

# The Management of Enriching Farmers in Intellectual Property of Gold Arc Tea Producing Area in China's Anhui Province

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## Abstract

The development of agriculture and the protection of intellectual property rights have always been an important strategy of China, realizing the richness of the poor areas is an important policy of our governments, therefore, this paper attempts to promote the farmers' income by making the management of the tea intellectual property rights of gold arc tea producing area in China's Anhui province, and realizes the "precision poverty alleviation" of the region. In this paper, the existing research has been summarized and summarized, the shortcomings of previous studies and the research trends have been analyzed. This paper discusses the status and shortcomings of regional tea intellectual property management from three aspects: development, operation and protection, building a multi participation in the tea industry collaboration management model, and establishing a tea industry management committee as the core of the management system. Finally, the paper gives the specific policy recommendations from six aspects, and discusses the shortcomings and improvement of the article, hoping to help promote the region's poverty alleviation.

**Keywords:** Intellectual property management, Enriching farmers in intellectual property, Gold arc tea producing area, Multi collaborative management

## 1. Introduction

Since 2004, the Chinese government has attached great importance to rural governance, agricultural development and farmers' income. In 2008, the development of agriculture and the protection of intellectual property rights became a national strategy. Over the past decade, Chinese government and Anhui provincial government have promulgated a number of laws and policies to encourage the protection of agricultural intellectual property rights and the development of characteristic agriculture, so as to achieve the "poverty alleviation" in the poverty-stricken areas of successive mountain areas.

The gold arc tea producing area (hereinafter referred to as the tea producing area) contains the "smiling arc" tea producing area, which is linked to Xuancheng, Huangshan, Chizhou, Anqing and Lu'an five cities in Anhui Province of China. The tea producing area is located between 29 ° - 32 ° N latitude, east of Zhejiang Province, west of Jiangxi Province, belongs to the subtropical monsoon climate, the annual average temperature at 16 °C, abundant sunshine, abundant rainfall, long frost-free period, Xin'An River and Yangtze River flows through the middle, the north is Huaihe, surrounds Anhui's largest freshwater lake - Chaohu, the terrain is dominated by mountainous hills, rich in mineral resources and weakly acidic red soil. It is very suitable for the growth of tea, the region has a contiguous tea plantation, a high degree of industrial concentration, tea production and growing year by year (see Figure 1), therefore, it is known as "gold arc tea producing area".

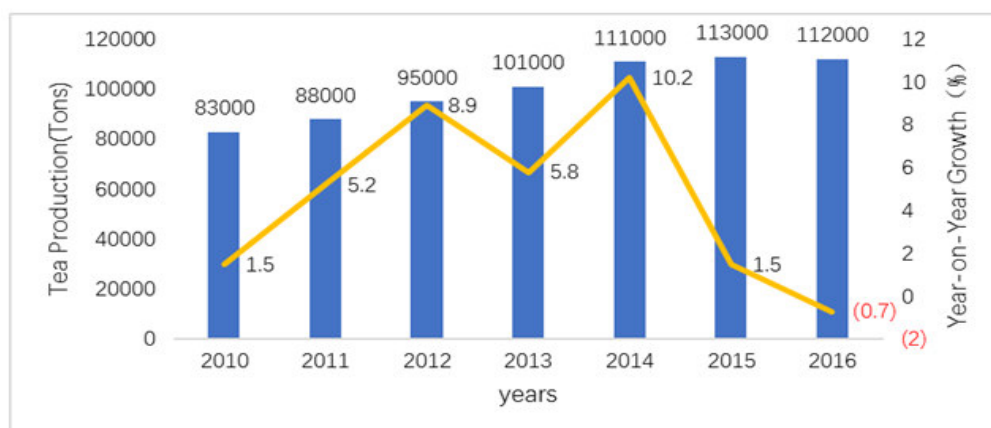


Figure 1: The Annual Tea Production of Gold Arc Tea Producing Area<sup>1</sup>

<sup>1</sup> Source: 2010-2016 Anhui Province Statistical annual reports.

But the golden arc of tea producing areas in regional development of congenial conditions, mountainous areas are widely distributed, the list of 592 national key poverty-stricken counties released in 2016 included 9 counties in the region, the regional economic development level is relatively backward.

