

Study on Countermeasures of Promoting Rural Vitalization Strategic Development by Tobacco Production in China

Wu Fan, Assistant Researcher

Wu Fan, Assistant Researcher in marine economy, Shandong Academy of Social Sciences, Jinan, China; Ocean University of China, Qingdao, China. Correspondence author: Wu Fan, 1450775527@qq.com

Abstract: Tobacco production has always been an important pillar industry for China's agricultural and rural economic development. By summarizing the practical experience of tobacco production in serving rural revitalization in China in recent years, this paper, based on the reality of tobacco industry, analyzes the practical problems existing in the development of tobacco-growing villages from the perspective of politics and overall situation, and puts forward some countermeasures to serve rural revitalization strategy in order to fulfill social responsibilities and help overcome poverty to lay a solid foundation for the strategic development of rural revitalization, to set the flue-cured tobacco industry as a model of agricultural strength, to set the tobacco-growing areas as a model of rural beauty, and to set the tobacco farmers as a model of farmers' wealth.

Key words: tobacco industry; rural revitalization strategy; countermeasures

Tob Regul Sci.™ 2021;7(5-1): 2385-2391

DOI: doi.org/10.18001/TRS.7.5.1.8

INTRODUCTION

China is the biggest tobacco producer in the world, and tobacco is an important cash crop in China. Tobacco planting and its industrial and commercial management system have gradually formed a relatively complete industrial system in the development process, which has promoted China's economic and social development. In China, tobacco planting is dominated by tobacco leaves and cigarettes, which has a long-lived history and a wide distribution, and under the influence of regional economies forming the five major areas of the Huang-Huai tobacco-growing area, the Northeast tobacco-growing area, the southwest tobacco-growing area, the Central China tobacco-growing area, and the Southern China tobacco-growing area.

REGIONAL TOBACCO PLANTING

In the early 1960s, the relevant agricultural departments in China divided the tobacco growing areas for the first time. In the early 1980s, the agricultural sector divided the flue-cured tobacco in detail according to its ecological suitability, specifically to the first-level and second-level planting areas, so as to strengthen the production efficiency of regionalization of tobacco planting in China in the practical sense. In 2003, a new division and mutual study of tobacco growing areas were conducted again led by the State Tobacco Monopoly Bureau, directed by the Academy of Agricultural Sciences, and with the participation of 21 tobacco-growing areas (Yunnan, Guizhou, Guangdong, Fujian, Hunan, Guizhou, etc.). The new regional division of tobacco planting followed the second regional division, and carried out detailed analysis and regional division according to different ecological tobacco on the basis of suitability and sub-suitability¹. For example, it was

strictly divided into southwest tobacco-growing area, central Yunnan plateau flue-cured tobacco area, eastern Yunnan plateau and southwestern Guizhou hilly flue-cured tobacco area, western Yunnan plateau mountainous flue-cured tobacco area and southern Yunnan and western Guangxi hilly flue-cured tobacco area in the first-level and second-level planting areas. The most suitable area and suitable area are divided into Fumin County, Luquan Yi and Miao Autonomous County, Songming County (the most suitable area) and Anning City, Chenggong County, Jinning County, Guandu District and Xishan District (the suitable area); Eshan Yi Autonomous County, Hongta District, Huaning County, Jiangchuan County, Xinping Yi and Dai Autonomous County, Yuanjiang Hani, Yi and Dai Autonomous County, Tonghai County (the most suitable area), Yimen County and Chengjiang County (the suitable area) in Yuxi City².

REGIONAL TOBACCO CONSUMPTION

With the deepening reform of economy and modern tobacco agriculture construction, tobacco production has gradually changed from extensive to large-scale and intensive management, which has brought about the gradual change of planting subjects from traditional tobacco farmers to large tobacco growers and family farms, and the shift of tobacco production employees from directly planting tobacco leaves to providing specialized services³⁻⁵. In the current tobacco consumption, the sales inflection point of cigarettes has now emerged, which is manifested in the fact that the tobacco produced in different regions has a local brand model and occupies the first place in the local sales volume. When foreign tourists travel to the region, they will also purchase the tobacco as gifts for friends, etc. in order to promote consumption and drive the development of regional tobacco economy⁶⁻⁷. For example, the sales volume of Chunghwa and Peony cigarettes in Shanghai occupies the leading position in the local sales volume, and the regional characteristics of tobacco consumption are mainly manifested in the protection of local regions.

