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Analysis and Thinking on Citrus Production and Marketing Situation of Hunan Province in 2017

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Abstract In 2017, both the planting area and yield of the citrus in Hunan Province increased, but some production areas suffered decline in yield due to abnormal climate. The sales price of citrus in the whole province increased compared with the previous year, and the sales progress was faster than the previous year. Due to the much increase of planting costs, the income of citrus growers declined. Therefore, it is recommended to promote the development of citrus industry in Hunan Province through strengthening the overall planning of the industry, consolidating the seed base, developing primary processing and deep processing, and enhancing brand building.

Key words Hunan Province, Citrus, Production, Marketing, Export, Processing, Development ideas

1 Introduction

According to our survey, in 2017, both the planting area and yield of the citrus in Hunan Province increased, but some production areas declined in yield due to abnormal climate. The sales price of citrus in the whole province increased compared with the previous year, and the sales progress was faster than the previous year. Due to the much increase of planting costs, the income of citrus growers declined.

2 Citrus production and marketing situation of Hunan Province in 2017

2.1 Increase in citrus planting area and yield The citrus varieties planted in Hunan Province mainly include Wenzhou Satsuma orange, ponkan, navel orange, rock candy orange, *etc.*^[1]. According to our survey, the planting area of citrus in Hunan Province in 2017 was estimated to be 0.38 million ha, increasing by 0.13 million ha compared with the previous year; the yield was 5.17 million t, increasing by 0.13 million t and the growth rate was up to 2.6%. In terms of varieties, Wenzhou Satsuma orange is still the variety with the largest planting area^[2]. In 2017, the planting area of Wenzhou Satsuma orange reached 0.1533 million ha, accounting for more than 40% of Hunan's citrus planting area. However, due to abnormal climate, the yield declined compared with the previous year. The planting area of navel orange and ponkan was higher than 66700 ha, the yield increased greatly compared with the previous year; the rock candy orange planting area was about 33300 ha, both the planting area and yield increased.

Due to the wide distribution of citrus cultivation in Hunan Province, the climate in some producing areas was abnormal in 2017, the yield of different varieties of citrus would be different. (i) Shimen County. In some areas, there were more rains in the

first half of 2017. In July – August, the drought lasted for a long time, leading to great decline of the yield of Wenzhou Satsuma orange, and the total yield was 0.25 million t, reducing by 28.7% compared with the same period of last year; the yield of navel orange increased, the total yield was 0.1 million t, increasing by 25.0% compared with the same period of the last year. In addition, due to impact of the climate, the taste of Wenzhou Satsuma orange is sourer, and the soluble active substance is reduced. The soluble active substances of the early-maturing and mid-late mature varieties are lower than the annual level by 10% and 12% respectively. According to our survey data, in the new agricultural management entities engaged in citrus planting in Shimen County in 2017, the planting area of early maturing citrus in Xiuping horticultural farm was 733.33 ha, basically equal to the last year, and the yield declined by 48.3% compared with the previous year (15500 t); in Yahui Citrus Specialized Cooperative of Shimen County, the yield of early-maturing Satsuma orange declined by more than 40% compared with the previous year, and the sugar content declined to 10% – 11%, reducing by 2 – 3 percentage points compared with the previous years. (ii) Yongxing County. In 2017, the planting area of rock candy orange was 9466 ha; in 2016, due to the frost damage at the beginning of the year, the yield was 85000 t; in 2017, the yield returned to 0.2 million t; however, due to drought in August to October, the rock candy orange was small (more than 50% fruit had the diameter less than 6 cm), the quality was lower, and the taste was slightly sour. (iii) Hongjiang City. Its "Qianyang" rock candy orange is of high quality and famous. In 2017, the planting area was 10000 ha, and the yield was estimated to be around 0.18 million t. (iv) Changde City and Xiangxi Autonomous Prefecture. In 2017, the citrus yield in Changde City reduced by 0.15 million t, reducing by 20%. Variety with yield decline was mainly Wenzhou Satsuma orange; in Xiangxi Autonomous Prefecture, the yield increased by 0.13 million t, increasing by 23.7%, and the variety with yield

increase was mainly ponkan. In addition, in 2017, Yongzhou City, Huaihua City, and Shaoyang City, the yield increased by 0.16 million t, and the yield in Chenzhou slightly declined.

