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Principles and Ways of Innovation on Organizational Model of Tobacco Production in China

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Abstract The innovation of organizational model of tobacco production is the key to realization of sustainable development of tobacco production in China. From the perspective of sustainable development, we analyze the necessity of innovation of organizational model of tobacco production, put forward the principles on innovation of organizational model of tobacco production, and offer corresponding recommendations for the ways of innovation of organizational model of tobacco production.

Key words Tobacco production, Organizational model, Innovation, Modern tobacco agriculture

In recent years, the tobacco production in China has achieved dramatic development, making great contribution to the development of China's agricultural economy and increase in farmers' income. However, with the economic development, the deep-seated contradictions embedded in the production of tobacco begin to loom large, which have caused some difficulties for the sustainable development of tobacco production in China^[1–3]. To achieve sustainable development of tobacco production, it is necessary to comprehensively address the problems of resources, ecology, economy and society. And the innovation of organizational model of tobacco production is the key^[1–3].

1 The necessity of innovation of organizational model of tobacco production

The decentralized planting mode of tobacco and the traditional practice of "fight alone" have been unable to meet the development needs of cured tobacco production, so it is necessary to achieve the transformation of tobacco production to modern tobacco agriculture. Innovating upon the organization and management model of tobacco production in line with the requirements of modern tobacco agriculture is the prerequisite for achieving this transformation^[20].

1.1 Increasing tobacco farmers' income and ensuring the supply of raw materials The traditional peasant economy mode, characterized by low degree of organization and intensification, weak self-development capacity, low labor efficiency and poor scale merit, can not adapt to the requirements of big business

and big brands on high quality, features and stability of raw tobacco material. Therefore, innovating upon the organizational forms of tobacco production and developing the modern tobacco agriculture to provide high-quality raw materials for the key brands, is a necessary requirement for achieving steady and healthy development of the industry, and an inevitable choice for maintaining the sustainable development of tobacco production^[21].

1.2 Optimizing the allocation of resources Superior forms of production organization can improve the efficiency of resource allocation, give full play to the advantages of technology, human resources, capital, land and other resources, and achieve rationalization of the tobacco production layout, so that the quality and structure of tobacco is improved significantly; the industrial enterprises' needs for tobacco material are effectively met; the capacity to produce and supply high-quality tobacco is ensured.

1.3 Achieving the sustainable development of tobacco production The traditional small-scale cultivation mode is difficult to produce the tobacco material with the same quality and stable amount, difficult to meet the development needs of the brand of the cigarette industry, therefore, it has become increasingly unsuited to the requirements of the development of modern tobacco production. At the same time, with the accelerated pace of agricultural planting structure adjustment, the role of the administrative means in stabilizing the tobacco planting scale is gradually weakened. In addition, the accelerated pace of industrialization and urbanization, the transfer of a large number of rural labor forces, great changes in the structure of tobacco farmers, and significant increase in the tobacco production costs, result in the gradual loss of the comparative advantage of tobacco planting. So, only by adopting the advanced production pattern to organize tobacco production, can we reduce the tobacco production costs and increase the tobacco production efficiency, effectively make tobacco

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co farmers get the benefits, and promote the sustainable and healthy development of tobacco industry.

Therefore, innovating upon the tobacco production organization and management mode, fundamentally changing the small-scale tobacco cultivation mode, and achieving the scientific management of the whole process of tobacco production (thereby improving the allocation efficiency of tobacco resource, increasing tobacco farmers' income and ensuring the production capacity of high-quality tobacco), is the key to promoting the building of modern tobacco agriculture, and also an effective way to achieve the sustainable development of tobacco production^[16].

2 Description of major organizational model of tobacco production

Worldwide, at present, there are many organizational forms of tobacco production, mainly including specialized planting households, tobacco farmers' mutual-aid team, tobacco farmers' cooperatives, tobacco farmers' association, family farm, etc.