DEVELOPMENT STATUS OF TOBACCO-GROWING VILLAGES

Generally Low Level of Education

Judging from the educational level of tobacco growers in Longyang District, Baoshan City, Yunnan Province in 2018, there were 3,076 people with primary school education level, accounting for 38.20%, 2,306 with junior high school education, accounting for 28.64%, 1,736 with high school education, accounting for 21.56%, 838 with college or secondary education, accounting for 10.41%, 96 with college or technical secondary education, accounting for 1.20%. According to the data analysis, there are 5,382 tobacco farmers with junior high school education or below (accounting for 66.84%), and 2,670 tobacco farmers with senior high school education or above (accounting for 33.16%). Thus it is clear that because tobacco farmers have generally low educational level, it takes time for them to accept new planting concepts and understand new technologies, and there is still a certain gap in implementation, which makes it difficult to achieve the level of skillful management, good management and intensive planting.

Relatively Weak Infrastructure

At present, although the infrastructure conditions of tobacco-growing villages have been improved to some extent, there are still some deficiencies in housing conditions, roads, greening and production conditions, such as the still existing dangerous buildings, the small coverage ratio of mechanized roads in tobacco-growing areas, the low degree of mechanization, and the lack of matching facilities, which restrict the improvement of tobacco farmers' production level and quality of life.

Seriously Damaged Ecological Environment

In the process of tobacco leaf production, tobacco farmers, in order to achieve maximum benefit, regardless of long-term interests and sustainable development of tobacco leaves, apply chemical fertilizers and highly toxic pesticides to the fields regardless of cost, resulting in acid-base imbalance in the soil, water pollution and serious damage to the ecological system. What is more serious is that there are more pesticide residues in tobacco fields and the pesticide residues in tobacco leaves exceed the standard.

REFLECTIONS ON TOBACCO PRODUCTION SERVING RURAL REVITALIZATION STRATEGY

1. It is necessary to innovate the infrastructure construction in tobacco-growing areas and continue to build a model of strong agriculture in tobacco-growing areas through 13 years of tobacco leaf infrastructure construction. Although the production and living conditions in the tobacco-growing areas have been improved in an all-round way, the transfer speed of the industry has also been accelerated. Therefore, how to maintain the stable development of the tobacco industry on the basis of further strengthening the facilities in the tobacco-growing areas is the focus of innovation and construction of the facilities in the tobacco-growing areas in the next step.

(1) Innovating land transfer mode to stabilize high-quality tobacco-growing areas. With the continuous matching of tobacco field facilities in tobacco-growing areas, the conditions for multi-industry development are more perfect, and efficient facility agriculture and non-tobacco cash crops are developing rapidly. However, due to the prominent competition with tobacco, the loss of high-quality tobacco fields is accelerated, especially the annual loss ratio of high-standard high-quality tobacco fields in the dam area is above 10%, and tobacco leaves are further transferred to mountainous areas, semi-mountainous areas and hilly areas, with mountain tobacco accounting for 67%. Therefore, it is necessary to innovate the way of land transfer in tobacco-growing areas to stabilize the core high-quality tobacco-growing areas, by firstly vigorously guiding the cooperatives or village committees to transfer the land in the core tobacco-growing areas through market-oriented operation, and then leasing the land back to the farmers to grow tobacco after unified planning; secondly actively encouraging large growers to transfer their land on their own, and promoting them to become a new type of rural business entity that focuses on tobacco leaf planting and combines multiple operations; thirdly strengthening strategic cooperation with leading enterprises, paying close attention to the development trend of modern agricultural production and operation by leading enterprises with strong capital, technology and market resources transferring land in the core tobacco growing areas, and actively seeking to carry out

strategic cooperation to ensure that their transferring land brings tobacco planting into the scope of business development; and fourthly exploring the development of diversified investment management, so that tobacco companies can carry out the land circulation in the core tobacco areas through diversified investment, equity participation, holding and other ways, and implement a development model based on tobacco leaf production and combining diversified management.

(2) Innovating facilities subsidies to stabilize basic tobacco fields. At present, because the stable period of tobacco-growing areas is not specified in the subsidy agreement for tobacco infrastructure construction, the planting structure of some tobacco-growing areas has been adjusted rapidly after the supporting infrastructure has been improved, resulting in idle and more damage to tobacco-growing infrastructure. Therefore, in the construction of tobacco leaf infrastructure, it is possible to explore the premise of infrastructure construction to stabilize the tobacco leaf area, sign a tobacco-growing area stabilization agreement with the local party Committee, government and village Committee, and focus on supporting facilities and equipment necessary for tobacco leaf production, such as curing barn, seedling shed and agricultural machinery⁸.

