

# Techniques in *Mincha* Production: Pursuing Perfection While Retaining the Essence of Tea Culture

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## Abstract

Tea growing in Fujian province dates as far back as the Shang and Zhou dynasties. Since then, Fujian tea (known as *Mincha* locally, in which *Min* is the abbreviation of Fujian Province) has flourished and is renowned in China and abroad. Closer connections to the international market have raised standards and led to the integration of different tea growing techniques to produce quality tea. This article aims to describe how tea production techniques have become increasingly sophisticated by focusing on *Mincha*'s breeding, fertilization, irrigation, weeding, pruning, intercropping, and scale production. The study also pays special attention to the inherent spirit of Chinese tea culture to explain the tranquil and peaceful attitude embodied in the inheritance and development of tea production techniques. Such a perspective demonstrates the profoundness of Chinese tea culture and sets a strategic direction for its future innovation.

## Keywords

*Mincha*, Ming and Qing Dynasties, Tea Production, Tea Processing Technique, Chinese Tea Culture

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## 1. Introduction

“Rock tea from the Gushan Mountain is the best in Fujian in terms of colour, aroma, and flavour. It is even superior to the famous Huqiu and Longjing teas.” (Liu, 2012). The history of *Mincha* starts with *Gongcha* (tribute tea, meaning tea offered to the emperor). Besides its unique attributes, environmental factors also contribute to the competitiveness. *Mincha* enjoys on the tea market. Therefore, this article tracks the development of *Mincha* production techniques chrono-

logically and delves into the spirit of Chinese tea culture with the aim of better continuing the traditional tea culture in the modern context.

## 2. History of *Mincha*: Past and Present Production Techniques

1) The land of two lush mountains and abounding waters nourish a flourishing tea industry.

*Min* stands for Fujian Province. The Chinese character *Min* is 闽, which is hieroglyphically composed of a door containing an insect, vividly depicts the geographic features of Fujian. Although Fujian is located on the southeast coast, there was little connection with the outside world in ancient times because the province is mostly mountainous. Fujian's mountains are like closed windows that trap hot and humid air in the *Min* region, making the atmosphere oppressive and filled with insects, while cutting off access from the outside world (Yang, 2016). However, the other side of the harsh environment is that the hot and humid climate and the craggy landscape serve as suitable conditions for tea growing. Additionally, in the Han dynasty, Fujian was no longer regarded as "a place of exile for extremely evil people". By then, people had realized that though Fujian was mountainous, its well-developed water transportation system could facilitate communication between the Chinese interior and places connected to the South China Sea. As a coastal area, Fujian's waterway and seaports helped it open up to the global market. As a result, tea was exported abroad on specially made magnolia boats, known as "mulan ships" (木兰舟) giving rise to the prosperous foreign trade of *Mincha*. At that time, Fujian saw an increasing number of ships at its seaports, and fixed shipping routes were gradually formed between the Chinese inland and Guangdong, Guangxi, Hainan, and even Southeast Asian countries, laying a solid foundation for the prosperity of *Mincha* in the Tang dynasty.

In modern times, scientific and technological advances transformed Fujian's geographical disadvantages into advantages. Effective measures have been put in place to make full use of land resources and create the best environment for growing tea trees. Such measures include "levelling the uneven terraced fields, structuring the growing patches in a way that the inner area is lower than the outer area rather than the other way around, building winding mountain roads with gentle rather than steep slopes, and changing vertical ditches to horizontal ones" (Luo & Sun, 2016). Further, long-distance sailing technology has allowed waterways extending in all directions to exhibit their advantage, thereby expanding the circle of influence of tea trade.

2) Various types of tea easily confuse the eyes, and skill is required to differentiate and appreciate their taste and aroma.

The popularity of *Mincha* is not limited by its remote location. On the contrary, as maritime trade continuously developed and gradually scaled up, *Mincha* has become more famous both in China and globally. Admittedly, this is

closely related to the well-developed waterway transportation mentioned above, but the reason for such a prosperous and enduring *Mincha* trade cannot be separated from its rich varieties and excellent taste. In this regard, *Mincha* farmers have unique insight and can accurately identify the types of tea leaves, such as *Oolong Tea* (*Tieguanyin*), *White tea* (*Baihaoyinzhen*, *Baimudan*, etc.), *Black tea* (*Jinjunmei*), and *Green tea* (*Lyubiluo*). Each type of tea leaves needs to be treated differently in site selection, planting, fertilization, irrigation, picking, and other aspects according to its own generic characteristics. It is necessary to identify the attributes of tea leaves in a cluster of tea varieties, and to provide suitable growth environments and formulate growth plans for tea trees in a customized manner in line with the geographical and seasonal conditions.

