Oolong tea in China

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ABSTRACT: This paper deals with the production, biological characteristics, processing techniques and marketing of oolong tea under modern social conditions. As a special tea in China, Oolong tea originated in Fujian province and then was introduced into Taiwan and Guangdong. The four kinds of famous Oolong Tea are: Wuyi rock-essence tea, Anxi Tieguanyin tea, Fenghuang Dancong tea and Dongding Oolong tea. Its heavy fragrance and brisk sweet taste are unparalleled. The special quality of the oolong tea is formed mainly due to the specific weather and soil conditions in the production areas, good varieties and unique processing techniques. With the popularity of air conditioning, making green oolong tea became popular to produce Tieguanyin tea, which promoted the stability of tea quality thus raising the value of the product. The production of oolong tea is increasing steadily along with the developments in the industrial economy and formation of an information society. One of the important reasons of increasing popularity of oolong tea in the domestic market is that drinking tea has become an important part of lifestyle for the people in this fast developing society to relieve pressure, as well as due to its special flavor and excellent natural and cultural attributes.

Keywords: Oolong tea; Heavy fragrance; Brisk sweet taste, Fujian province

Introduction

Oolong tea is a special tea in China. It originated from Fujian province and introduced into Taiwan and Guangdong. According to historical documents, oolong tea was first made in Fujian in late Ming and early Qing dynasties. The processing techniques of the oolong tea were recorded in "Tea Ballad of Wuyi" and "Tea Ballad of Anxi" by Shi Chao-quan (1625–1711), "Sequel of Tea Classic" by Lu Ting-can (1734) who cited the oolong tea processing techniques from "Tea Story of Wang Cao Tang", "History of Wuyi Mountain" by Dong Tian-gong (1751). Zhang Tian-fu discussed the historical origin, good varieties, techniques of production, and drinking habits of oolong tea in his monograph titled "Oolong Tea in Fujian". He also concluded that oolong tea is a healthy beverage.[1]

The production and consumption of oolong tea has greatly changed during the last three centuries. After the initial production of oolong tea, a certain amount of it was also being exported for more than 100 years. According to "Tea in Fujian" (1941), 4,550 tons of oolong tea was exported in 1887 via Xiamen.[1] In 2001, its exports increased to about 21,671 tons, which is 4.7 times more than that in 1887.[2] In 2009, the yield of primary oolong tea reached 159,062 tons, of which 70–80% was consumed in China. Therefore, it is obvious that China is not only a big producing country but also a large consuming country of oolong tea.

Production Areas and Varieties of Oolong Tea

Oolong tea is produced in Fujian, Guangdong and Taiwan. There are two main production areas in Fujian province i.e. the northern Fujian area and the southern Fujian area. The northern Fujian area includes Wuyishan City, Jianyang and Jianou Counties, which are famous in Wuyi rock-essence tea. The main counties in the southern area are Anxi, Yongchun, Pinghe, and Hua'an, where Anxi Tieguanyin enjoys a long-standing reputation. Zhangping county in western Fujian produces a compressed tea cake of shuixian. Guangdong oolong tea is largely produced in Chao'an, Raoping and Meizhou of Shantou district, where Dancong from Chao'an Fenghuang and Raoping Lingtou are oolong teas with good quality. Taiwan oolong tea is mainly produced in Xinzhu, Taoyuan, Miaoli, Taibei, Wenshan and Nantou Counties, which are famous in Dongding oolong and Wenshan Baozhong. (Refer Table 1)

Four Famous Varieties of Oolong Tea

Oolong tea is a kind of semi-fermented tea produced with fine processing techniques. It combines the processing characteristics of black tea and green tea and possesses the mellowness of black tea and the freshness of green tea. The heavy fragrance and brisk sweet taste of the oolong tea are far superior to others.

