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# Countermeasures for Tobacco Branding and Industrial Development in Enshi Prefecture

Guangzhong DAI\*

Second Geological Team of Hubei Province, Enshi 445000, China

**Abstract** Agricultural branding is an important mark of agricultural modernization. Enshi Prefecture of Hubei Province is reputed as "Tobacco Kingdom" and "World Capital of Selenium". It is also the key production area of flue-cured tobacco, burley tobacco and selenium-enriched tobacco. The tobacco industry has become a pillar industry of Enshi Prefecture. This paper firstly introduces tobacco resource and industry of Enshi Prefecture. Then, it analyzes countermeasures for tobacco branding and industrial development. Finally, it comes up with several constructive recommendations.

**Key words** Enshi Prefecture, Tobacco Kingdom, World Capital of Selenium, Selenium-enriched tobacco, Tobacco branding, Industrial development

## 1 Introduction

To implement requirements of central government and State Council for "consolidating brands of characteristic agricultural products, supporting strengthening famous brands, and protecting famous brands of agricultural products", the Ministry of Agriculture issued *Opinions on Further Promoting Agricultural Branding* ([2006] No.7)<sup>[1-2]</sup>. Brand is the "name, term, design, symbol, or any other feature that identifies one seller's product distinct from those of other sellers. Agricultural branding is an important mark of agricultural modernization<sup>[3]</sup>. The significance of further promoting agricultural branding lies in: (1) major means for promoting transformation of traditional agriculture to modern agriculture, (2) effective approach of optimizing agricultural structure, (3) urgent requirement for improving agricultural product quality and safety and competitive power, (4) basic measure for realizing increase of agricultural efficiency and farmers' income.

Chinese tobacco brand awareness is not deep. Tobacco production belongs to scope of agricultural production. Like most agricultural products, tobacco producers and operators are weak in brand awareness, or even no brand awareness. With the constant improvement of quality, the competition of tobacco market will also change from quality competition to brand competition. To win favor of tobacco industry, tobacco products must give prominence to function of brand.

Enshi Tujia and Miao Autonomous Prefecture is located in the mountainous southwestern corner of Hubei Province. It is major area of anti - poverty project. In Enshi Prefecture, there are 2 county-level cities (Enshi and Lichuan) and 6 counties (Badong, Laifeng, Xianfeng, Jianshi, Hefeng, and Xuanen). The flue-

cured tobacco produced in Enshi matches Yunyan tobacco. Its burley tobacco is also famous and sold in more than 20 countries in Europe, Africa, and Southeast Asia. The soil in Enshi is rich in selenium. Enshi is known as the "selenium capital of China". Enshi is one of the four largest tobacco production bases, with reputation of home of burley tobacco, home of flue-cured tobacco, and tobacco kingdom. Jianshi County is the birthplace of burley tobacco and Xintang is the first township of high quality burley tobacco in China. With resource advantage of developing tobacco industry<sup>[4-7]</sup>, the tobacco industry has become a pillar industry of Enshi Prefecture. In 2013, Enshi Prefecture launched construction of 6 industrial chain of tobacco industry to promote development of characteristic industry. In this study, it is intended to analyze current development status and present countermeasures for branding and industrial development of tobacco industry in Enshi Prefecture.

## 2 Tobacco resource and industry of Enshi Prefecture

**2.1 Historical and cultural resources** Tobacco originates from America, Oceania and some islands of the South Pacific Ocean. At present, there are 66 species of tobacco, but only two species are cultivated, *i. e.* Nicotiana tabacum L. and Nicotiana rustica L. At the end of Qing Dynasty, Nicotiana tabacum L. were introduced to China from Philippines, Vietnam and Korea. By now, it has more than 400 years of history. Enshi Prefecture has long history of tobacco planting. From the period of Emperor Kang Xi, sun-cured tobacco was planted and many people were addicted to smoking. At the later period of Qing Dynasty, there was the situation that tobacco was planted all over the country, tobacco planting was uninterrupted, and tobacco was sold to foreign countries. In the period of the Republic of China, tobacco planting was more widespread, and the major type was sun-cured tobacco. Apart from planting sun-cured tobacco, Enshi Prefecture also plants Rustica tobacco. Flue-cured tobacco belongs to Nicotiana tabacum L. It originated in Virginia State of the United States and

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\* Corresponding author. E-mail: 373646385@qq.com

was planted successfully in Taiwan, Shandong, Henan, Anhui and Liaoning provinces in the beginning of 20 century. However, it was planted in Enshi Prefecture not long. In 1962, Enshi County (now Enshi City) local product company introduced 50g Changbo-huang seed of flue-cured tobacco and planted for trial in Longfeng District for 25 mu. The yield per mu was 1 dan. The burley tobacco originated in Ohio State of the United States and also belongs to Nicotiana tabacum L. In the 1960s, the burley tobacco was introduced to China and successfully planted in Jianshi County of Hubei Province and Xinchang County of Zhejiang Province. Besides, Enshi Prefecture also plants aromatic tobacco (oriental tobacco and Turkish tobacco), Maryland tobacco, flue-cured tobacco with special aroma, and Indonesian cigar.