2.1 Specialized planting households The characteristics of specialized planting households: based on the self-owned labor and household contract management, with planting tobacco income as the main source of the family economy, moderate production scale of specialized planting households.

2.2 Tobacco farmers' mutual-aid team The characteristics of tobacco farmers' mutual-aid team: constituted by a number of tobacco growers on good terms, with the production intention of jointly developing cured tobacco, within the given tobacco production areas. Usually the prestigious, accommodating and impartial farmers with high production level serve as the leaders of mutual-aid team. The group members support and help each other, jointly organizing the cured tobacco production in accordance with the relatively consistent technical requirements. The group leader is responsible for the management, guidance, supervision on team members' production.

The generation background of tobacco farmers' mutual-aid team: scattered growing areas; considerable tobacco growers; small growing area per household; low concentration degree of growing. Through the tobacco farmers' mutual-aid team, we can implement consistent technical operation, and strengthen the implementation of various production technology measures, to improve the level of cured tobacco cultivation, reduce differences in the tobacco quality, and increase the efficiency of tobacco growing.

2.3 Tobacco farmers' association Tobacco farmers' association is a kind of large-scale but loose tobacco production organization form, whose characteristics are as follows: organized by the enterprises, involving the government, the tobacco farmers to participate, initiated by the tobacco farmers, on behalf of the interests of tobacco farmers. The members of tobacco farmers' association are often the tobacco farmers with better tobacco growing technique, stable tobacco growing area and good benefits. Therefore, the members are both stable large tobacco growing households, and tobacco production leaders.

The advantages of tobacco farmers' association are mainly reflected in the following three aspects: (1) Improving the degree of organization of tobacco farmers; (2) Improving the concentration of tobacco production; (3) Through efficient network, promoting the advanced production technology and improving the level of tobacco production.

The tobacco farmers' association is mainly suitable for the regions where people are in a dispersed residence state; the transportation is convenient; the production technical guidance is difficult; the tobacco technical guidance personnel are rare.

2.4 Family farm Farm production is the inevitable outcome of the development of market economy to a certain extent. It has the basic characteristics of modern mass production, with good benefits, which can improve production efficiency, conduce to specialized collaboration, and conduce to improvement and stability in the quality of tobacco.

In the countries with developed market economy, although there are many forms of agricultural production organization, the family farm is the most common form. The family farm has the most agricultural resources and produces the most agricultural products, which is the most important form of agricultural production in these countries.

The family farm has the following advantages:

(1) It can stabilize the growing area of tobacco, conducive to the implementation of contract of production and marketing. Under the support and assistance of the tobacco companies and the local government, the operators of tobacco farm sign the land contract with the village committee. Thus, the planting area is accurate, conducive to the implementation of the contract system of tobacco production and sales, and realization of "production based on order".

(2) It implements mechanized farming, promoting labor efficiency. There is a large growing area of tobacco in contiguous farms. In land cultivation, fertilization, ridging, transplanting, film covering, watering, weeding, sprout inhibition, curing and other management links, the mechanized operation can be basically achieved, so as to reduce labor intensity, reduce costs, and improve work efficiency.

(3) It helps to implement professional management and promotes the application rate of technology.

(4) It helps to improve the purity and acceptability rate of tobacco. As against the traditional smallholder production organizations, the family farms have great advantages, but at the same time, there is the problem of poor ability to resist risks. In the case of suffering natural disasters or management failures, the farm will also suffer a greater loss, and the owners' income can not be guaranteed, thereby restricting the development of family farms.

2.5 Cooperatives Under the conditions of market economy, cooperatives are the economic organization with joint-stock nature for the farmers to engage in agricultural production, implementing "join a cooperative voluntarily, withdraw from a cooperative freely". Members can join the cooperatives with their own cash,

means of production or bank loans; the capital is embodied in the form of shares. The main work of the cooperatives is to provide pre-production services and post-production services (collection, cleaning, rough processing, and storage) to members, and assist farmers to market.