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Table 1. Main production areas and varieties of Oolong tea

Oolong Tea Type	Variety	Producing area
Northern Fujian Oolong tea	Wuyi rock-essence teas, such as Wuyi Shuixian, Wuyi Qizhong, Wuyi Rougui, Da Hongpao, Tie Luohan, Bai Jiguan, Shui Jingui, etc.	Wuyishan City
	Northern Fujian Shuixian, Northern Fujian oolong, etc.	Jianou, Jianyang, Shunchang, Nanping, etc.
Southern Fujian Oolong tea	Anxi Tieguanyin, Huangjingui, Yongchun Foshou, Pinghe Baiya Qilan, etc.	Anxi, Yongchun, Hua'an, Pinghe, etc.
	Southern Fujian Sezhong, Southern Fujian Shuixian, etc.	Quanzhou, Zhangzhou, etc.
	Zhangping Shuixian tea cake	Zhangping
Guangdong Oolong tea	Fenghuang Shuixian, Fenghuang Dangcong, Huangzhixiang, Lancai, Raoping Sezhong, etc.	Chaoshan, Raoping, Meizhou, etc.
Taiwan Oolong tea	Dongding oolong tea, Wenshan Baozhong, Baihaoooolong, Jinxuan, Cuiyu, etc.	Xinzhu, Taoyuan, Miaoli, Taibei, Wenshan, Nantao, etc.

Wuyi Rock-essence tea

Wuyi rock-essence tea, a famous tea with a long history, is produced in Wuyi mountain of Wuyishan City. It is named as Wuyi rock-essence tea because the tea plants grow in rock cracks over the mountains. The tea leaves are fat, bold and tightly twisted with sand green color and shine like gemstone. Wuyi rock-essence tea possesses characteristic "bohea flavor", is mellow and thick, with sweet taste, and is round and brisk. The liquor is bright orange yellow.[3,6]

Anxi Tieguanyin

Anxi Tieguanyin, also a famous tea with a long history, originated in Anxi county. Tieguanyin is not only the name of tea product but also the name of a tea plant variety. It is so named because its leaf is heavy with an appearance of Guangyin. The appearance of the tea leaves is neat, round and curled. The leaves are heavy and sand green in color. Tieguanyin has a clean and high fragrance like natural *Magnolia*. The liquor is golden yellow and clear. The flavor is mellow and thick, sweet and brisk with prominent flavor. Tieguanyin tea can be infused for more than seven times. The leaves after infusion are still fat, thick, soft, bright and even.[3,6]

Fenghuang Dancong tea

The leaf of Fenghuang Dancong tea is tight and straight, yellowish auburn in color, blooming with red spots. It has a natural flower fragrance. The flavor is heavy and mellow, sweet and brisk with prominent mountain-flavor. The liquor is clear, yellow and bright. The leaf after infusion is yellow and bright with red edges. It can be infused for several times. The fresh leaves are picked from Fenghuang Shuixian. Febghuang Dancong is classified into 10 aroma types in terms of the appearance of leaf and plant, and the aroma of tea products. For example, Huangzhixiang Dancong has the aroma of Huangzhi flower and mountain-flavor. It can be infused several times.

Dongding Oolong tea

Dongding oolong tea belongs to "semi-spherical baozhong tea", produced in Nantou, Yunlin and Jiayi Counties of Taiwan. The leaf is naturally curled evenly and tightly into semi-sphere. It is green, bright, shining and with prominent white downs. The dry tea has strong fragrance. After infusion, the tea possesses clean aroma with natural fragrance of flower and fruit. The liquor is yellow like honey or golden yellow, clear and bright. The flavor is mellow, thick and sweet. The leaves after infusion are soft. The typical Dongding oolong tea is characterized by flavor which persists around throat, has prominent artificially fired flavor and fragrance. It is mainly produced in Lugu Village of Nantou county, Taiwan.[5]

Every oolong tea possesses its specific quality characteristics. Wuyi rock-essence tea is characterized by its YEN flavor, Anxi Tieguangyi by its IN-flavor, Fenghuang Dancong by its mountain flavor and Dongding oolong tea by its clean aroma. Every oolong tea with typical flavor commands relatively stable consumers.

Specific Favorable Natural Conditions of Production Areas

Oolong tea has a natural aroma of flower and fruit, and a specific aromatic flavor, which is one of the reasons that it attracts consumer's attention and interest. This specific quality is formed due to the natural conditions of the production areas, varieties of tea plant, processing techniques, among other factors. The specific natural conditions of four oolong teas are analyzed as follows.