**2.2 Brand resources** Enshi Prefecture has excellent tobacco brand resources. As early as February 1916, tobacco produced in Xianfeng County won a silver medal in Panama Pacific Exhibition. In Enshi Prefecture, there are 75 famous brands of Hubei Province, including 3 brands related to tobacco: Miaoja Brand of Jianshi Cigar Factory of Hubei Tobacco Corporation, Shancha Brand of Lichuan Tobacco Factory, and Yunli brand.

Qingjiangyuan tobacco of Enshi Prefecture is one of two famous tobacco brands in Hubei Province. Its comprehensive score of appearance quality is 87.08, nicotine content is low, total sugar is slightly higher than 30%, and sugar-nicotine ratio is proper, and comprehensive average score of sensory quality is 86.35, so the overall quality is high<sup>[6]</sup>. Qingjiangyuan brand tobacco is sweet, elegant and aromatic, selenium-enriched and green ecological<sup>[7]</sup>. From 2008, Enshi Prefecture Tobacco Corporation started implementing 1135 Project, which promoted development of Qingjiangyuan characteristic high quality tobacco, completed researches of Qingjiangyuan project, and realized connection of Qingjiangyuan tobacco brand and key tobacco brands<sup>[8]</sup>.

**2.3 Climate resources** The climate of Enshi Prefecture takes on distinct monsoon character. In space, restricted from complex terrain and ground form, sunshine of Enshi Prefecture decreases from northeast to southwest, and temperature reduces with rise of altitude, with annual average temperature of 15.8–18.5 °C. In the whole year, the humidity of Enshi Prefecture is high. In sum, Enshi Prefecture belongs to subtropical monsoon humid mountain. The growth period of crops is long, and frost-free period lasts 200–300 days (more than 230 days in most regions, more than 300 days in regions of below 300 m altitude Yangtze River valley, and less than 200 days in high mountain areas with altitude above 1800 m). In the whole Prefecture, the annual average sunshine hour reaches 1 160–1 600, and sunshine percentage is 26%–37%.

Wuling Mountain area of Enshi Prefecture is an extension of Yunnan–Guizhou Plateau, has excellent ecological and climate and land resources for tobacco planting. Its flue-cured tobacco is Yunnan–Guizhou type, has adequate aroma and high quality. From April to November, the climate of Enshi Prefecture is similar to Kentucky State of the United States. In geographic, natural climate, and soil structure, Enshi Prefecture is suitable for planting

burley tobacco.

**2.4 Rich in selenium resource** By now, reports show that 24 provinces including Hubei, Shaanxi and Shandong, have natural selenium-rich soil. According to rough statistics, the area of selenium-rich soil (>0.4mg/kg) takes up 60.9% of the whole area of Enshi Prefecture. Average selenium content of soil in Enshi tobacco planting area reaches (0.63 ± 0.56) mg/kg<sup>[9]</sup>. Different types of tobacco have different selenium enriching ability<sup>[10]</sup>. The selenium content is related to tobacco position. The upper, middle and lower part of tobacco contains 0.24, 0.19 and 0.20 mg/kg selenium respectively, and there is a significant positive correlation between selenium content of middle and upper tobacco and soil selenium content<sup>[9]</sup>.

Selenium-enriched tobacco is low-toxic and relatively safe tobacco because selenium can restrain emission of harmful substance of smoke<sup>[5]</sup> and selenium has obvious influence on organic content of tobacco. Researches of Zhang Chi *et al* (2004)<sup>[12]</sup> indicate that selenium can increase total water soluble sugar, reducing sugar and non-reducing sugar of burley tobacco by 41.25%, 23.33% and 32.77% separately; increase total nitrogen, protein and nicotine by 22.22%, 23.68% and 28.64% respectively; reduce chlorine of tobacco by 40.36%.