Cooperatives are established based on a voluntary basis, and joining or quitting is completely free. Each member is entitled to equal rights, and "one-person, one-vote" management system is adopted. The council of cooperative is generated as the institution of power by the election of all members, and all the major activities of the cooperatives must be approved by the council. At the same time, the board of supervisors is generated by election, which will supervise the operation of cooperatives and financial operation. In addition, to join the cooperatives, the members must hold shares of cooperatives, and the common property of cooperatives belongs to all members. According to the members' holdings and cooperatives' operating performance, the cooperatives distribute the dividends; at the same time, the members have to bear the possible business risks and losses.

Cooperative is the non-governmental organization voluntarily established by the farmers. Although it has no direct relationship with the government, European governments vigorously support the development of cooperatives through legislation and preferential policies.

For example, Italian law clearly provides that the main purpose of cooperatives is to provide favorable agricultural data and technology, and information services to members, not for profit. Italian agricultural cooperatives, as "cooperative legal person" different from other enterprises, enjoy a lot of preferential treatment in policies, taxation, credit, etc. By the EU agriculture subsidies, the government provides direct financial support to agricultural cooperatives or pays interest of loans for agricultural projects, by setting up technical training courses and providing free training for farmers.

3 Innovation of organizational model of tobacco production in China

3.1 Innovation principles of organizational model of tobacco production in China To implement the innovation of organizational model of tobacco production, it is necessary to adhere to the fundamental position of the household contract management, in accordance with the general requirements of "combination of centralization and decentralization, two-tier management, professional cooperation"; strengthen publicity, guidance, and service support; establish and improve the tobacco production mode "planting and operation by individual household, unified organization and services by tobacco farmers' professional cooperatives", so as to promote large-scale cultivation, specialized division of labor and intensive management.

(1) Sticking to the principle of taking actions that suit local circumstances. Differences in socio-economic conditions and the natural ecological conditions, determine differences in the organi-

zational model of tobacco production. Therefore, to innovate upon the tobacco production organization form, we must take actions that suit local circumstances, not only fully considering the actual situation of tobacco production and tobacco farmers, but also fully considering the carrying capacity of natural resources and advanced experience at home and abroad, so as to avoid undue losses.

(2) Sticking to the market-oriented principle of participation of interests. It is necessary to establish the corresponding tobacco production organization, to organize the farmers who practise decentralized management and get rid of the small scale peasant economy drawbacks. According to the requirements of the development of the market economy, driven by the interests, it is necessary to take capital cooperation or labor production cooperation as a link, so that there is a close relationship of interests between the cooperative members and the cohesion of cooperative organization is enhanced, thereby achieving increase in the tobacco growing income.

(3) Sticking to the principle of taking tobacco farmers as the main body. To innovate upon the tobacco production organization form, we must fully respect the will of farmers, and respect the tobacco farmers' dominant position in the new economy. We should adhere to the principle of "joining voluntarily and quitting freely", and implement the operating mechanism of "established by farmers, operated by farmers, and benefiting farmers", to fully mobilize the enthusiasm of tobacco growers for production, and enhance the competitiveness of the new economy.

(4) Sticking to the principle of policy support. For the innovation of forms of tobacco production organization, we not only need to strengthen the support and guidance, but also need to adopt preferential policies to vigorously promote change in the mode of tobacco production.

The change and innovation of forms of tobacco production organization, is an extremely complex system project. Therefore, we must take actions that suit local circumstances, seek truth from facts, grasp the principle, follow the law, and adhere to developing various forms of tobacco production cooperation organization. Through constant practice and gradual improvement, we should have the courage to explore the tobacco production cooperation organization forms with local characteristics, to adapt to the requirements of the development of the modern tobacco agriculture construction, and ensure sustainable, healthy and stable development of tobacco production.