Environmental conditions of the production area of Wuyi Rock-essence tea

Wuyi rock-essence tea is one of the ten historically famous teas in China. It is produced in Wuyishan City of Fujian province. Wuyishan City is situated in northern Fujian, with 27°28' to 28°05'N, latitude and 117°37' to 119°19'E, longitude. The mean annual temperature is 17.9°C and the average annual rainfall is 1906 mm with 272 days of frost free period. Wuyi Mountain is situated approximately 10 km from the southern side of Wuyishan city. It is a famous mountain and a scenic resort for tourists since ancient times. The great fame of Wuyi Mountain is not only because of its beautiful scene but also due to its Wuyi rock-essence tea. The warm climate (warm in winter and cool in summer), plentiful rainfall (2000 mm/yr), higher relative humidity (80%) and short duration of sunshine favor the growth of Wuyi rock-essence tea.

Environmental conditions of the production area of Anxi Tieguanyin tea

Tieguanyin originated in Anxi county of Fujian province. Anxi county is a beautiful mountainous district of Fujian province, situated in the northwest of Quanzhou City, with 24°50' to 25°26'N, latitude and 117°36' to 118°17'E, longitude. It is characterized by marine monsoon climate of both southern subtropics and central subtropics without severe cold in the winter and intense heat in the summer. The mean annual temperature ranges between 16°C and 21°C, the average annual rainfall is between 1600 mm and 1800 mm, the annual duration of sunshine between 1850 h and 2000 h, the frost free period is between 260 days and 350 days and the mean annual relative humidity is about 80%. Lan River traverses the land of Anxi and the main mountain inside Anxi is Feng Mountain. It is warm and has plentiful rainfall with common fog in the morning and mist in the evening, which is beneficial to the growth of Tieguanyin tea plant. Anxi is also one of the natural pool of good tea varieties.

Environmental conditions of the production area of Fenghuang Dancong tea

Fenghuang Dancong is produced in Fenghuangshan town, Chaozhou city. It is so named, not only because of the place name, but also due to the specific manner by which the leaves are picked from different bushes and are processed separately. Chao' county is situated on the transition belt between Hanjiang plain and mountains, with 23°26'to 24°00'N, latitude and 116°22' to 116°29'E, longitude. It borders on the South China Sea and is characterized by the marine and monsoon climate of southern subtropics with long summer and short winter. The mean annual temperature is 21.4°C, the average annual rainfall is 1668.3 mm, the mean annual duration of sunshine is 1996.6 h and the relative humidity ranges from 75% to 85%. It has plentiful rainfall and humid air. Fenghuang Mountain area is embraced by green mountains located more than 1100 m above sea level.[4] Wudong Mountain, abounds in famous tea, and is 1391m above sea level. The mean annual temperature in Wudong mountain area is 17.4°C, the mean annual duration of sunshine 1400h, the average annual precipitation is 2119.7 mm, the mean relative humidity is 80% and the temperature difference 8–10°C i.e. without severe cold in the winter and intense heat in the summer. The soil is deep and fertile. There are many springs in the mountain area with common fog and dew. The environment is favorable for the growth of tea.

Environmental conditions of the production area of Dongding Oolong tea

Taiwan Dongding oolong tea is produced in Lugu town of Nantou county, belonging to "semi-spherical baozhong tea". Dongding tea, Songbochangqing tea and the oolong tea produced in some new areas such as Wushe, Shuili, Xinyi, Meishan, Shizhen, Xuding and Liugui are more popular than the others and are famous all over the world. Nantou county is situated in the center of Taiwan, with 23°26'to 24°17'N, latitude and 120°36' to 121°20'E, longitude. As the Central mountains, Yushan Mountains and Ali Mountains traverse the county, it is called "mountain county" because mountains with dense forest occupy more land area than plains. The mean annual temperature is 23.716°C, the annual rainfall ranges from 2300 mm to 2600 mm and the mean relative humidity is 80%. The main soil types are red-brown soil, yellow-brown soil and lithosols. These counties, with more than 1000 m above sea level, possess the most mountainous tea plantations. The Dongding terrace tea plantation of Zhangya Village, which is 700 m above sea level, is

in this county, where the tea produced previously was called Dongding tea.[5]

The above discussion shows that the production areas of high quality oolong tea are generally located over mountains between 23°and 28°N, latitude and 116°and 122°E, longitude, having the marine monsoon climate of southern tropics or central subtropics. On the contrary, the famous green teas, such as Xihu Longjin, Dongting Biluochun, Mengding Ganlu and Huangshan Maofeng, are largely grown over the areas around 30°N, latitude. The special environmental conditions are the key factors for the excellent quality of oolong tea.