**2.5 Type resources** Burley Tobacco Experimental Station of China Tobacco (Hubei Tobacco Research Institute) moved to Wuhan from Enshi Prefecture in 2002. For more than 20 years, this sole burley tobacco research institute has collected, appraised, arranged and kept many domestic burley tobacco germplasm resource and some foreign cultivated burley types or strains<sup>[13]</sup>. In Enshi Prefecture, there are EB #4, Eyan #1 (formerly Jianbai #80), Eyan #2, Eyan #3, Eyan #4, Eyan #5, Eyan #6, Eyan #209, Eyan #101, Hefeng Big V, Hefeng Yellow Smoke, Hefeng Zilaihuang, Jianxuan #1, Jianxuan #2, Jianxuan #3, and Jianxuan #304 local characteristic burley tobacco types.

Besides, tobacco area of Enshi Prefecture is rich in flue-cured tobacco resources. To screen characteristic flue-cured tobacco types suitable for ecological condition of Enshi Prefecture, Enshi Prefecture tobacco area carried out regional adaptation research in 2009. It made an overall assessment of CF205, Zhongyan Smoke #100, Zhongyan Smoke #103, Zhongyan Smoke #201, and Yunyan Smoke #87. Results show that Zhongyan Smoke #103, Zhongyan Smoke #201 and CF205 better manifest type features and economic benefits in different tobacco production areas of Enshi Prefecture<sup>[14]</sup>. In 2010, Xianfeng County of Hubei Province conducted regional experiment for 8 new flue-cured tobacco types with K326 as control group, and results indicate that YN105, YN110 and HB029 have better comprehensive traits<sup>[15]</sup>.

**2.6 Tobacco industry** Enshi Prefecture is major burley tobacco production area. Its tobacco quality is famous at both home and abroad, and both tobacco planting size and production level rank first in China. Flue-cured tobacco is widely accepted by cigarette factories for internal quality, and the quality of burley tobacco is also unique in whole China.

The tobacco industry has become a key pillar industry of Enshi Prefecture. In the whole prefecture, the tobacco planting area reaches 650 000 mu (including 450 000 flue-cured tobacco and 200 000 burley tobacco), and annual yield of tobacco reaches 1.5 million dan (1 million flue-cured tobacco and 0.5 million burley tobacco). Tobacco industry has annual yield of 100 000 boxes of cigarettes. In 2012, tobacco industry contributed 49.2% of fiscal revenues of Enshi Prefecture. The flue-cured tobacco yield of the whole prefecture accounts for more than 65% of Hubei Province, and total yield and export amount of burley tobacco of Enshi Prefecture takes up above 70% of the whole country.

All 2 county-level cities and 6 counties under administration of Enshi Prefecture abound with high quality tobacco. Lichuan City, Laifeng County and Xianfeng are suitable for planting flue-cured tobacco, while Enshi City, Jinshi County, Xuanen County, Hefeng County, and Badong County are suitable for planting burley tobacco.

### 3 Countermeasures for branding and industrial development of tobacco industry in Enshi Prefecture

**3.1 Carrying out 1:10000 ecological agricultural geological survey in key townships with selenium-enriched tobacco** Selenium-enriched tobacco contains little tar and has low free radical when burning. Selenium element can eliminate carcinogenic substance (benzpyrene) generated during burning, restore DNA damage resulted from benzpyrene, and can strengthen resistance of lung against diseases. Natural organic selenium in tobacco can reduce the tar content, resist carcinogenic action of benzpyrene, and reduce concentration of free radicals in tar, thus to reduce toxic action of tobacco and protect health of smokers. However, geological environment of Enshi Prefecture selenium agriculture is complex, and influence from types of basement rock and terrain is significant. Horizontal change of environment is great and soil types are varied.

Therefore, it is required to carry out 1:10000 ecological geological survey in key townships of Enshi Prefecture, including Xintang Township, Hongtu Township, Tumbu Township, Sancha Township, Cuiba Township, and Longfeng Town of Enshi City, Tuanbu Town, and Shaxi Township of Lichuan City, Longping Township, Guodian Town, Huaping Town, Hongyansi Town, and Jingyang Town of Jianshi County, Lucongpo Town and Yesanguan Town of Badong County, Wanzhai Township and Jiaoyuan Town of Xuanen County, Yanzi Township, Rongmei Town, Xiaping Township, Wuyang Township, and Zhongying Township of Hefeng County, evaluate ecological geological condition of selenium-enriched agriculture, and reveal optimum ecological geological environment of selenium-enriched tobacco.

**3.2 Fully implementing GAP management of tobacco production** The Good Agricultural Practices (GAP) are specific methods which, when applied to agriculture, create food for consumers or further processing that is safe and wholesome. These practices are recognized as best agricultural management practices<sup>[16]</sup>.