Therefore, the golden arc tea producing area can try to achieve regional development and increase the income of farmers through the development of tea industry and the effective management of intellectual property rights.

The significance of this study is to use intellectual property theory to guide the development of characteristic agriculture, to combine it with "enriching farmers", to provide reference for the government to formulate policies, to construct a multi collaborative management model, and to improve the system of intellectual property management in China.

## 2. Literature Review

### 2.1 *Researches on the Management of Intellectual Property Rights*

#### 2.1.1 Researches on the Protection and Management of Intellectual Property Rights

Yan Fan (2009) constructed a set of ADR system, analyzed the current situation of China's government intellectual property performance management, and from the macro level gives the corresponding countermeasures and suggestions to better develop the knowledge economy. Guo Junhua (2009) thinks that the government attaches great importance to the formulation of intellectual property policy, but neglects the effect of policy implementation, thus designs the process for assessing the policy, constructs the corresponding index and frame, and clarifies the weight of each index through AHP.

Pan Baozheng(2005) through the empirical investigation of the situation of IPR management in government, scientific research institutions and enterprises in international cooperation in science and technology, analyzes the existing problems, and draws lessons from the successful experiences of developed countries, and puts forward the coping strategies of intellectual property management in cooperation.

Wang Jiuyun (2001) discussed the influence of intellectual property protection on technological innovation, and pointed out that it is necessary to realize technological innovation, accorded with the legal procedure, and payed attention to the diversity of intellectual property rights.

#### 2.1.2 The Reference of Other Countries' Intellectual Property System

Bao Haibo (2004) took the United States, Japan and other developed countries intellectual property policy as the research object, analyzed the function of government in the four aspects from the system innovation, organization, education and policy orientation, and summarizes the model of intellectual property strategy.

Liu Hua et al. (2009) discussed the connotation of the concept of public policy of intellectual property rights for the first time, clarified its relationship with the law, summed up the policy of intellectual property rights in the United States, Japan, Korea and India, constructing the public policy system including industrial progress, regional development, scientific and technological innovation, trade circulation, cultural education and so on.

### 2.2 *Researches on agricultural policy*

#### 2.2.1 Perfection of Agricultural Policy

Chen Fei (2004) analyzed the model of agricultural science and technology achievements in China, discussed the agricultural achievements themselves, users, promoters three aspects of the existing problems, and put forward the improvement measures from the perspective of education and culture system reform.

Zhu Mande (2011) took China's agricultural support policy as the research content, used PSE to evaluate its performance and structure characteristic, confirmed that the government subsidies for agriculture showed a rapid growth trend, price supports and subsidies has become the most important policy tools, but we cannot ignore the control of the market and the problem of excessive intervention.

#### 2.2.2 Prospects for the Development of Characteristic Agriculture

Chen Senfa (2010) innovated the index system of determining the leading industry of the agricultural county, and given its weight by principal component analysis, and the arrangement of industry leading ability in order, and then choose the leading industry of ecological agriculture county, pointed out the direction for the development of characteristic agriculture.

Zhu Pengyi (2015) summed up the development model of agricultural ecological economy, and concluded that the unbalanced development strategy is more conducive to the development of agricultural ecological economy, and put forward specific strategic thinking. Hu Guangzhi et al. (2015) argued that China's current eco-agriculture development should choose a model based on family farms. Therefore, the corresponding policies should be promulgated to reform the land system, improve the agricultural product certification mechanism and establish a platform for agricultural trade.

### *2.3 Research on Agricultural Intellectual Property*

The study on agricultural intellectual property rights focuses on the achievements, deficiencies and improvements introduced.

Yang Deqiao (2013) took the agricultural practice from 2003 to 2012 as the object of study, summarized the progress made in China's agriculture, and pointed out that the level of agricultural intellectual property in China is low, the regional development is unbalanced, the conversion rate is low and the main structure is unreasonable, then put forward the improvement measures targeted. Zhao Xicang et al. (2013) have innovated in the comprehensive index of agricultural intellectual property. The index system includes five aspects of agricultural creativity, output value, use, protection and management, which can better reflect the fruits and values of agricultural intellectual property creation. The index is comprehensive, which reflects the level of intellectual property rights in China.