Biological Characteristics of Oolong Tea Varieties – Evaluation and Appraisal

Characteristics and biological structure of fresh leaves

The epidermis of fresh leaves suitable to be processed into oolong tea possesses thicker cuticle than others. The cuticle is covered by characteristic pattern of the wax layer with figured images. Different varieties possess different profiles. According to the research of Yan Xue-cheng, the wax of Shuixian assumes decorative pattern while Tieguanyin is corrugated. The main components of wax layer are poly-carbon fatty acids and poly-carbon unitary fatty alcohol. During the processing of oolong tea, the wax layer decomposes and transforms into aroma components, which is considered as one of the sources of the aroma of oolong tea. The cuticle is composed of wax, cellulose and pectin. The cuticles of the guard cells on the back of the leaf of Shuixian and Benshan are very thick compared to the epidermal cells.[7] The thickness of cuticle of guard cells affects the opening and closing of stomata, showing an important effect on water loss during making green oolong tea.

The stomata density and the arrangement of palisade tissue cells of oolong tea leaf are related with the varieties. Different varieties have different stomata density which affects the duration of making green oolong tea. The more the stomata density and number of palisade tissue cells in the layer larger the intercellular space, easier the water evaporation and gas discharges, faster the tea fermentation, shorter is the time of making green. For example, the stomata densities of Huangdan and Qilan are double than that of Meizhan, so the time of making-green oolong of Huangdan and Qilan is shorter than that of Meizhan.[7]

The characteristics of biochemical components of fresh leaves

There are obvious differences in chemical constituents in different oolong tea varieties. The Research Institute of Anxi county and the Tea Research Institute of Chinese Academy of Agricultural Sciences have determined the main biological and chemical components in fresh leaves of 13 oolong tea varieties, such as Shuixian,Tieguanyin, Huangdan, Maoxie, and so on. The total amount of tea poly-phenols and free amino acids were 21.14–30.71% and 2.02–2.99%, respectively. The ratio of poly-phenol to amino acids were 8.50–14.60, i.e. between the range of green tea and black tea. The total amount of catechins were 141.71–199.62 mg/g, of which non-ester type catechins were 47.98–87.29 mg/g and ester type catechins were 87.5–122.64 mg/g. The contents of total water-soluble extracts are 34.86–44.41%. The different biochemical contents of the compounds in the varieties, determine the difference in quality of the oolong tea varieties. Thus, the biological and biochemical characteristics are the basis for the formation of quality.

Control of Quality – The Role of Oolong tea

Processing Techniques

Although there are differences in different production areas in making green tea, viz bumping green, but same processes like mixing indoor, rolling, wrapping and rubbing and drying are common. The processing techniques of oolong tea can be summarized as picking fresh leaves, sun-withering or withering, making green, frying green, shaping and drying, as under:

Picking fresh leaves

Fresh leaves with certain maturity are required for oolong tea processing. They are generally picked up when all the terminal buds are opened and the branches begin to take shape. The leaves for oolong tea processing are older than those for the processing of black tea and green tea, which is an important factor for the formation of the unique quality of oolong tea because these contain less tea poly-phenols, caffeine and nitrogen but more ether extracts in the older leaves. The ether extracts are important for the aroma of oolong tea. The unique aroma of oolong tea can form only when the fresh leaves are picked at the time when the shoots approach maturity.

Effects of Sun-withering on the Quality of Oolong Tea

Sun-withering, leaf cooling and repeating rolling green leaves are the key techniques for the formation of the unique quality of oolong tea. Sun-withering and leaf-cooling can adjust the water evaporation from the leaves and the decomposition of contents of the leaves during the withering and effectively control the oxidation of poly-phenols and the decomposition of chlorophyll, increasing the contents of water extracts, amino acids and soluble sugar, which may be related with the formation of aroma of the oolong tea.