2.2 Increase in the sales price of citrus compared with the previous year In September 2017, Wenzhou Satsuma orange in Hunan Province began to be sold, and the sales price increased compared with the previous year. Among the production areas, the price of the early maturing Satsuma orange in Shimen County was 2.5 yuan/kg, increasing by 31.6% compared with the same period of last year, and the price of mid-late mature Satsuma orange was 2.8 yuan/kg, increasing by 27.3% compared with the same period of last year; No. 6 navel orange was 4.3 yuan/kg, increasing by 26.5% compared with the same period of last year; the navel orange in Dao County was 4.6 yuan/kg, increasing by 9.5% compared with the same period of last year. According to our survey, the planting area and yield of navel orange and rock candy orange in Hunan Province increased significantly in 2017, and the sales price in the province also rose compared with the same period of last year. The main reasons for the good production and sales of citrus in Hunan Province are as follows. (i) The yield of Satsuma orange declined, especially in Changde, leading to high price of early-maturing Satsuma orange. (ii) Due to influence of "greening disease" in surrounding provinces, the planting area and yield of navel orange, Satsuma orange, and honey pomelo greatly declined.

Besides, according to our survey, Hongjiang City of Huaihua City is the main production area of rock candy orange. In 2017, with the increase of the rock candy orange, the sales price also rose steadily. In 2017, the yield of Hongyan rock candy orange of specialized cooperatives in Hongjiang City increased by 25%, and the sugar content reached 14.2%, the quality significantly improved, the fresh fruit price reached 3–6 yuan/kg, and the sales price of fresh fruit by e-commerce was 11 yuan/kg. By comparison, the price in Yongxing County in 2017 was only 5–8 yuan/kg, lower than 7.6–10 yuan/kg compared with the same period of last year, and the sales progress was slow. Possible reasons are as follows. First, the planting area of rock candy orange in Yunnan Province increased, and the rock candy orange was 20 d earlier than Hunan Province; in 2016, the purchase price of rock candy orange in Yunnan Province was 9–14 yuan/kg; in 2017, it declined to 5–8 yuan/kg, which directly lowered the sales price. Second, due to the impact of climate, rock candy orange of Yongxing County was smaller, and the fruit with diameter smaller than 6 cm accounted for 50%, and both the quality and taste were inferior.

2.3 Faster sales progress and no "hard selling" on a large scale According to our survey, by the end of November 2017, the early-maturing, mid-late and mature Wenzhou Satsuma orange have basically been sold, and the sales progress was faster than in previous years. It is estimated that the citrus sales would keep the better situation. From the sales situation, citrus growers whose citrus quality were higher and who participated in specialized cooper-

atives obtained better sales, while those citrus growers who live in remote areas, had smaller planting scale, and brand was not influential, and did not participate in specialized cooperatives were slow in sales progress. Some citrus growers had high expectation for sales price and waited for higher price. By the late November, except some remote areas, most of the harvested citrus in Hunan Province had been sold. In summary, citrus with regional brands or corporate brands needs not worry about sales, while old varieties of citrus in old production area without market competitiveness would be dull of sales in local areas in short term.

2.4 Difficult to increase income of citrus growers due to the decline of yield and rise of planting costs Citrus is the agricultural pillar industry in Shimen County. In 2017, the price of citrus in Shimen County increased, and the total output value and comprehensive output value of citrus reached 900 million yuan and 1 150 million yuan, increasing by 4.4% and 15.0% compared with the same period of last year. However, for citrus growers, although the price of citrus has increased, the yield has decreased, the labor cost has increased, and the growth of the income of the citrus growers has been limited. Some citrus growers have even suffered losses. Take Yahui Citrus Specialized Cooperative in Shimen County as an example, the early-maturing Satsuma orange declined by more than 40% in 2017. Although the purchase price rose from 2.6 yuan/kg in 2016 to 3.2 yuan/kg in 2017, the great decline of yield and rise of wage of producers and packaging costs led to decline of citrus growers' income. In 2017, the wage of citrus planting worker in Yongxing County was 120–130 yuan/(person · day), which was 20% higher than that of the previous year; the cost of cartons and express delivery also increased compared with the previous year, and the express delivery fee increased by 10% (4–6 yuan/piece) compared with the previous year.

3 Warehousing, primary processing and export

3.1 Significant effect in implementation of "cold storage subsidy" project Since 2013, the Ministry of Agriculture has implemented subsidies for the initial processing of agricultural products in some provinces and cities in the whole country, and subsidized the construction of cold storage for fruit and vegetable^[3]. By 2017, Hunan Province has implemented the policy for five years, with a total subsidy of 185 million yuan. In 2017, the number of counties (cities) receiving subsidies in the province increased to 19, of which poverty-stricken counties accounted for about 80%, and 17 counties (cities) were used to build cold storage for citrus. According to our survey, after the implementation of the subsidy project for the construction of fruit and vegetable cold storage, the benefits are very obvious.