In addition, tea stir-drying techniques are an important part of the core competitiveness of tea leaves in the trade process. Since the beginning of *Mincha* trade, people's requirements of the shape, colour, and taste of tea leaves have continuously improved. The traditional manual tea stir-drying techniques of *Mincha* include four steps, namely *Rouqing* (rolling before dehydration), *Shaqing* (heating to stop oxidation), *Rounian* (rolling), and *Tanlianhonggan* (spreading for cool drying). Although the steps are complex, the original shape of the tea leaves as well as the freshness and brightness in colour can be restored as much as possible. People in Fujian, who attach great importance to the sense of ceremony, are willing to devote efforts in improving the water, tea, and tea sets: making tea with mountain spring water makes it fragrant and tender; *White tea* is made by boiling, and *Oolong* by brewing, each with a different form. These variations in techniques make the tea as close as possible to the natural shape, colour, and taste, and ensure freshness and mellowness. The current stir-drying techniques of *Mincha* have become increasingly precise and quantified with the development of computing technology: the control over heating area, temperature, and time in tea stir-drying are monitored under big data. For example, tea drying machines have applied science and technology to better grasp scientific footprinting, and strived to achieve the best "colour, aroma, and taste" of tea leaves, which have contributed to the formation of core competitiveness in tea trade and allowed *Mincha* to enter the international market with more advantages.

From the original manual work involving hand roasting and simple tools such as iron pots to modern scale production, *Mincha* has already become part of people's daily lives in Fujian. Tea planting and sorting are not merely skills, but are part of a lifestyle that is embraced by the whole community.

3) Delicate tea leaves need proper irrigation and fertilization.

Fujian has a hot, humid, and rainy climate that is ideal for tea growing, but it makes *Mincha* sensitive to low temperatures. In fact, *Mincha's* growth is threatened by frost and sudden temperature drops in spring. This means farmers cannot simply plant tea trees and wait passively for the harvest. Tea trees need proper fertilization and irrigation to absorb nutrients necessary for their healthy growth. Frost in Fujian usually occurs in early spring, late autumn, and winter. It

causes problems for the irrigation and fertilization of tea trees and can easily kill them. Therefore, the wise ancients learned to determine the right time for fertilization based on the twenty-four solar terms. According to continuous exploration by tea farmers, the current fertilization frequency in Fujian can be summarized as “one basal and three topdressing fertilizations”. The basal fertilizer is applied once from September to October, which consolidates the roots and helps the plant survive and weather the cold winter. Topdressing is applied in March, at the end of May, and in the middle and late July of the subsequent year. According to the solar terms, these three time nodes fall on Insects Awaken, Vernal Equinox, and Grain Rain, respectively, which all imply that the rainfall and temperature at this time are suitable for plant growth. Topdressing prevents the dilution of soil nutrients in the precipitation process, and allows rainwater to bring nutrients to the roots to ensure that the tea trees are supplemented with nutrients as much as possible. In terms of irrigation, people will follow the hints of solar terms. For example, they will prepare drainage systems in the plum rain season to prevent poor drainage in tea gardens, which can stop plant growth and even cause rotten roots; at solar terms such as Great Heat, they will water the tea trees in the morning, thus avoiding irrigation at noon, which can accelerate evaporation in the sun, and cause nutrient loss and leaf scorch. Besides complying with the time points, people also consider the amount of irrigation. Further, methods of irrigation have also evolved from flooding irrigation to pouring irrigation, and then to dripping irrigation.

However, even the most intelligent ancient people were unable to deal with the cold snap in spring, which could confuse decision-making about top dressing and irrigation and thus, led to damage and even death of tea trees. Spring is also the tea-harvesting season, so the spring cold snap can result in a yield decline and even a poor or no harvest at all. With the development of computer technology, weather forecasting has become increasingly accurate. This gives enough time for tea farmers to take protective measures in advance when frost and cold snaps occur (Li, 2016). In addition, by monitoring conditions of land, weather, and tea trees, computer technology can determine the proper time for irrigation and water volume, and can replace human labour when irrigating tea trees in dangerous and rugged places. Irrigation and fertilization technology are becoming more sophisticated as time goes by. With the continuous development of irrigation and fertilization techniques, more precise amounts can be applied in the cultivation process of tea leaves, which improve tea plant survival, reduce the cultivation cost, provide products with higher quality for tea trade, and enhance the added value of products, thereby contributing to the establishment of business reputation in tea trade.

4) Careful pruning and intercropping are crucial for a good harvest.