In 2003, China Food and Drug Administration printed and issued *Management Method for Regulating Certification of Production Quality Management of Traditional Chinese Medicines (Interim)* and *Good Agricultural Practice for Chinese Crude Drugs (Interim)*, and started implementing GAP management and certification in production of traditional Chinese medicines<sup>[17-18]</sup>. Implementing GAP management is an inevitable path for tobacco production in China<sup>[19]</sup>. GAP management of tobacco production is favorable for (i) strictly selecting ecological environment for tobacco growth, (ii) monitoring materials for tobacco production in the whole process, (iii) conducting code management of tobacco farmers, (iv) establishing tobacco production technical extension system, and (v) setting up tobacco quality tracing system. Therefore, it is recommended to fully implement tobacco production GAP management.

### 3.3 Strengthening construction of specialized tobacco farmers' cooperatives

Specialized farmers' cooperatives are mutual-aid economic organizations formed on the basis of rural household contractual management by producers and operators of similar agricultural products or suppliers and users of similar agricultural production and operation services. Now, new agricultural operating entities with large specialized households, family farms and specialized farmers' cooperatives as representatives spring up and lay solid foundation for innovating agricultural operating system<sup>[20-22]</sup>. With deepening of modern tobacco industry, the function of specialized tobacco farmers' cooperatives is greater and greater in tobacco production<sup>[20]</sup>. China has built national model cooperatives for specialized farmers' cooperatives, including 15 cooperatives related to tobacco planting (listed in Table 1). Thus, it is required to strengthen construction of specialized tobacco farmers' cooperatives in the whole prefecture and make effort to build tobacco type national model cooperatives.

### 3.4 Certifying China's time-honored brands of cigarette enterprises

China's time-honored brand is an honored title granted by the Ministry of Commerce of China to enterprises in mainland China, whose brand has a long history, products, techniques or services passed down through generations, has strong Chinese culture background and characteristics, and is widely recognized by the society<sup>[23]</sup>. Enshi Prefecture has a long history of tobacco processing. As early as Qing Dynasty, it had manual cigarette rolling machine. In 1941, all counties of Enshi Prefecture had manual cigarette rolling industry. Therefore, it is recommended to strengthen collection and arrangement of cigarette enterprises and make effort to win certification of China's time-honored brands of cigarette enterprises.

### 3.5 Exploring and sorting out local tobacco culture

Tobacco is not just a type of consumer goods, but it has been integrated into social custom and worldly wisdom, and becomes a unique tobacco culture<sup>[24]</sup>. Therefore, it is proposed to explore and sort out local tobacco culture, such as Tujia and Miao rustic tobacco custom and tobacco corporate culture.

**Table 1** National model tobacco farmers specialized cooperatives

| Province     | Specialized cooperatives  |
|--------------|---|
| Henan        | Baofeng County Sipo Tobacco Planting Specialized Cooperative                    |
| Heilongjiang | Hua'nan County Jinfeng Tobacco Planting Cooperative                             |
| Hunan        | Guixiang County Hongyun Flue-cured Tobacco Specialized Cooperative              |
|              | Guixiang County Modern Tobacco Specialized Cooperative                          |
|              | Jiahe County Puman Township Yiyang Tobacco Farmers' Specialized Cooperative     |
|              | Changning City Tongjiang Tobacco Production Specialized Cooperative             |
|              | Ningyuan County Wangli Flue-cured Tobacco Production Specialized Cooperative    |
|              | Ningyuan County Zuoba Flue-cured Tobacco Production Specialized Cooperative     |
|              | Xintian County Qianshan Flue-cured Tobacco Production Specialized Cooperative   |
|              | Ningxiang County Jiulongfeng Tobacco Specialized Cooperative                    |
| Jilin        | Nongan County Daikun Tobacco Planting Specialized Cooperative                   |
|              | Yushu City Fumin Flue-cured Tobacco Specialized Cooperative                     |
|              | Changbai County Jinshu Yellow Tobacco Specialized Cooperative                   |
| Jiangxi      | Huichang County Dongtou Yongsheng Tobacco Specialized Cooperative               |
| Yunnan       | Yuxi City Hongta District Yuxi Hongsheng Modern Tobacco Specialized Cooperative |

**3.6 Implementing Geographical Indication protection for Qingiangyuan flue-cured tobacco, Qingiangyuan burley tobacco, Qingiangyuan selenium-enriched tobacco and Laifeng cigar** Geographical indication has brand effect<sup>[25-26]</sup>, so it is feasible to build characteristic brand with the help of geographical indication. Qingiangyuan tobacco has distinct characteristics of geographical indication<sup>[6-7]</sup>. Laifeng cigar planting environment can constitute natural factors of geographical indication. Laifeng County preliminarily plans to expand cigar planting area to 2 000 mu and build high quality cigar material base.