The first is reducing the losses. Without cold storage, citrus has to be stacked in the field, citrus is seriously rotted and damaged, the loss rate is up to 35%, while the loss rate of citrus using the cold storage is only 10%. The second is helping citrus

growers to increase income. If there is no cold storage, after citrus is harvested, to avoid rot and damage of citrus and increase unnecessary losses, citrus should be sold as soon as possible. Citrus growers stay in inferior position and often sell their citrus wholly, so although the yield is increased, their income is not increased. By contrast, if they have cold storage, they can keep their citrus and sell citrus when the price is high. In October 2016, Wenzhou Satsuma orange began to be picked, the opening price of the place of origin was 1.4 yuan/kg, and it rose to 2.2 yuan/kg in November. At this time, the price of Satsuma orange stored in the cold storage was higher, and the sales of Wenzhou Satsuma orange ended. After the orange seeds were picked and stored, they were stored for 2 to 3 months. The price of Satsuma orange can be doubled until the Spring Festival, so the benefits are very obvious. Besides, the use of cold storage has lengthened the market cycle of citrus, enhanced the ability of citrus growers to withstand natural risks and market risks, expanded the profit space of citrus growers, and reduced the loss risks. The third is inciting social capital and promoting employment. The subsidies for the construction of fruit and vegetable cold storage in Hunan Province are mainly for large growers, family farms, and specialized cooperatives. Because of obviously feeling the income increase, growers and enterprises without obtaining subsidies are also actively contributing to the construction of cold storage. At present, no county (city) that obtained the project "just takes the subsidy funds". In 2017, Xining County of Hunan Province received subsidies from the central government, and the county also actively raised funds, and the demonstration effect was excellent. The construction of cold storage also solves the problem of employment of some local farmers. The fourth is reducing the pollution. The use of cold storage reduces the environmental pollution caused by the rot of fruit during the citrus stacking in the field. According to our survey, driven by the subsidy project for the construction of fruit and vegetable cold storage, in recent years, the citrus in Hunan Province has gradually tended to be classified and the target sales market has gradually diverged. The "good fruit" is mainly sold to the southeast coastal areas such as Shanghai and Hangzhou; the "moderate fruit" is sold to North China, Northeast China and other places; the "poor fruit" is mainly sold to Henan and other places.

3.2 Rapid growth in sales volume of e-commerce According to our survey, in recent years, the citrus sales volume of e-commerce grew rapidly in Hunan Province^[4]. Xiuping horticultural farm in Shimen County has realized significant benefits through the combination of high-end products "direct-sale store + e-commerce" through "Jingdong" "Tmall" and self-built e-commerce sales platform. In 2016, the sales volume of citrus in e-commerce accounted for 5% of its total sales volume; in 2017, the proportion grew to 15%; in 2018, it proposed the target of "selling products completely in e-commerce platform"; in the period of Double Eleven Global Carnival of 2017, the sales volume of a citrus primary processing enterprise in Shimen County reached

9 000 t, increasing by 4 200 t compared with the same period of the last year, and the sales price was two times of the last year. The citrus plantation in Yongxing County has established cooperation with e-commerce platforms such as Alibaba and Baiguoyuan. At present, it has realized 30% rock candy orange was sold through e-commerce platform.

3.3 Slight decline of export volume, but profit of foreign trade declined due to rise of costs The export of citrus in Hunan Province is mainly relied on Wenzhou Satsuma orange^[5], and the export volume in 2017 decreased slightly compared with the same period of last year. According to our survey, in recent years, the export volume of Wenzhou Satsuma orange in Shimen County has been maintained at about 1/4 of the total output. In 2016, the export volume of Wenzhou Satsuma orange in Shimen County was 99 800 t. In 2017, the export volume of Wenzhou Satsuma orange declined by 20%, close to 80 000 t. Taking Jinxiangyuan Company in Shimen County as an example, it registered the export citrus planting base with the model of "company + base + farmer". Since 2005, it started exporting to Canada, Malaysia and other countries. In 2017, it received 210 containers, but it may be able to complete 1/2 of those orders due to disasters in the planting base. At the same time of the decline in citrus exports in 2017, export profits of citrus exporters declined due to rising labor costs, packaging costs, and transportation costs.

In future, there is still a large market space for citrus exports in Hunan Province. In 2017, the total output of citrus in the United States was 22 million t, mainly concentrated in Florida and other places. However, due to the extensive culling of local citrus trees affected by greening disease and the frequent occurrence of typhoons, the total citrus production in the United States is expected to decline by 15% in 2018 and the industry may suffer recession. On the whole, the decline of the American citrus industry is favorable for the development and trade of China's citrus industry, so the citrus price may rise.