The first process is sun-withering. When the leaves are placed under weak sunlight, the leaf temperature increases quickly and the water evaporates to some extent, which promotes the enzyme activity and chemical changes in the leaves, as well as losses of the grass like flavor. This is a necessary step for making tea green and also to improve the quality of oolong tea. It can be observed during the sun-withering that the state and smell of the leaves change. Weak clean aroma appears after the disappearance of the grass like flavor and reappear during making tea green. It is observed that the contents of benzyl cyanide and indole increase when the leaves are sun withered as compared with fresh leaves. Except for linalool and geraniol, other 32 kinds of components all increase after sun-withering. Sun-withering induces the formation of fragrance substances or precursor substances of fragrance of oolong tea, and provide necessary material basis for the appearance of strong or special aroma during making tea green.

Effects of making tea green on the quality of Oolong tea

Making-green is the key process to improve the quality of oolong tea. Making-green includes the repetition of rocking-green and airing-green which can effectively control the change of water and the oxidation of enzymes. The extent of making-green varies with region, variety, seasons, and so on.

During the making-green process, transmission of water in the leaves takes place which is essential for the movement and balance of water inside and outside the leaves. The direction and the extent of water movement in the leaves during making-green reflect the effect of processing on the change of water relations. The formation of aroma depends upon the various physiological processes and biochemical reactions with water during the making-green process. The water potential of the leaves changes because of the changes in the pressure and concentration of cell sap, the oxidation and reduction of poly-phenols, the oxidation of ascorbic acid, and formation of a number of fragrant substances (allylic alcohols, anti-2-hexenol, isoamyl terpene, jasmone, etc.).

Rolling-green significantly increases the aroma components,[7] such as hexalic acid-*cis*-3-hexenyl ester, acid-3-hexenyl ester, *cis*-jasmone, benzene acetonitrile, neroridol, jasmine lactone, isoeugenol, phenyl acetic acid and indole. The degree of green-shaking influences directly the degree of fermentation, and then induces significant differences in aroma components. Anxi Tieguanyin contains more nerolidol, jasmine lactone and indole than Taiwan oolong tea. The main aroma components in Taiwan oolong tea are linalool, linalool oxide, geraniol and benzyl alcohol. It is obvious that different ways of making-green result in different degrees of aroma and flavor.

Effects of fixation on the quality of Oolong tea

Fixation is the step which followed making-green. During fixation, the activity of enzymes and the enzymatic oxidation of poly-phenols are inhibited, the quality formed during making-green is fixed, the grass like flavor disappears. Further, the aroma increases, the water evaporates, and the leaves become soft enough for rubbing and twisting.

The aromatic substances with grass-like flavor volatilize during fixation. A series of component changes take place, such as the destruction of chlorophyll, volatilization of trans-2-hexenal, leaf alcohol and hexanol with low boiling-point, and the gradual appearance of aromatic substances with high boiling-point, etc. The aroma is fixed, stabilizes and purified further which makes the aroma of oolong tea pure and elegant.

Effects of baking on the quality of Oolong tea

The appearance of oolong tea is mainly formed after making-green and fixation. There are three main shapes, i.e., stripe, coil-shaped beads and round-shaped. There are only a few particulate broken teas. Non-enzymatic oxidation takes place during the shaping process. Some oolong teas, such as Wuyi rock-essence tea and Feng-huang Dancong, have their own particular rolling techniques. Tea is rolled fast for short time and under hot condition because the leaves are more mature than black tea and green tea and there is less water in the leaves for rolling. The South Fujian and Taiwan oolong tea are

rolled first, and then moulded. The tea leaves are pack rolled or rolled under hot condition to curl the leaves and enhance the taste. Commonly used machines include roller, fast-packing machine, sphere-making machine and loose-packing machine etc.

Removing water by drying facilitates the formation of a particular aroma and flavor of oolong tea and in storage of tea. Heating induces degradation of lipids and terpenoids, the molecular rearrangements and the addition reactions result in the formation of high-aroma terpenes, which constitute the elegant aroma and good taste of the oolong tea.