3.2 Ways to innovate upon organizational form of tobacco production in China According to the principles of with tobacco farmers as main body, family operation, taking actions that suit local circumstances, and appropriate scale, we should promote reasonable transfer of basic tobacco land, choose specialized planting households, family farms and other planting subjects based on the local situation, to carry out tobacco production operation with the family as unit, and promote moderately large-scale cultivation.

At the same time, according to the principles of self-organization and self-development, we must adhere to taking the tobacco

farmers as the main body, build tobacco farmers' professional cooperatives, give full play to the enthusiasm, initiative and creativity of tobacco farmers, promote specialized division of labor, perfect the mode of operation, regulate the operation mechanism, improve the management level and development capacity of cooperatives, and achieve self-development of cooperatives.

3.2.1 Specialized planting households. On the basis of household contract management, specialized planting households are the peasant households with production capacity, the main body of tobacco production, through the transfer of land management rights to concentrate 10 – 100 mu of land, based on their own labor, whose family income is mainly from tobacco growing.

3.2.2 Family farm. The family farm, the tobacco production entity, based on the family members' management and employing workers for operation, practising independent operation and assuming sole responsibility for its profits or losses, is often founded by the people with certain economic strength and good capacity of production management. The family farms have a large scale, generally more than 6.7 hm², whose arable land is obtained through the transfer of land management rights.

The family farms have initially had the basic characteristics of modern mass production, able to implement the scientific management of the process, conducive to the consolidation and development of specialization and cooperation, conducive to the improvement and stability in the quality of tobacco. The development of family farms is subject to the constraints of the topography in the producing areas. The establishment of tobacco farms is based on the principles of "by operation of law, voluntariness, paying", under the premise of adhering to the basic household contract management system of land and protecting various farmers' land contract management rights.

3.2.3 Tobacco farmers' professional cooperatives. Tobacco farmers' professional cooperatives are the economic cooperation organizations of tobacco production of joint-stock nature, with independent status of legal person. The members of tobacco farmers' professional cooperatives are mainly tobacco farmers, and the aim of tobacco farmers' professional cooperatives is "joining cooperatives voluntarily, production and marketing based on contract, mutual assistance and reciprocity, equal opportunity". The tobacco farmers' professional cooperatives have the functions of planning industry, organizing production, serving the farmers, and managing the members, of which the most important is serving the farmers. The characteristics of tobacco farmers' professional cooperatives: with voluntariness and reciprocity as the fundamental principle, in the form of tobacco production cooperatives to jointly organize tobacco production, the benefit obtained to be owned by the members in accordance with the trading volume and share.

The service-oriented professional cooperative is important realization form of specialized and socialized service, also the inevitable requirement of large-scale cultivation, and still the manifestation form of intensive management. It is a key part of in the implementation of modern tobacco agriculture. In accordance with

the principle of voluntarily joining cooperatives, the professional cooperatives are established, to engage in the links of specialized operation, such as cultivation of seedling, farming, ridging, fertilization, transplanting, plant protection, harvesting, curing, and grading, which can effectively reduce tobacco farmers' labor intensity and complexity of tobacco growing, reduce production costs, increase the tobacco growing income, and improve the efficiency. Tobacco farmers' professional cooperatives include seedling cooperative, mechanized farming cooperative, plant protection cooperative, curing cooperative, grading cooperative, etc.

Tobacco farmers' professional cooperatives have the following characteristics:

(1) The tobacco farmers are the main body. Tobacco growers voluntarily join cooperatives and operate independently. Tobacco farmers' professional cooperative is tobacco farmers' organization, not subsidiary body of tobacco stations or village committees.

(2) The service functions are prominent. By the cooperatives, tobacco farmers' self service and cooperative service are achieved, to activate tobacco production factors, improve the efficiency of resource allocation, reduce costs, and mobilize tobacco farmers' enthusiasm.

(3) Through the curing barn, breeding shed, farm machinery and many other operating assets, the tobacco companies support the tobacco farmers' professional cooperatives, so as to ensure that tobacco farmers can get benefit.