4 Problems in the citrus industry

4.1 Ageing of trees and low management level restricting yield increase In Hunan Province, there are more than 200 000 ha old orchards, most of which are over 20 years old, accounting for more than half of the province's citrus planting area. Most of the citrus trees in Yongzhou City were planted in the 1970s and 1980s. The trees were old, and there were many pests and diseases, small and black fruits. The Xiuping horticultural farm in Shimen County was built in 1975, and some early-maturing citrus trees were 41 years old, due to aging and high plant density, the yield declined by 50% in 2017. Besides, most of the fruit farmers in the main producing areas lack funds and technologies. As a result, the orchards are negligent of management, resulting in more wasteland and natural orchards. In the whole province, due to the low quality of citrus cultivation workers, the management level and

technology level of citrus cultivation have become stagnated in recent years^[6]. Although some enterprises have increased their investment, those fruit growers who support raw material base start mechanical reclaiming, soil improvement, planting and management of the orchard to improve the quality of citrus. But due to excessive investment pressure, the effect is not obvious.

4.2 Imperfect fine seed promotion system and obstruction of overall improvement of citrus

Wenzhou Satsuma orange is the dominant citrus variety in Hunan Province. Although the price is higher and higher every year, the quality improvement is still a problem. Main causes are as follows. (i) Although the breeding system of Wenzhou Satsuma orange has advantages in China, there is no system for variety promotion, which affects the product quality. (ii) The industrialized development of plant seedlings lags behind. Planting seedling is a key part of sustainable development of the citrus industry. Virus-free seedlings can overcome the plant diseases and pests such as "greening disease" and "big stone flies". At present, Hunan Province provides subsidies to certified virus-free land seedling bases. The main producing areas also have financial support. The citrus growers purchase virus-free seedlings. The government subsidizes 5 yuan/plant for citrus growers and the individual only needs to pay 1 yuan/plant^[7]. However, the state does not have financial support for subsidies and promotion of virus-free seedlings. Hunan Province has limited funds and the subsidy coverage is small. In addition, "high quality but low price" also restricts the improvement of citrus quality. High-quality organic citrus is difficult to plant, and the planting scale is limited. It is difficult to produce high prices due to the impact on market prices. As a result, citrus growers are not willing to plant organic citrus.

4.3 Rapid expansion of citrus in neighboring provinces, citrus price in Hunan Province being affected

According to relevant studies, China annually produces 36 million t of citrus. Deducting the use of citrus in making juice and canned food, loss in the production, storage and transportation, adding to the import, the fresh circuit at the market is about 30 million t. Calculated at the 1.4 billion of total population, the per capita consumption of citrus needs 22 kg to reach the balance between the supply and demand. Therefore, from the perspective of total volume, the citrus has the risk of dull sales. In recent years, the planting area of citrus in provinces and cities has increased or decreased. The planting area of Hubei, Guangdong, Zhejiang and Fujian has shrunk. The planting area in Jiangxi Province has also shrunk due to "greening disease". The planting area in Hunan Province has remained relatively stable. The planting area in Yunnan and Guangxi showed a rapid growth. According to the *Summary of National Agricultural Statistics*, in 2010, the citrus planting area of Yunnan and Guangxi was 34 300 ha and 197 900 ha, respectively, with yield of 416 600 t and 3 132 100 t, ranking 10th and 3rd respectively in China; in 2016, the planting area increased to 47 100 ha and 370 400 ha, respectively, and the yield increased

to 613 000 t and 5.78 million t respectively, ranking 10th and 1st respectively in China. The rapid growth of citrus planting in other provinces has a greater impact on the market price of Hunan Province. In recent years, the planting area of Satsuma orange in Hunan Province has not shrunk significantly, and the planting area of rock candy orange has increased. However, due to the large planting area of Yunnan citrus and early sales, the market price "follows Yunnan" and lacks voice. In addition, the price of different varieties of citrus will also affect each other, the price of citrus, navel orange, rock candy orange and other varieties will be affected by the price of Satsuma orange which come into the market early. In recent years, some new citrus varieties planted in Yunnan and Guangxi are popular with consumers and the benefits are high, which bring certain impact on the production of traditional citrus varieties in Hunan Province.