Li Lingling (2014) summarized the public power, private rights and social rights of agricultural intellectual property performance, compared the research directions and trends of agricultural intellectual property performance abroad, and pointed out the domestic research more single, so it is necessary to make a balance of the depth of research and geographical indication.

### *2.4 Comments of Researches*

In summary, China's intellectual property protection and agricultural development research is more mature; on the study of agricultural intellectual property needs to be further refined, need to determine the specific areas of agricultural branches in-depth discussion. In addition to the protection of intellectual property research, but also lack of development, operation and other analysis.

In recent years, there have been a small number of scholars began to pay attention to the development of agriculture and increase farmers' income, therefore, combined with national intellectual property strategy and poverty alleviation policy, how to use intellectual property management to enrich the people and research on the development of characteristic agriculture in a particular region, especially in poor areas, is a new trend in future research.

## **3. Analysis on the Status and deficiencies of tea intellectual property management**

### *3.1 Development of Tea Intellectual Property*

#### *3.1.1 Ignoring the Development of New Varieties of Tea*

In addition to more complete varieties of tea in Huangshan City, most of the tea produced in the other four cities is green tea, and consumers know little about blue tea, yellow tea, black tea and scented tea in the region. With the emphasis on health and consumer demand changes, black tea and other new varieties of sales continue to rise. Compared with green tea, these tea are rich in nutrition, fine processing procedures, high value-added. But for a long time, new varieties of the region are not developed, some areas of well-known tea processing technology is not improved, less capital investment, large-scale production cannot be implemented, the lack of product characteristics are common phenomenon.

#### *3.1.2 Tea Culture Is Not Excavated*

The intangible cultural heritage of tea in the region is relatively small, the national level only four (Qimen Black Tea, Huangshan Mao Feng, Taiping Houkui, Lu'an Guapian), two provincial (song Luo tea, Tunxi Green Tea), and mainly green tea production skills, other varieties only Qimen black tea. In fact, there are many varieties of tea in the region, its production process is complex and diverse, each has its own difference, in addition to the production process, there are a lot of tea culture has not been excavated in the region, for example, the ancient culture of "eating" part, the local tea song, dance, drama, and harvest legend are historical treasures, historical records for its tea is also very rich, tea culture in the region needs to be further refined and developed.

#### *3.1.3 Lack of Professional Talents*

According to official data, nearly five years Huangshan City for the introduction and cultivation of agricultural talents budget is only 70,000 RMB, Lu'an City, 50,000 RMB, while the remaining three cities do not have a special budget. Here mainly by the local tea farmers responsible for the cultivation of tea in the region, their cultural level is relatively low, the lack of awareness of innovation, the use of advanced technology is generally low. At present, many tea factories in the region are still in accordance with the traditional cultivation, picking, baking way for the processing of tea, low production efficiency and health and safety cannot be guaranteed, no professional researchers on tea varieties to improve research.

### *3.2 Application of Tea Intellectual Property*

#### *3.2.1 Sales Channel Is Too Narrow*

In the region many places still follow the old mode of production and sales, mainly by the tea factory hired tea farmers planted, picking tea, buying fresh leaves, after the initial processing, to the market to sell primary tea products, tea farmers and the market completely decoupling, in the "what to sell what" the original sales model

(Ni Chenchen, 2014). Brand sales, online sales, cultural sales and other new sales model is still not well used, tea brand benefits have not been played. There are a lot of tea farmers sell the tea of poor quality in the informal market, which can not only improve the sales of tea, but also not conducive to improving the income of tea farmers.

### 3.2.2 Single Output and Difficult Valuation

Due to there are many small tea processing plants and family-style manufacturers in the region, especially in poor counties, production technology backward, lack of scientific research funds, poor sanitation conditions of production equipment and other issues restricting the development of new varieties of tea and tea products, high value-added toiletries, food, medicinal health care products and so on cannot get development. In addition, there is a lack of unified management of the valuation of tea products, increasing the difficulty of trademark transfer and sale; there is no corresponding intellectual property trading platform in the region, it restricts the use of patent technology and its pledge financing, and how to carry out the financing with the permission and proof of geographical indications still needs further trial and exploration.

### 3.2.3 Scattered Tea Enterprises and Messy Brands

The region has hundreds of tea processing plants and tea enterprises, the main scope of these enterprises covered each other, tea processing plants in the vicious competition, lack of cooperation consciousness, and even some tea processing plants in order to make the sale of tea prices lower and ignore the quality of tea.