(3) Innovating water source project management to stabilize people's hearts in tobacco-growing areas. Since 2011, thanks to the tobacco industry's active development of people-benefit water source project, the water conservancy conditions in the tobacco-growing areas have been fundamentally changed, and the problem of farmland water use has been solved, turning some once barren land into fertile farmland. At present, the problem of drinking water in rural areas is still an important difficulty for farmers to live in, especially in dry years. In some areas, farmers still need to use manpower or horses to solve the water problem. Therefore, direct distribution of drinking water pipelines for human settlements to farmers in the covered areas through the layout of water source projects will be an important direction for the development of rural water sources in the next step and will further improve the well-being of farmers⁹.

2. Promoting the construction of beautiful tobacco areas and building a model beautiful countryside requires not only the beautiful

environment, but also the more prosperous life of the common people, the more civilized local customs, the more democratic management, the more convenient public service, the more democratic management and the more harmonious interpersonal relationship. To promote the construction of beautiful tobacco-growing areas, the following aspects need to be considered by Yunnan Tobacco:

(1) Adhere to the concept of environment-friendly development and create a beautiful and livable tobacco-growing area. Adhere to the development concept of "green, ecological, characteristic, high-quality and safe", continue to accelerate the application of green production technology focusing on the application of organic fertilizer, biomass fuel and plastic film recycling, and increase the protection of ecological environment in tobacco-growing areas¹⁰. In terms of organic fertilizer utilization, 100% farmyard manure coverage and more than 40% commercial organic fertilizer application should be achieved in tobacco-growing areas of the province, and the on-site development and utilization of commercial organic fertilizer raw materials should be increased. Efforts should be made to reduce the average application amount of pure nitrogen in tobacco-growing chemical fertilizer in the province by 15kg/hm². In the application of biomass fuel, the deployment arrangement of the National Bureau on the popularization and application of biomass fuel should be responded positively, the procurement of biomass fuel burners should be regulated, and the research on biomass fuel raw materials should be increased, so as to achieve low cost, high combustion value and less emissions. As for the recycling of plastic films, on the basis of adhering to the recovery of 100% residual films in tobacco-growing areas, the utilization of resources should be increased to avoid the secondary pollution of the recovered residual films on the environment; China's call to continuously promote the construction of a green prevention and control technology system should be actively responded to; the plant protection policy of "giving priority to agricultural prevention and control, physical prevention and control, biological prevention and control, supplemented by chemical prevention and control" should be adhered to; efforts should be made to promote physical prevention and control measures

such as insect killing lamps, yellow sticky boards, blue boards and gyplure. The aphid prevention and control technology of *Aphis gossypii* bees should cover 100% of the annual tobacco growing fields, the safe production of tobacco leaves should be promoted, and efforts should be made to create a livable tobacco-growing area with beautiful environment.

(2) Adhere to the concept of resource-saving development and improve the beautiful and livable tobacco-growing areas. The promotion of STP in tobacco-growing areas should be strengthened to continuously improve the social and economic conditions of people and communities related to tobacco production and gradually improve the efficiency and competitiveness of tobacco production. The pilot work of the STP project and tobacco production should be organically integrated to learn from each other's strong points and complement each other. Measures should be formulated and implemented in strict accordance with the standards according to the assessment contents (management, crops, environment and tobacco practitioners) of the four sections of the STP project, so as to achieve the integration of the STP project system and the tobacco production management system in the pilot area. The promotion of light, simple and applicable and resource-saving technologies, such as transplanting seedlings under film, one-time picking and baking of upper leaves, integration of picking and baking, and integration of water and fertilizer, should be strengthened. The transplanting area of seedlings under film should reach 80%. The "1+N" specialized baking technology should be promoted to more than 300,000 hm², the integration of picking and baking more than 30,000 hm², and the integration of water and fertilizer more than 13,300 hm². Efforts should be made to reduce the use of substrate raw materials, baking raw materials and water resources in tobacco leaf production, and to continuously improve and transform the ecological environment in tobacco-growing areas.