(4) The property rights are clear. Tobacco enterprises have right of speech, final right of disposal and right of supervision on service pricing to the operable assets formed due to their investment in infrastructure. The cooperatives have management right to operable assets and tobacco farmers' usufruct, to achieve the sharing for tobacco farmers.

(5) Tobacco farmers' professional cooperatives do not absorb social capital, avoiding damage to the tobacco farmers' usufruct of operating assets due to the entry of social capital. When cooperatives need funds, they can solve problem through other means.

(6) The operation of cooperatives is normative. Under the leadership of local Party committees and government, the chairman and general manager are selected, and the system of council and board of supervisors is improved, to ensure comprehensive improvement in the management level of cooperatives. The cooperatives are non-profit institutions and the service pricing hinges in a large measure on the cost.

(7) The development is diversified. Tobacco farmers' professional cooperatives should focus on tobacco and highlight service, develop the supporting industries and diversified business, enhance the anti-risk ability and self-development capability.

3.2.4 Base on the building of base unit, establishing comprehensive service system. In terms of the building of cooperatives, it is necessary to establish cooperatives providing comprehensive services, and build a socialized and specialized service system. This type of cooperative providing comprehensive services should

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ernment should provide special low-interest loan to the cooperatives. For example, the Three Sidun Mango Farmers' Cooperative provides more than 10 million yuan guaranteed loans for the cooperative members every year to solve the problems of cooperative economic development; the members, in accordance to the requirements of cooperatives, produce brand products. In this way the cooperative is becoming stronger and the members' income increases steadily. In recent years, the amount of mango sold outside the island accounts for 10% of the total. Besides, owing to the honesty of the cooperatives, the guaranteed production capital and the high quality of products, the unit price of mango produced by this cooperative is 0.6–2 yuan/kg higher, which greatly improves the economic benefits of the cooperative members.

3.3 Farmers' cooperatives can cooperate with the leading enterprises to improve the members' economic income With the aid of the funds, brand, management system, technical conditions and promotion channel of leading enterprises, the farmers' cooperatives can realize their development according to the market needs, regional distribution, specialized production, standardized and intensive management, and brand promotion, which will build a good relationship between thousands of small-scale production and ever-changing market and improve the members' income. For instance, Xiaoling farmers' specialized cooperative work together with Dongfang Tianrun Agricultural Development Co., Ltd. in

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strengthen self-construction, self-development, efficient service, and standardized management, to become the main body of innovation of organizational model of tobacco production.

In the base unit, the cooperatives providing comprehensive services are established, dominated by the tobacco companies, with tobacco farmers as the main body, to truly achieve unified and decentralized management system, so as to improve standardization management level, ultimately improve quality of tobacco, and increase tobacco farmers' income.

4 Conclusions

With the continuous development of China's society and economy, China's tobacco production is facing some problems, such as decentralized operation, low tobacco growing income and uneven quality of tobacco. Therefore, we must vigorously promote the construction of modern tobacco agriculture, to achieve the sustainable development of China's tobacco, and provide continuous, stable and high-quality source of raw materials for cigarette industry. Based on the actual situation of the producing areas, we should take actions that suit local circumstances, stick to the principle of taking tobacco farmers as the main body, vigorously strengthen policy support, and innovate upon the organizational forms of production, to coordinate the interests among the country, industry, and tobacco farmers, lay the foundation for the sustainable development of tobacco in China.

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Dongfang, Hainan Province, the cooperative now has 232 members, and 100 hm² planting area. Taking a pattern of "cooperative + company + farmers" management, the cooperative has greatly improved the income of its members. In 2008, the cooperative realized an output value of 8.058 million yuan with a profit of 3.728 million yuan; the per capita income of its members was 30,300 yuan; In 2009, the output value was 13.5 million yuan with a profit of 4.213 million yuan, the per capita profit of its members was 34 000 yuan, equivalent to 10.6 times of the per capita income of Xiaoling villagers who didn't joined the cooperative (3 209 yuan) in the same year.

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