The high visibility of tea in the region exist a common phenomenon of "A surname multiple names", taking Lu'an Guapian as an example, its brand "Hui Liu" and "smile appear" is most well-known, however, Lu'an Guapian also owns "emblem general", "Hui Fu tea", "Zhong Liu", "Jade Valley" more than 20 brands. At the same time, Jingxian Lanxiang, Yuexi Cuilan, Dongzhi Yunjian and so on exist a common phenomenon of "A surname no name", there is no formal official certification of the brand and trademark.

## 3.3 Protection of Tea Intellectual Property

### 3.3.1 Lack of Registration of Geographical Indications

At present, in the region for national geographical indication products only 13, of which Huangshan City 7 ranks first, Lu'an 3, Anqing 2, Chizhou one, and as a large amount of tea production city, Xuancheng has no one pieces of geographical indication products, Jingxian Lan Xiang, Shucheng small orchids, Wu Li Qing, Si Xi Kuding, Tianzhu JianHao and other tea of well-known in the province have not applied for geographical indications products. In addition, many of the origin of tea enterprises have not been approved to use geographical indications, or the use of geographical indications is not provided, which means that the use of its geographical indications in other regions of the tea industry is not limited, making it difficult to protect the original tea.

### 3.3.2 Single Specie of Trademark and Patent

There are 40 famous trademarks in Anhui Province, but there are only about 13 kinds of tea varieties, there is a common phenomenon of "a surname multiple names", and there are many well-known tea without its own trademark. In addition, the scope of protection approved by the trademark is only for tea, which makes tea products are not within the scope of the trademark protection.

At the same time, the regional patent such as tea packaging and other appearance design (95) and utility model (257), tea invention patents of only 46, accounting for 1.7% of China's tea invention patents, of which the largest in Huangshan City, only about 17, we can see the type of patent application is single.

### 3.3.3 Lacking of Regulation of Infringement

There is no special regulatory authorities in the region, which cannot form an effective constraint on infringement. Some tea processing plants lack the knowledge and skills of intellectual property management, and do not intend to develop new varieties. Even if realize the variety of innovation and improvement, but also because of the lack of intellectual property declaration skills were registered by others. At the same time, due to the high cost of safeguarding the rights and the complex procedures of court complaints, making some enterprises are afraid to safeguard the rights and claims. Tea Industry Association because there is no real power, indulging infringement, "open one eye close one eye". Unscrupulous traders in order to grab profits, continue to reduce production costs, ignoring product quality and safety, which in turn damaged the image of its brand and reputation, forming a vicious cycle.

## 4. Construction of Multi Cooperative Management Model

### 4.1 The Basis and Reasons for the Construction of Multi Cooperative Management Model

Multi collaborative management is the improvement of market and government failure, as the name suggests, it refers to the government-led, enterprises, social organizations, citizens and other subjects through the development of rules and consensus, jointly manage public affairs, it is the process of realizing and protecting public interests. It has many characteristics such as the diversification of the participants, the coordination of the main body, the openness and dynamic of the management, in the management of public affairs, the main bodies are interdependent, the government plays a leading role, and other subjects are equally involved in the

management, the relationship among the main bodies is in the changing of cooperation, opposition and compromise, each stage of the tasks and objectives will change, and the system of resources and information free flow and sharing(Zhou Peng,2015).

Tea industry management process involves tea farmers, enterprises, social organizations, governments and other subjects, Intellectual property rights management of tea cannot be separated from the active participation of these subjects.

#### 4.2 Construction of Multi Cooperative Management Model

This paper builds the central and local governments, social organizations, tea enterprises, tea cooperatives, tea farmers and other multi participation in the tea industry management, that is, tea industry multi cooperative management model of Anhui gold arc tea producing area, see Figure 2:

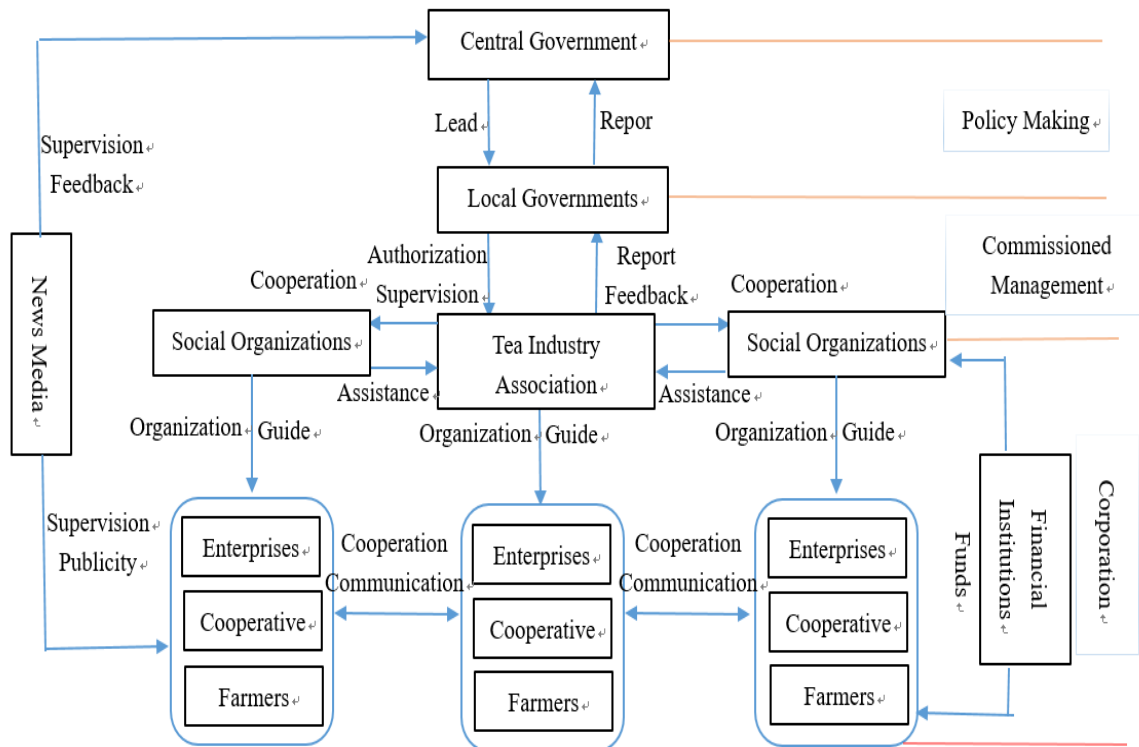


Figure 2: Multi - Cooperative Tea Industry Management Model

As shown in the figure, the central and local governments and relevant departments in the regional tea industry management system are responsible for formulating the relevant preferential policies for the common goal of "getting out of poverty" and pointing out the direction and means of management from the macro level. Tea industry associations and other social organizations to accept the government's authorization or commissioned to organize and guide the development of local tea enterprises and cooperatives, while social organizations to accept the government's supervision, and regular report to the governments. Tea enterprises, cooperatives and tea farmers expand the depth of cooperation and communication in the production, marketing, brand promotion and maintenance, etc. In addition, the news media should play a role of the "bridge" of supervising counterfeiting, brand publicity and policy feedback, and financial institutions such as banks should provide financial support for the development of tea industry.

#### 4.3 Establishing a Unified Management Agency System

The governments can try to set up the Anhui Tea Industry Management Committee, the management committee in each city set up the tea industry management office as a secondary body, responsible for the specific producing areas of tea industry management, and authorize the tea industry association to formulate relevant management rules, accept tea farmer's and tea enterprise's reporting, establish a network platform for counting the range of tea, tea plant varieties, production, processing, sales channels, set unified quality standards for tea, according to the standards grant certificates of origin to the enterprises, and report to the Management Committee for the record review (see Figure 3).