3. Continuously promote tobacco farmers to increase their income and make them a model of rich farmers. Tobacco planting is a benefit-stable industry. To continuously increase the income of tobacco farmers and make them a model of rich farmers, the first step is to maintain the stable development of tobacco industry and stabilize the planting and purchasing plan of farmers in tobacco-

growing areas, so as to ensure benefits every year; the second step is to develop diversified industries, steadily increase the income sources of tobacco farmers, and keep the income of tobacco farmers growing year by year so as to realize the goal of making farmers rich.

(1) Continue to promote the structural reform of tobacco supply side, and continuously improve the quality level of tobacco leaves. Give full play to the decisive role of the market in the allocation of resources. Firstly, closely relying on the tobacco leaf base unit as an effective platform, it is necessary to earnestly implement the content of base unit construction, fully apply the effective tobacco leaf resources to the cigarette formulation of the corresponding industry, and comprehensively improve the utilization rate and adaptation rate of cigarette brand raw materials of the base tobacco leaf in accordance with the high-quality tobacco leaf engineering target of "brand of origin and label of products". Standards should be jointly formulated with industrial enterprises from the aspects of agronomic indicators, external quality, internal quality, acquisition quality and relevant technical measures, to jointly supervise the implementation, jointly assess the management, and strictly implement the planned exit management for base units that are not satisfactory to industrial enterprises. Secondly, it is necessary to continuously improve the characteristic supply level of tobacco leaves. The working experience of Yunnan China Tobacco and Yunnan Tobacco Business in developing "2260" high-end characteristic and high-quality tobacco leaves should be fully used for reference. By selecting tobacco-growing areas together with industrial enterprises, working out production technology points and production and quality assessment methods together, we can jointly create high-end high-quality raw materials and strive to meet the needs of production industry.

(2) Promote the development quality of tobacco farmers' professional cooperatives, and further realize the cost reduction and efficiency increase of tobacco production. First of all, the direction of specialized service subsidies should be changed. Since the development of modern tobacco agriculture, in order to promote the specialized service of tobacco production and reduce labor and cost for tobacco farmers, tobacco has adhered to the principles

of "promoting without coercion, supporting without arrangement, and guiding without substitution", and guided and promoted the continuous development and expansion of tobacco farmers' specialized cooperatives, the significant improvement of specialized service level in the main links of tobacco production, and the continuous enhancement of cooperative service capabilities¹¹. The next step is to change the direction of support for tobacco farmers' professional cooperatives. While keeping the price of professional services unchanged, the subsidies for professional services in mature links such as seedling raising, mechanical farming, plant protection and grading should be reduced, and the subsidies be shifted to those for weak links in tobacco leaf production such as professional baking and organic fertilizer application, so as to further reduce the production cost of tobacco farmers and improve the quality of tobacco leaves. Finally, it is to explore the establishment of tobacco farmers' professional cooperative association, to form the industrial development road of social cooperation, and to change the situation of comprehensive management by a single cooperative in the past. Through the establishment of cooperative association, in the process of professional service and diversified business, the industrial development pattern of division of labor contract and flow operation is formed, which not only reduces the operation cost, but also improves the work efficiency.

(3) Accelerate the cultivation of professional farmers (tobacco farmers) and improve the benefits of large-scale planting. According to the current economic benefit analysis of tobacco planting, 0.33 hm² of tobacco planting can only achieve the goal of family poverty alleviation. It is obvious that to achieve the goal of rich farmers, it is necessary to carry out scale planting to increase the family income. In order to strengthen the cultivation of professional tobacco farmers, first of all, the local Party committee and government should reasonably guide the distribution of tobacco farmers and increase the labor output of tobacco farmers, so as to solve the farmers' over-reliance on land; secondly, it is necessary to rely on village committees or cooperatives to speed up the transfer of land sale and leaseback, to improve the level of planting scale and economic benefits of

professional farmers (tobacco farmers), so as to achieve the goal of getting rich from tobacco.