The above factors in tea growing point to the favourable “geographical and timing” conditions that are beyond human control, but pruning and plucking techniques speak to the so-called “human harmony” in which humans can make

a huge difference from the very beginning. Time-honoured manual pruning and plucking techniques are widely used in Fujian.

Tea stems are pruned to “strengthen the branches”, and weeding is crucial to improve the growth of tea trees. Waste products produced in the process are re-used to improve output and quality of tea. One of the earliest methods is to level the land and compact the soil before sowing so that existing weeds break down and become fertilizer. Then the seeds are sown in such way that a distance is maintained between rows, allowing the tea seedlings to obtain enough sunshine and ensuring a higher survival rate when they are transplanted a month later. Another method is to plant herbs in different seasons to absorb nutrients that would otherwise be taken in by weeds. When the herbs mature, they are fed back to the tea trees in the form of fertilizer. Later on, people discovered that intercropping could be mutually beneficial for various plants. For example, wide and narrow row cropping and strip cropping can be adopted so that tall crops can ensure efficient use of light, land, and other resources. Despite certain technological limitations, intercropping maximizes the output of tea trees (Zhang et. al., 2019).

With the constant advancement of science and technology, machines are increasingly used in pruning and plucking. They can monitor the soil quality and pH value to help tea farmers make well-informed and scientifically grounded decisions as to which and how many plants should be intercropped, thus maximizing the output and quality of tea leaves (Ren, 2020), and delivering high quality products to the tea trade market. Furthermore, this concept of sustainable development will contribute to the formation of a green value chain in the process of tea trade, enhance the sustainable development of tea enterprises, and provide green power and vitality for the development of national economy.

### 3. Exquisite Techniques Is an Expression of the Love of People in Fujian

There is a saying that “the best tea in the world is from the south of the Yangtze River, and the best tea in that region is from Fujian”. Such a reputation is not built overnight, but is the result of tea farmers’ continuous exploration of the natural environment as well as the improvement of techniques and accumulation of experience. Their constant efforts have perfected the making of *Mincha*. It can be said that the superb quality of *Mincha* is attributed to “favourable timing, geographical conditions, and people’s efforts”, which are deeply rooted in the long history of tea planting.

It is worth noting that there was a saying in southern Fujian that goes, “the ultimate enjoyment lies in smoking a hand-rolled cigar, listening to southern music, and making a cup of Kung Fu tea”. Techniques in making *Mincha* have been enhanced, while the essence of the tea culture has also solidified during its historical development. *Mincha* tea culture incorporates “philosophy, ethics, history, literature, and art”. It pursues the beauty of “tea leaves, water, tea sets, heat, and environment” (Fu & Dai, 2018).

Making a cup of fine tea shows respect for the tea. In Fujian, people attach great importance to tea leaves, water, and tea sets. They are fond of Oolong tea, which has features of both black and green tea. The best brand of Oolong tea is considered to be *Tieguanyin of Anxi*. When completely infused, the tea leaves resemble green olives. The tea tastes a little bitter at first but slowly becomes sweet in the mouth. To achieve such a premium quality and taste, one must pay special attention to the water used for making tea. As such, Fujian people have strict water requirements when making tea. In particular, soft water should be used to brew tea so that tea leaves will not produce an astringent taste, and the aroma and the tea liquid can be clear and pure. Soft water is distinguished from hard water in that the former contains less than 8 mg of calcium and magnesium per litre. To make a cup of fine tea, one needs to go through a procedure of “warming the teapot, warming the teacup, discarding the water, filling up the tea pot with tea leaves, and so on”. Regarding tea sets, Fujian people prefer ceramic tea wares with lids, such as the *Meng Chen* teapot, which ranges from 50 to 100 ml. The small teapots are the size of small oranges, and the big ones of muskmelons. The brewing method can make the tea aroma and taste last longer. The aesthetic beauty of tea tasting can also be achieved with the help of fine tea wares. Tea is normally served in *Meng Chen* teapots and small *Ruochen* teacups that are half the size of a table tennis ball. These utensils are placed on a round tray, making tea drinking a pleasant experience.

Tasting a cup of tea is a sign of respect for the tea maker. There is a common saying in southern Fujian: “one cup of tea in the morning makes you energetic the whole day; one cup of tea in the afternoon reduces your pressure at work; one cup of tea in the evening relaxes your body; drinking three cups of tea makes a daily routine”. People in southern Fujian are hospitable, and they always treat guests to a cup of carefully brewed tea. Drinking a cup of tea with the host indicates that you have a close relationship. In this case, guests should have some knowledge about “tea-serving etiquette”: the tea is served first in a way that is called “Guan Gong (a famous general in the Three Kingdoms period) patrols the city”, which means pouring the tea into a row of cups; the next step is called “Han Xin (a famous general in the Han Dynasty) calls the roll in the military camp”, which means the last drops of tea drip into each cup to complete the graceful tea ceremony. Tea drinking follows the principle of smelling the aroma before tasting the flavour. You have a sip of tea, retain it in your mouth, swallow it slowly, and feel the aftertaste.

