The Process and Impact of China's Sericulture Technology towards the World

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Abstract: As an important representative of China's traditional farming civilization, sericulture industry has a long history of more than 5,000 years. The development of more than 5,000 years has not only created a large amount of material wealth but also left us precious spiritual wealth. However, with the rapid development of social economy, especially the deepening of economic globalization, some problems arising from the development of sericulture industry in China have become more prominent. Therefore, this paper will study the process and impact of Chinese sericulture technology on the world. Analyzed the problems encountered in the development and proposed corresponding improvement measures. The research shows that the sericulture industry will continue to develop healthily by improving the overall quality of technicians, improving the technical level of silkworm farmers, and applying new technology promotion models.

1. Introduction

China is the birthplace of the world's fragrance industry. Sericulture has a history of more than 5000 year in China. The “funding and mulling” and “male farming and weaving” are economic activities with Chinese tradition and characteristics [1]. It also reflects the special emphasis of the silk industry in the history of China's economic development [2]. Silkworm and silk have a history of more than 5000 years in China. The oracle bones have written about silkworm, mulberry, silk, silkworm and silkworm gods [3]. The author investigated the status quo of sericulture production, and analyzed that the effect of sericulture production on low income has not changed. In the face of the development of sericulture industry from other countries, the development of China's sericulture industry feels the pressure, and there is an urgent need to make progress in the promotion of sericulture technology [4]. In the 10 years since the system was put into operation, Chun 'an sericulture has gone from point to surface, from the ground to the fields, and all over the land Sang Hai has turned over blue waves. Chun 'an cocoon from less to more, from inferior to superior, Qiandao Lake cocoon goes everywhere [5]. In the stage of traditional experience agriculture, the development of sericulture science and technology in our country has been in the leading stage, accumulated rich sericulture science and technology knowledge, and appeared a large number of books on sericulture science and technology [6]. Planting mulberry, raising incense, reeling silk and weaving silk are great innovations of the ancient Chinese people. They are an important part of China's ancient splendid culture and a major contribution to the development of human society. They have written an indispensable page in the history of world civilization.

From the time when Lei Zu created the method of nourishing incense, the production of fragrant mulberry in China has a long history and has now developed into a huge industry. Since China's output of vertical seedlings and raw silk exceeded that of foreign countries in 1970 and 1977 respectively, China has been the world's largest producer of silk weaving [7]. However, with the expansion of sericulture scale, there are many problems in the application of sericulture technology, which affect the further improvement of cocoon quality and hinder the healthy development of the industry. Due to the impact of disasters, climate and other reasons, the development of China's sericulture industry is very unstable. In recent years, there have been many ups and downs, bringing great adverse effects to the development of China's sericulture industry [8]. At present, it is the golden age of China's sericulture production development, and the sericulture industry has become China's sunrise industry [9]. With the gradual development of our country, sericulture production

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has given birth to a new round of development opportunities, and this traditional industry will still make new contributions to China's farmers' income. In order to maintain the economic status of China's related industries, there are some problems that have to be taken seriously in the promotion of technology. These problems have been around for a long time [10]. The sericulture technology promotion system has achieved a virtuous cycle and healthy development, and the sericulture industry has undergone earth-shaking changes. With the introduction and development of modern experimental agronomy, China's sericulture technology has made great achievements after more than one hundred years of exploration. Therefore, it is necessary to calmly analyze and face up to the bottleneck problem that currently restricts the development of the sericulture industry.

2. Problems in the application of sericulture technology

2.1. Sangyuan cultivation is not in place

China has a long history of sericulture. In recent years, the promotion of sericulture technology has been extensive and wide, and the level of sericulture technology of silkworm farmers has improved significantly. Silkworm and mulberry industry is an important part of China's rural economy, both in terms of historical development and real economic life. It has played an important role in the history of China's agricultural civilization development for thousands of years. Among them, in the field of agricultural production, it includes mulberry cultivation, silkworm breeding, sericulture, silkworm seedling drying and storage, as well as sales of saplings and fragrances. However, there are large differences in the breeding level, breeding ground conditions, and cultural quality of silkworm farmers. Moreover, our country has four distinct seasons, with rain and heat in the same period, dry and wet seasons are obvious, spring is warm, and summer is humid and rainy. The sunshine is sufficient throughout the year, which is beneficial to the growth of mulberry trees, the accumulation of nutrients in mulberry leaves and the prevention and control of diseases and insect pests. Silkworm and mulberry production has developed rapidly and has become the backbone sideline for Wujiang farmers to become rich. However, since 1994, due to the influence of international and domestic silk prices, sericulture production has entered a period of stagnation from the peak of development, especially in 1998, when cocoon prices continued to fall back, falling to a historical low. For example, the experiment and promotion of the introduction of fine varieties, due to insufficient funds, and technical personnel do not have enough confidence. Therefore, normal research and popularization experiments cannot be carried out under the oppression of external conditions.