Thus, it is required to implement Geographical Indication protection for Qingiangyuan flue-cured tobacco, Qingiangyuan burley tobacco, Qingiangyuan selenium-enriched tobacco and Laifeng cigar: (1) applying Geographical Indication protection to State Administration of Quality Supervision, Inspection and Quarantine; (2) registering Geographical Indication brand in State Administration for Industry and Commerce; (3) applying Geographical Indication of agricultural products to the Ministry of Agriculture.

Geographical Indication protection for Qingiangyuan flue-cured tobacco covers all areas suitable for production of flue-cured tobacco in the whole prefecture; geographical Indication protection for Qingiangyuan burley tobacco includes areas suitable for planting burley tobacco in Enshi City, Jianshi County, Xuanen County, Hefeng County, and Badong County; geographical Indication

protection for Qingiangyuan selenium-enriched tobacco covers areas rich in selenium; geographical Indication protection for Laifeng cigar is limited to Baifusi, Dahe, and Jiusi towns.

### 3.7 Certifying Qingiangyuan tobacco famous brand of Hubei Province and the whole China

In Enshi Prefecture, there are 75 famous brands of Hubei Province, and three are tobacco related. But all these three are cigarette brands, no famous tobacco brand. In March 2013, with approval of State Administration for Industry and Commerce, the Three Gorges Brand of Three Gorges Wine Company was certified as China's famous brand, realizing a breakthrough of famous brands of Enshi Prefecture. Therefore, it is required to cultivate Qingiangyuan characteristic tobacco brand, and actively apply certification of famous brand of Hubei Province and the whole China.

### 3.8 Building famous brands of Hubei Province and the whole China for Qingiangyuan flue-cured tobacco, Qingiangyuan burley tobacco, and Qingiangyuan selenium-enriched tobacco

Enshi Prefecture has 4 famous agricultural product brands of Hubei Province, including 1 top ten agricultural product brand and 3 excellent agricultural product brands of Hubei Province. However, these 4 brands are not tobacco types. Thus, it is required to strengthen brand awareness of tobacco, and build famous brands of Hubei Province and the whole China for Qingiangyuan flue-cured tobacco, Qingiangyuan burley tobacco, and Qingiangyuan selenium-enriched tobacco.

### 3.9 Striving for name of "home of flue-cured tobacco", "home of burley tobacco", and "home of selenium-enriched tobacco"

Name of home of characteristic products is chaotic in China, and there are more than 10 systems<sup>[2]</sup>. Enshi Prefecture should apply for "home of flue-cured tobacco", "home of burley tobacco", and "home of selenium-enriched tobacco" to China Tobacco Society or State Council, to restore its name of "kingdom of tobacco".

## 4 Conclusions and recommendations

Enshi Prefecture has a long history of planting tobacco. As early as 1916, tobacco produced in Xianfeng County won a silver medal in Panama Pacific Exhibition, and Jianshi County is the birthplace of the burley tobacco. Its flue-cured tobacco features adequate aroma and high quality. With climate similar to Kentucky State of United States, Enshi Prefecture is suitable for planting burley tobacco. Besides, Enshi Prefecture is rich in selenium and tobacco type resources, has good reputation of "kingdom of tobacco" and "world capital of selenium", and is a major production area of flue-cured tobacco, burley tobacco, and natural selenium-enriched tobacco.

In line with current situations of tobacco development in Enshi Prefecture, it is recommended to (1) carry out 1:10000 ecological agricultural geological survey in key townships with selenium-enriched tobacco; (2) fully implement GAP management of tobacco production; (3) strengthen construction of specialized tobacco farmers' cooperatives; (4) certify China's time-honored

brands of cigarette enterprises; (5) explore and sorting out local tobacco culture; (6) implement Geographical Indication protection for Qingjiangyuan flue-cured tobacco, Qingjiangyuan burley tobacco, Qingjiangyuan selenium-enriched tobacco and Laifeng cigar; (7) certify Qingjiangyuan tobacco famous brand of Hubei Province and the whole China; (8) build famous brands of Hubei Province and the whole China for Qingjiangyuan flue-cured tobacco, Qingjiangyuan burley tobacco, and Qingjiangyuan selenium-enriched tobacco; (9) strive for name of "home of flue-cured tobacco", "home of burley tobacco", and "home of selenium-enriched tobacco".

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