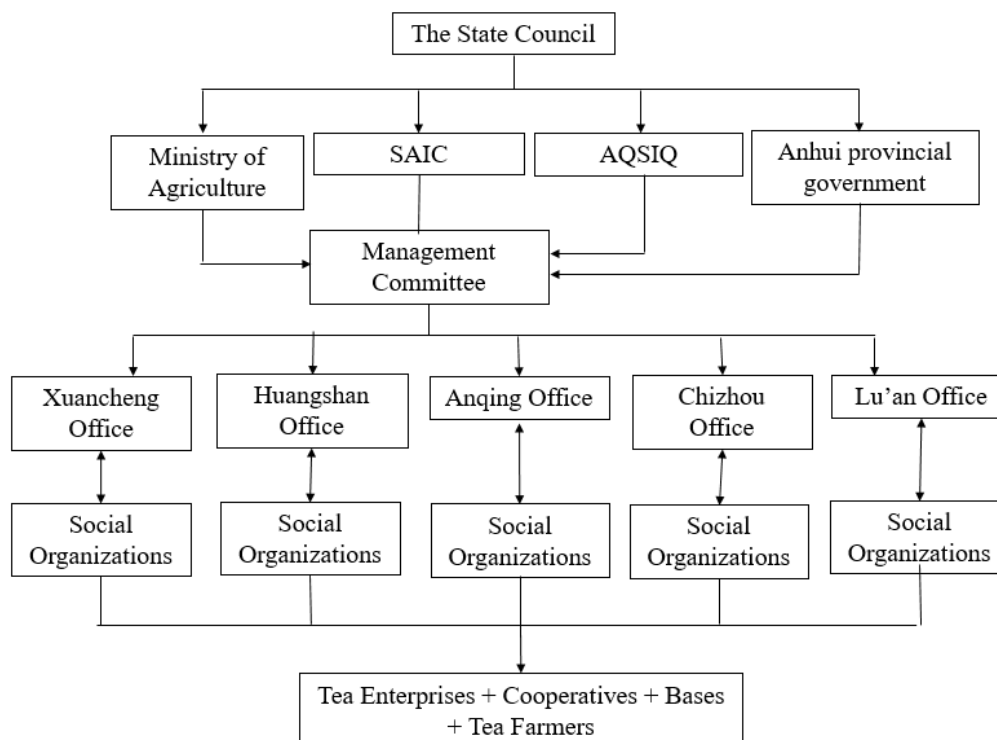


Figure 3: Tea Industry Management Agency System

Promoting of "tea enterprises + cooperatives + base + tea farmers" management model, tea enterprises through the land contract, establish tea production bases, the scattered tea farmers set up cooperatives, and sign a production and marketing contract with enterprises. Tea enterprises are responsible for providing tea farmers with tea tree saplings and advanced technology, technical training for tea farmers, unified acquisition, processing, deep processing and sales of tea. In addition, the governments should encourage tea enterprises to cooperate with each other, and timely sharing of sale channels and brand building experience.

## 5. Recommendations and Conclusion

### 5.1 Policy Recommendations

#### 5.1.1 Strengthening the Development of New Varieties of Tea

Regional governments and relevant departments and tea enterprises should invest more funds for the development of other varieties of tea research and quality improvement, the governments can give financial subsidy to tea enterprises and incentive for technological innovation. At the same time, should actively carry out the registration at China Administration for Industry and commerce, national quality inspection administration and the State Department of agriculture, registration includes not only the geographical indication, more should be the production process, packaging, brand logo and other aspects of trademark and patent application. In addition, we should also pay attention to the registration of foreign brands to ensure the international legitimacy of the brands.

#### 5.1.2 Digging Deep into the Tea Culture

Since ancient times, tea culture is rich in the gold arc tea producing area, in addition to historical records and as national gift exchanges, the governments and tea industry associations can excavate and arrange the local traditional culture, such as traditional arts and drama about tea, tea folk songs, folk paper-cut, lantern show and related cultural relics and heritage, and to protect the form of the application of a variety of regional tea culture. In addition, tea enterprises can also actively organize various forms of "Tea Culture Festival", exhibit of new varieties of tea and promote the local tea culture, promote the tea art value and visibility, thereby increasing tea enterprises and farmers income.

#### 5.1.3 Extending Industry Chains

On the one hand, the governments should increase financial support and technical guidance for tea enterprises, give subsidies, tax relief, incentive of scientific research and other forms to encourage enterprises to increase research on new varieties of tea, improve the quality of tea.

On the other hand, tea enterprises should actively develop all kinds of tea products, tea and diet, Chinese medicine, skin care, etc., making a variety of refreshments dessert, special dishes, tea health products, tea cosmetics, soap and other toiletries, detergents and other light industrial materials, animal feed, and create the

appropriate brand, extend the industrial chain, enhance its economic value, and continue to develop new consumer groups.

