaves are piled in a heap to facilitate fermentation – the leaves "cook" and add a highly prized depth and smoothness to the complex and diverse flavours. Both varieties are then stored for aging.

The tea comes as leaves or might be formed into a brick, cake, bell or mushroom shape and then stored in warm, moist cellars which allow the tea to mature further. It is drinkable after 3 months, but better after about five years. Good quality Puerhs benefit from aging for as many as 40-60 years.