(4) Develop the industry of increasing income after tobacco production and enhance the potential of increasing income of tobacco farmers. Under the premise of limited space for tobacco leaf planning and price growth, the development of diversified industries is the key to achieve sustainable income increase of tobacco farmers. In recent years, cooperatives' multi-industries such as biomass fuel and organic fertilizer processing and comprehensive utilization of facilities have played a very good role in promoting the income of tobacco farmers. In particular, the construction of industrial complex in tobacco-growing areas follows the principle of "government-led, farmer-led, village-driven, and industry-driven", taking administrative villages as a unit, relying on the whole tobacco industry chain, gathering high-quality land resources, using established infrastructure, and establishing a modern agricultural industrial park based on tobacco and coordinated development of multiple industries. On the basis of solving the stability of primary production, it gradually extends to secondary and tertiary industries, and promotes industrial revitalization and farmers' prosperity in tobacco-growing areas^{12,13}. For example, in Dali, Baoshan, Yuxi, Qujing and other provinces (cities) in Yunnan Province, tobacco growers can increase their diversified operating income by more than 7.50 yuan /hm² after planting flue-cured tobacco by helping cooperatives to introduce leading enterprises and planting green peas and sweet and crisp corn on the land after tobacco planting. Planting one mu of flue-cured tobacco a year can generate an income equivalent to two mu. For example, through years of continuous development, tobacco growers can not only accumulate certain funds, but also further explore the development of other industries. Thus, after years of continuous development, tobacco farmers can not only accumulate certain funds, but also further explore the development of other industries.

(5) Excavate traditional ecological food in rural areas and create new kinetic energy for tobacco farmers to increase their income. It is necessary to adhere to the development concept of "developing agriculture by quality, strengthening agriculture by industry and enriching farmers by brand name"¹⁴, take the

people's pursuit of green ecological food as the starting point and the end result, adopt the model of "tobacco guidance, cooperative organization, tobacco farmers' participation and market operation", take tobacco farmers' professional cooperatives as the platform, fully excavate and restore the traditional rural ecological food, give full play to the wisdom and strength of the masses, carry out the standardization and large-scale production of ecological food¹⁵, cultivate organic, green, medium and high-end characteristic agricultural products, and use both online and offline sales channels to expand new income points for tobacco farmers.

Author Declaration

This research is not funded by any organization related to tobacco production.

References

1. Tao Runzhao. Analysis on the Correlation between Regional Economic Development and Local Tobacco Industry Development. *China Economic and Trade*, 2016 (7): 47.
2. Sun Kaiguo. Analysis of the effects of tobacco cultivation on soil nutrient characteristics. *Agriculture & Technology*, 2017, 37(12): 15.
3. Anderson, Susan. Strategic Marketing in the UK Tobacco Industry. *The Lancet Oncology*, Vol.3 August, 2002:142-146.
4. Baker, Patricia et al. Tobacco-Don't Underestimate Importance of Total Return. *Merril Lynch Co.* December, 2001.
5. Capehart, Thomas C.Jr. Trends in the Cigarette Industry after the Master Settlement Agreement. *USDA's Electronic Outlook Report from the Economic Research Service*, October, 2001.
6. Fell, Jonathan. Tobacco Industry-Managing European Cigarette Portfolios. *Morgan Stanley*. June 6, 2003.
7. Delipalla, Sophia et al. Estimating Tax Incidence, Market Power and Market Conduct: The European Cigarette Industry. *International Journal of Industrial Organization*. 2001(19): 885-908.
8. Levy, DT et al. The US Cigarette Industry: An Economic and Marketing Perspective. *Tobacco Regulatory Science*. 2019(5): 156-168.
9. Sanders-Jackson, Ashley et al. A Qualitative Evaluation of Tobacco Consumption in the Rural Context. *Tobacco Regulatory Science*. 2020(7): 224-234.
10. Duan Jueping. The development path of rural collective economy under the strategy of Rural Revitalization. *Regional Governance*, 2020 (1): 36-38.
11. Yu Hongguang, Lyu Bingbing, Wu Kaicheng. "Combination of farm and cooperative" to promote the

Study on Countermeasures of Promoting Rural Vitalization Strategic Development by Tobacco Production in China

- transformation and upgrading of tobacco agriculture. *Farmers Daily*, Sept. 4, 2013 (002).
12. Huang Qinghai, Ping Xianliang, Wu Changqiang, et al. How to Realize Industrial Prosperity in Jiangxi Agricultural Rural Areas. *Jiangxi Agriculture*, 2018 (9): 16-17.
 13. Zeng Fusheng, Cai Baozhong. Realization of Hunan Rural Revitalization Strategy by Industrial Prosperity. *Research of Agricultural Modernization*, 2018, 39 (2): 179-184.
 14. Jiang Zelin. Industrial Ecology and Eco-industry in the Strategy of Village Rejuvenation. *China Economic & Trade Herald*, 2018 (9): 23-24.
 15. Wen Shuangquan. Wu Shan: Strengthen the Industrial System with Special Features and Open the Chapter of Villages Revitalization. *The World and Chongqing*, 2018 (7): 30-33.