For convenience of comparison, we select Zhejiang in the east and Guangxi in the west as two representative provinces and regions to compare with the national average production cost data. As shown in fig. 1, the material and service costs of sericulture production in Zhejiang province in 2015 are slightly higher than the national average, while Guangxi is higher than Zhejiang and the national average.

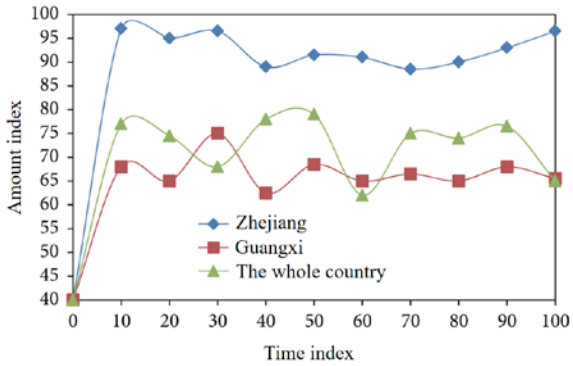

Fig. 1 Trend of Material and Service Expenses

2.2. Silkworm rearing is not well done

However, the rural labor force is gradually flowing to the city, the labor force engaged in

sericulture production is decreasing year by year, and the age structure is aging. On the macro layout of sericulture industry, the development principle proposed in the plan is “to stabilize and optimize the eastern part, gradually upgrade the central part and actively develop the western part”. The former largest silk company in China, Saio Silk Company, went bankrupt due to blind expansion of its scale, disconnection of its capital chain, global financial crisis and other influences. As a result, many sericulture farmers lost a lot. The research and development and promotion of sericulture technology will always depend on professional research and development personnel with certain science and technology to improve excellent varieties, planting methods and planting areas. The face is no longer competition for quantity and price, but mainly for quality and technology competition, because our sericulture production still largely follows the millennium tradition. In this background, various production workshops such as “machines”, dye houses, and clothing shops have appeared. Since the beginning of the Zhou Dynasty, China has been set up to be responsible for the production of sericulture. By the time of the Western Han Dynasty, the official institutions had a large scale. The expansion of sericulture and the reduction of labor directly affect the development of sericulture industry. The management of sericulture is increasingly extensive, which seriously impacts the improvement of modern sericulture technology. Some silkworm farmers do not even use a thermometer and hygrometer, and only rely on “experience” to control the temperature.

Labor cost is the highest proportion of sericulture production, and with the acceleration of China's industrialization, the proportion of labor costs is still growing, and the national average labor cost accounts for 84.25% of the total cost. But as can be seen from Figure 2, the trend is the same as the cost of materials and services.

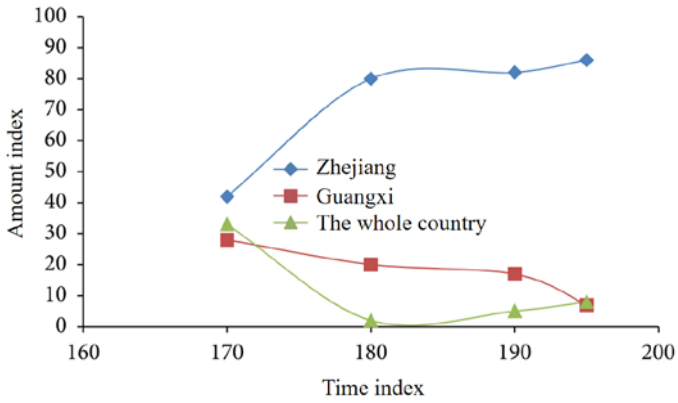

Fig. 2 Trends in labor costs

3. Recommendations and measures

3.1. Strengthen Leadership and Consolidate Production Foundation

Silkworm and mulberry production is one of the agricultural and sideline industries most affected by the plan. Its ups and downs, government intervention and support play an important role. Governments at all levels should strengthen their leadership over sericulture production, formulate a series of preferential policies and reward and punishment measures, create a good atmosphere for development, and fully mobilize the enthusiasm of all levels. However, under the new situation, traditional industries are greatly challenged by modern industries, and new contradictions have emerged in the promotion of sericulture technology. Silkworm and mulberry industry is an important and special industry closely related to agriculture, industry and trade in the national economy. It concerns the employment of tens of millions of people. Its rise and fall also affects social stability and harmony to a certain extent. For example, a light tax policy will be implemented on sericulture production, special product tax will be reduced or exempted, and low-interest discount loans will be provided to large sericulture farmers. For the reconstruction of the co-education facilities and the old mulberry gardens, Fanggeyi re-promoted into the budget or raised funds to solve the problems, thus consolidating and improving the existing production

conditions. The technical requirements of different links are also different. For example, the selection of the technical requirements is lower, and the technical content of the silk-screening workers is higher. This will result in different inheritance content. It is achieved by simply expanding the area of mulberry gardens and expanding the scale of breeding. Rather, relying more on scientific and technological progress to continuously improve the production efficiency of Xiangsang, and increase the output of the unit mulberry area to achieve total growth.