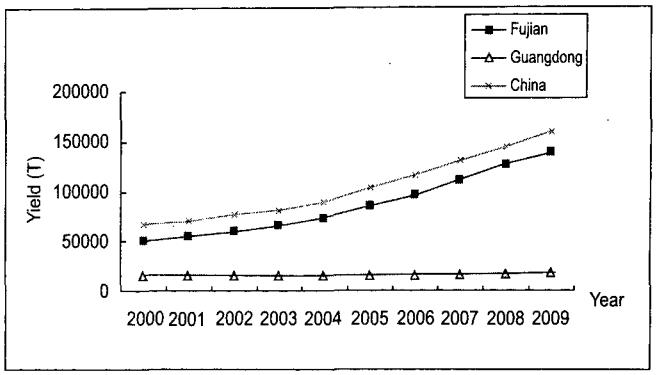

Figure 1. The production of Oolong tea during 2000–2009

Changes in the Production and Marketing of Oolong tea under the Modern Industrial and Information Economy

Since 2000, there have been significant changes in the production of oolong tea. The production of oolong tea is the second highest among all kinds of tea (Table2).[8] The production and export of oolong tea during 2001–2010 in China is shown in Table 3. The export of oolong tea did not change apparently as the production of oolong tea increased. It can be seen that the consumer potential in domestic market is the important driving force for the development of oolong tea.

Table 2. Proportions (%) of production of three major teas

Time	Green Tea	Black Tea	Oolong Tea
1980–1986	59.1	20.1	3.8
1991–1997	69.6	11.4	8.0
2000–2006	73.7	5.6	10.5

Table 3. The production and export of Oolong tea in China during 2001–2010

Year	2001–2005	2006–2010	2001–2010
Production of primary tea (ton)	8.44	13.98	11.21
Exports (ton)	2.00	2.16	2.08
Proportion of export to total production(%)	24.33	15.63	19.98

What caused these changes? The natural conditions are inherent. The factors affecting the quality, the production conditions and the potential advantages for oolong tea have already been discussed previously. Nevertheless, in the mid-1980s, the yield of oolong tea only accounted for 3.8% of the total tea production in China, much less than the total production in the world. This shows that the changes in consumer market brought about by the development of the industrial economy and information society were important factors to stimulate production of the oolong tea.

Solving of the Processing Obstacles by Modern Industrial Techniques

The processing of oolong tea is quite complex and is restricted by weather. It requires very hard work and fine skills to produce stable-quality products even if the raw materials are good. The low prices and low ratio of output to input led to limited production. In the late 1980s, Zhang Tian-fu and other researchers have studied the conditions for making it green in air-conditioned room. However, the making-green process under air-conditioning did not develop rapidly because of the limitations of financial and technological situation. With the popularity of air-conditioning equipments over time, air-conditioning became popular for making-green process and in the production of Tieguanyin, which promote the stability of tea quality and raised the value of the product. The peasants obtain more profit, recover the investment of equipments quickly, and then invest more money for further production. Table 4 shows the production area and the production of Anxi Tieguanyin during 2000–2010.

The drinking–effect of Oolong tea in the information society

People in the information society are facing immense pressure of the fast pace of work environment. Among a number of ways to relieve this pressure, outdoor sports and drinking tea are convenient and easy to realize. This

Table 4. Production area and yield of Anxi Tieguanyin during 2000–2010

Year	2000–2003	2004–2007	2008–2010
Tea acreage (ha)	21,000	30,498	40,000
Tieguanyin acreage (ha)	8,667	17,166	26,287
Total tea yield (ton)	30,750	46,750	61,333
Tieguanyin yield (ton)	12,000	21,750	30,067

is one of the reasons that oolong tea is becoming more and more popular in the domestic market.

Why oolong tea can quickly become one of the main beverage to relax the pressure on these people? This is related with the metabolic advantage of drinking oolong tea, especially Tieguanyin, Wuyi rock-essence tea, which reflects both natural and cultural attributes.

Drinking of oolong tea is very popular and is the main method of tea drinking by businessmen and the literary men. It is very popular to drink oolong tea in Zhangzhou, Quanzhou and Chaozhou, where the oolong tea drinking is rich in folk custom and has developed unique tea-making procedures. The custom of tea drinking, combined with culture and art, has become the oolong tea art. The oolong tea art, of which one of the major objectives is relaxation, has become more and more popular in middle class. The oolong tea art has become an essential business requirement of tea shops and teahouses, spreading the drinking culture of oolong tea and is helping to grow its consumer market. According incomplete statistics, the annual income of the industry of oolong tea art is about 10,000 million Yuan and provides one million job opportunities.