In Fujian, “tea” can easily resolve disputes and estrangement. The reason is that this common hobby becomes an emotional tie. Netizens have a saying, “Other people’s dialects are unimpeded in cross-provincial communication; Fujian dialect has its own encryption function even in the same province”. Although this is a joke, there is some truth in it. In Fujian, because the mountains and rivers shape relatively scattered living environments, there are differences in language, customs, and living habits. However, the traditional hobby of drinking tea tends to be consistent despite the geographical dispersion. In the early days

in Fujian, people in different places drank slightly different kinds of tea. People in southern Fujian loved Oolong tea, people in Fuzhou liked scented tea, people in northern Fujian drank Oolong tea and green tea, and people in eastern Fujian drank green tea. However, over time, people all over Fujian no longer have special tea preferences. Hence, when people are furious and depressed, the anger in their heart slowly disappears as steps in a series of tea ceremonies are carried out. Through the tea ceremony, people's self-cultivation improves, and disputes do not arise easily. Secondly, even if there is a dispute because of misunderstanding, people can invite each other to have a drink afterwards, in which tea serves as a sign of good faith to eliminate the estrangement and bring them closer. The spirit of "harmony is precious" in tea culture has long been unconsciously flowing in people's blood along with the tea in their mouth, and has become a tradition. It is a great way of "picking up the world's most simple and elegant pleasure"?

#### 4. Continuing to Develop the Spirit of Tea Culture

Fujian's favourable natural and cultural environment has established the top ranking of *Mincha* in the Chinese tea industry. Among the six major tea categories in China, four belong to *Mincha*. It has also fostered a unique tea culture within the long history of China, such as tea tasting in the Tang dynasty, *jiancha* (tea from the historical Jianzhou region [建州]) in the Song dynasty, *doucha* (tea competitions) in the Yuan dynasty, and *gongcha* (tribute tea, meaning tea offered to the emperor) in the Ming and Qing dynasties.

Thousands of years have passed since its inception, but *Mincha* is still as prosperous as in ancient times. It is worth noting, however, that while scientific and technological developments have brought about increasingly frequent international communication, they have also, inevitably, led to more trade friction. Following are some suggestions for the future development of *Mincha* under new economic circumstances: in the first place, when transforming landscapes to better grow tea trees in Fujian, people should overcome geographical limitations and fully draw upon the environmental advantages whilst also maintaining the ecological landscape as much as possible to enable tourism to go hand in hand with tea production. Secondly, more investment in research and development should be made to protect various types of *Mincha*; branding and patent applications should also be invested in. For example, the traditional tea-processing techniques including kneading, fixation, rolling, and cooling should not be abandoned when machines are widely used in tea production. The government should take protection work seriously so that these skills can be passed on. Thirdly, the government should work with businesses. On the one hand, the government should implement more policies to encourage innovation in tea-production businesses, while businesses should adopt advanced technologies in tea processing and focus on training highly skilled employees so that a professional value chain covering tea planting, production, processing, and selling can be formed. Further, businesses should work hard to carry forward the spirit of

tea culture while developing technology. They should extract the inherent cultural value of the tea industry by establishing the brand image of *Mincha* and building its core competitiveness to ensure the long-term development of *Mincha* on the international tea market. To conclude, people should seize opportunities in the ever-changing world and stay true to the essence of Chinese tea culture while bringing out the best of *Mincha* to the world.

## 5. Conclusion

Tea leaves in Fujian have enjoyed a good reputation both in China and other countries since they began to be planted in the Shang and Zhou dynasties. With increasing close contact with the international market, the requirements on the integration and upgrading of tea production technology have become increasingly higher. Through the above analysis, authors have found that *Mincha* has been constantly developing towards “lean” in breeding, fertilization, irrigation, weeding, pruning, intercropping, large-scale production, etc. The development and introduction of science and technology have tapped the unlimited potential of tea trade. Therefore, the successful *Mincha* trade is relevant to other tea-producing regions to learn from. However, in the development of science and technology, whether from the perspective of *Mincha* itself or China’s tea trade, the limitation of “unification” among machines must be overcome, and the characteristics of regions and varieties in the process of tea production should be preserved, infused with the sentiments of local culture, so that tea trade can pursue exquisite technology, while retaining the simple and elegant pleasure of the world!

## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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