In economics, costs always appear in pairs with income. In the case of the same total income, the lower the cost means the higher the income. The individual silkworm farmers as independent accounting will also calculate the income of sericulture production and the production of sericulture. Compared with other agricultural production, if the sericulture production income is relatively low, it will choose to produce other agricultural products. As shown in Figure 3.

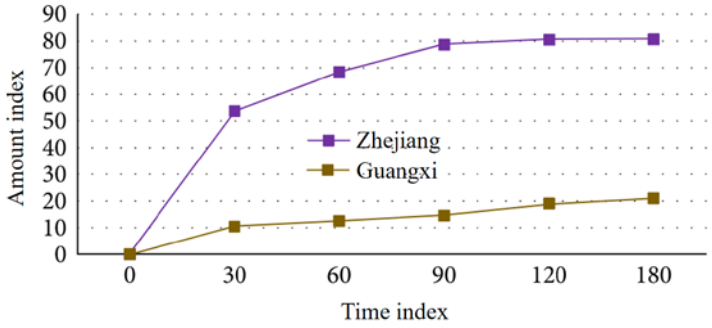

Fig. 3 Trends in cash income

3.2. Improve the technical level of silkworm farmers

Silkworm farmers are the mainstay of sericulture technology application, which is directly related to the promotion and transformation of scientific and technological achievements, and is related to the effectiveness of technology application. In recent years, with the recovery of the economy, the silk industry has gradually picked up, and the city has also increased its support for the sericulture industry. Some of the original state-owned enterprises have re-established their silks with a new look after restructuring and restructuring. It is recommended to optimize the layout according to the stable total amount, concentrate the advantages, form the principle of scale, and carry out internal structural adjustment. When guiding their self-learning, it is necessary to understand the psychology of the relevant technical personnel, and pay full attention to the promotion methods. Therefore, in the process of promoting sericulture technology, we should implement matching measures, combine technology with material, and create a good environment for technology promotion as much as possible. Moreover, sericulture is not the only agricultural industry in our country. Besides planting mulberry and raising silkworm, sericulture farmers also engage in other agricultural production. Some sericulture farmers do not pay enough attention to sericulture industry. A sericulture cooperative will be formed based on the principles of voluntary participation, benefit sharing and risk sharing. The scattered households will be formed into compact units. Actively guide farmers and sericulture graduates to exchange technical experience with each other and learn and promote sericulture technology in exchange and cooperation. With the rapid development of sericulture industry, the regional distribution is getting wider and wider, the production scale is getting larger and larger, and the market demand for cocoon quality is getting higher and higher.

4. Conclusion

China has always been famous for its ancient silk civilization. It is also the world's silk production center and the largest country. The sericulture industry has distinctive features and dominates the international market. Since the reform and opening up to the outside world until the middle of the 20th century, the sericulture industry in our country has further developed, which has played a great role in national economic construction, especially in earning foreign exchange and

solving the three rural issues. In order to make the sericulture industry bigger and stronger, only by combining with the reality of our country, emancipating our minds, changing our ideas, focusing on sericulture farmers, finding the breakthrough point for the promotion of sericulture technology, coping with challenges and being brave in innovation. To establish a set of sericulture technical service system suitable for the actual situation of our country and promote the sound and rapid development of sericulture industry in our country. Excavate the potential of production efficiency, achieve the goal of saving effort, saving costs, and high efficiency, and popularize the existing organic combination of less breeding, platform breeding, mulberry breeding, standardized pest control, model fertilization, etc., and greatly improve working hours. Faced with the continuous deepening of the reform of the rural economic system, in the face of the rapid development of science and technology, the sericulture science and technology promotion system must always adhere to the scientific and technological progress as the forerunner and the satisfaction of the silkworm farmers. Committed to the whole process of service, to accelerate the promotion of technology as the pace of innovation, and strive to be at the forefront of the province and the country in the progress of sericulture technology. Pay attention to science and technology investment, speed up the promotion of new varieties and new technologies, increase scientific and technological testing and scientific and technological training, improve the scientific and technological content of sericulture production, and improve the overall efficiency of sericulture production.

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