At the same time, the effect of the market on the price of oolong tea has become more and more direct. Taking Anxi county as an example, the number of tea shops has increased by more than 7 times from 2001 to 2010 with the total output value being 18030 million Yuan (Table 5). The wholesale price of 51% of the primary oolong tea in 2011 was approximately 100–500 Yuan/kg (Table 6), which makes the tea peasants have enough money to pay for further expansion and raise their quality of life. However, it should not be ignored that the wholesale price of about a quarter of the tea products can only pay for the production cost and is not enough to get full returns. Therefore, the aim of the tea peasants should be to produce excellent oolong tea. By this way, the tea product can carry on the drinking culture and bring the peasants more profits.

The other drinking way is tea as a beverage. There are stable consumer markets for tea beverage in Japan, maintaining an annual export volume of more than 2 million kg. Having met the requirements of quickness and convenience, tea beverage is sold better in summer than in other seasons. It is recognized by the customers that oolong tea has good effect on decreasing fat in the body.

Table 6. The distribution of wholesale prices

Price/yuan/kg	<100	100–500	500–1000	>1000
Price Distribution	28	51	16	5

Concluding Remarks

Tea has become a natural beverage in the world. During the last ten years, the global annual tea consumption has increased by 3% per year. In China, the consumption of tea products has increased by 5% per year. Tea has become a national drink. It is widely accepted that drinking tea is good for health. As a result, drinking tea is becoming a fashion. Tea consumption per capita in China was 0.2 kg in 1978, 0.36 kg in 2000, 0.45 kg in 2006 and 0.7 kg in 2010. The tea production corresponds with tea consumption. The production of green tea is the highest, the consumption of green tea is also the highest. As the production of oolong tea is at the second place, its consumption is simultaneously increasing, reaching to about 80,000 tons, and is also at the second place. With the increasing pace of production, oolong tea production was 159,062 tons in 2009, which is 2.35 times more than that in 2000. This growth is clearly the result of increasing market demand. It is expected that the production of oolong tea would increase further in 2008. The production areas of oolong tea in China welcome more and more consumers to share the mellowness of oolong tea.

Table 5. Increase in tea shops and the output value in China during 2001–2010

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
No. of tea shops	250	430	500	720	1000	1360	1480	1620	1750	1830
Output value/billion yuan	3.0	4.62	5.6	8.6	10.2	11.2	13.2	15.8	17.0	18.0

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1. Tea plantation of Wuyi mountain, Fujian

2. Wuyi Dahongpao

3. Anxi Tieguanyin

4. Tea plantation of Tieguanyin in Anxi, Fujian

5. Plantation of Wudong mountain in Guangdong

6. Fenghuang Dancong

7. Tea plantation of Taiwan

8. Tea plantation of Taiwan

9. Tea capital, Anxi, China

10. Tea trade between tea farmers

11. Tea processing house in the Institute for rock-essence tea in Manting, Wuyi

12. Transforming tea pickings

13. Sun withering

14. Making green and observation

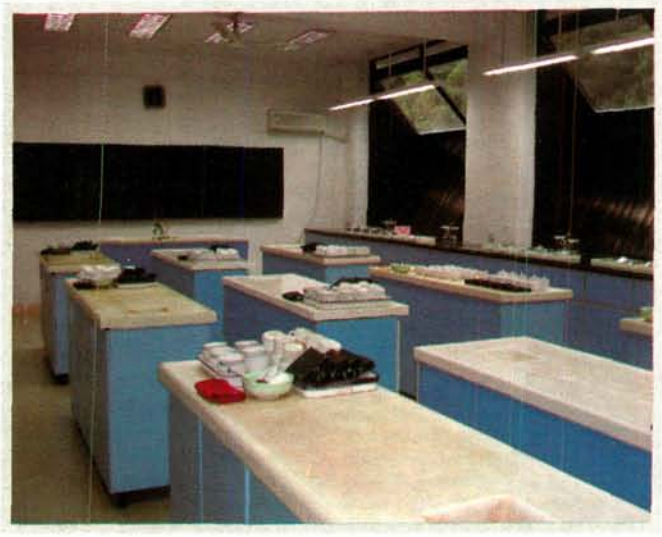
15. Organoleptic tasting of oolong tea

16. Tea market in Lugu town, Taiwan

17. Machines for oolong tea processing and packing

18. Line of oolong tea production

19. Tea processing factory of Bama Tea Company in Anxi



20. Laboratory for tea test and examination of Fujian Agriculture and Forestry University

21. Tea art room of Tea Capital in Anxi, China

22. Tea plantation, Taiwan