#### 5.1.4 Innovating the Ways of Brand Publicity

First of all, enterprises should make full use of new media such as network. On the basis of the "store + counter + associates", make full use of the network, news and other media to increase the exposure rate of regional tea, so that its brand is understood and recognized by consumers.

Second, we must vigorously develop the tea tourism industry. The region is rich in tourism resources, Huangshan, Peach Lake, Wanfo Hot Springs, Tianzhu Mountain, Jiuhua Mountain and other scenic spots is unique. Tea as a regional specialty, can better enhance its visibility and sales in tourism. Encouraging tea farmers to carry out "farmhouse" and "tea festival" activities to promote local tea and tea culture, while increasing the income of tea farmers.

#### 5.1.5 Improving the Legal System and Supervision

At the national level, to formulate some laws as soon as possible, and encourage the development and protection of intellectual property rights of the tea industry and other characteristic industry, learn from the experience of India, the provisions of the farmers' "unknowing exemption" to maximize protection of the interests of farmers. Provincial and municipal governments to develop more stringent standards according to geographical characteristics, for the development of tea industry to provide financial funds, institutional environment, cultural construction and technical guidance, indicating the direction of the tea industry management and ways, and the rights and obligations of industry associations, promote the ways of the tea farmers to safeguard their rights.

Third, the government should continue to improve the construction of China's intellectual property courts, simplify the application procedures for tea farmers and tea enterprises infringement compensation, and reduce the cost of collection. In addition, it should also be government-led to encourage tea industry associations and tea enterprises to increase the crackdown on counterfeiting, encourage the media and tea farmers to do a good job.

#### 5.1.6 Strengthen Education and Cultivate Professional Talents

First of all, the government should actively encourage tea associations and other social organizations to strengthen the education and training of farmers. By strengthening the education of tea farmers' culture and intellectual property rights, make them realize the importance of intellectual property rights management, encourage them to report fake behavior, and actively safeguard their rights.

Secondly, the governments encourage social organizations to strengthen the tea farmers and tea enterprises staff technical training, to master the basic knowledge of tea and processing skills, and constantly improve the quality of tea production technology and quality.

Third, for the scarcity of intellectual property and scientific research personnel, the governments should allocate special funds to encourage tea enterprises to employ experts, or encourage college graduates to return home to start a business, promote the local tea farmers and tea enterprises to improve the innovative technology and ability.

### 5.2 Conclusion and Outlook

On the basis of summarizing previous studies, this paper finds out how to enrich farmers in intellectual property management and the development of characteristic agriculture in certain areas, especially in poor areas, is a new trend of future research. This paper first introduces the general situation of the gold arc tea producing area in Anhui Province, China.

The main achievements of this paper include:

First, by analyzing the published data of China Administration for Industry and Commerce, National Quality Inspection Administration and the State Department of Agriculture and local governments, the geographical indications, trademarks, patents and non-material tea cultural heritage of the regional tea was obtained. This paper discusses the current situations and deficiencies of the tea intellectual property rights management in the gold arc tea producing area from three aspects of the development, application and protection.

Secondly, the paper constructs the multi cooperative management mode and the management committee as the core of the management agency system, analyzes the role of the relevant subjects in the development of tea industry and the management of intellectual property rights, and clarifies their respective responsibilities.

Finally, putting forward specific policy recommendations for the problems, including strengthening the development of new varieties of tea, digging deep into the tea culture, extending industry chains, innovating the ways of brand publicity, improving the legal system and supervision, strengthen education and cultivate professional talents and other six aspects, to improve the management of regional tea industry, enhance the added value of tea and its products, and ultimately achieve the goal of increasing farmers and regional poverty alleviation.

In this paper, there are the following shortcomings: one is the lack of research methods. The data

analysis of the article is relatively small, which may affect the accuracy. At the same time, the study has strong regionality and may not be applicable to other places. The universality needs to be discussed. On the other hand, the lack of literature retrieval. Due to the limited personal level and the scope of the study is too small, the literature can be retrieved less, the information on the development and the application of intellectual property rights is less.

Therefore, in the follow-up study need to conduct in-depth research, to collect information on the development and application of local tea industry, to strengthen exchanges and cooperation with the local governments, access to tea intellectual property and regional economic development related information, to conduct empirical research, and to improve the research content.

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