4.4 Lack of virus-free seedlings and weak foundation of industrial development

High-quality seedlings are the basis for the healthy development of the citrus industry^[7]. At present, citrus "greening disease" "big stone fly" and other pests and diseases frequently occur. Due to its infection and difficult to cure, the greening disease is called "citrus cancer". The virus-free citrus seedlings can better prevent and control many kinds of pests and diseases. According to our survey, about 100 million citrus seedlings are produced annually (about 20 million in Sichuan, Chongqing, Guangxi, and Jiangxi respectively, and 10 million in Hunan), but more than 80% of them are land seedlings with pests and diseases, the container seedlings (virus-free seedlings) that are truly isolated and produced are less than 20%. In the case of the rapid expansion of citrus planting area in some provinces, the demand for virus-free seedlings has increased dramatically, and "supply is greatly less than demand". In terms of price, the land seedlings are 4 – 6 yuan/plant, and the virus-free seedlings are 8 – 10 yuan/plant. At present, China's production and management of citrus has not imposed the "threshold" limit. Some newcomers have purchased and planted low-price ordinary seedlings in new citrus orchards. For the whole industry, the source of seedling cultivation has been neglected in the development of the citrus industry, and the healthy development of the entire industry is at risk, which is in urgent need of macro planning and supervision.

4.5 Backward development of deep processing industry in the production area and shrinking area of "Citrus reticulata Blanco" (wide peel citrus) for deep processing

Now, the deep processing of citrus in Hunan Province is mainly based on juice and canned food. In terms of juice processing, Huiyuan Group has a factory in Huaihua City, Hunan Province, but because of the "CIF price of orange juice produced in Florida of the USA is lower than the cost price of factor processing in Hunan Province, the product is weak in market competitiveness. The raw material for canned citrus processing in China adopts "wide peel citrus" (including Wenzhou Satsuma orange and ponkan). At present, China's citrus canned food is highly competitive in global

trade, and its export volume accounts for 70% – 80% of global trade volume, much higher than Spain and Japan, and remains in a monopoly position. In the late 1980s when the citrus industry was in prosperity, the Wenzhou Satsuma orange planting area in Dong'an County and Xintian County of Yongzhou City reached 27 300 ha, such abundant raw materials made the local citrus processing industry develop rapidly. By the beginning of the 21st century, there were four large canned food processing factories, the citrus canning factory in the neighboring provinces has gathered in Hunan Province. In recent years, the planting area of new citrus varieties has squeezed the development space of traditional citrus varieties, and the total output of "wide peel citrus" in the main producing areas of China has been declining year by year. At present, the planting area of new citrus varieties has squeezed the development space of traditional citrus varieties, and the total output of "wide-skin citrus" in the main producing areas of China has been decreasing year by year. Due to the shrinking of planting area, the acquisition of raw materials for enterprises has been difficult, and the development of citrus deep processing industry has been hindered. The slow development of citrus deep processing industry has affected the healthy development of "wide peel citrus" production.

5 Recommendations for development of citrus industry

5.1 Strengthening the overall planning of the national citrus industry Citrus is the fruit with the largest output in China and China's citrus planting area and output rank first in the world. At present, the domestic citrus consumption market is undergoing transformation and upgrading. The production is also beset with many problems such as large number of old orchards, homogenized development, excessive products, and shrinkage of planting income space. It is badly necessary to conduct macro guidance and planning for the entire citrus industry nationwide, strengthen guidance and supervision, and enhance the study of citrus industry.

5.2 Strengthening the industrial base capacity from the seedlings Seedlings are the basis for the healthy development of the entire citrus industry, so it is necessary to start from the seedlings to enhance the industrial base capacity. In the first place, it is recommended to strengthen the production and marketing supervision of citrus seedlings, to avoid disorderly marketing of the virus seedlings; in the second place, it is recommended to encourage breeding experts to conduct product breeding and research and development at different maturity stages, and enhance promotion of different varieties, to extend the sales cycle, and promote healthy and sustainable development of the citrus industry; in the third place, it is recommended to build state level virus-free seedling breeding farms, and give play to the demonstration effects, to effectively prevent seedling demands of the citrus industry. According to our survey, Hongjiang City of Huaihua City took virus-

free seedlings as high quality seedling varieties in strict accordance with the *Code for Breeding of Virus-Free Citrus Seedlings*. It realized the annual output of 200 000 plants of container virus-free seedlings, and provided guarantee for supply of seedlings for local citrus development. This practice is worth learning and promotion.

5.3 Improving the primary processing subsidy project of the production area and strengthening the support In the first place, it is recommended to appropriately increase the scale of funds for the primary processing subsidy projects in the production areas, and give full play to the demonstration role of promoting the increase of farmers' income; in the second place, it is recommended to accelerate the progress of the project, and take advantage of the benefits of financial subsidy funds in a timely manner; the technical service fees must be listed in the project, to provide guarantee for well implementation of good projects.

5.4 Developing citrus deep processing industry Citrus deep processing has many related industries, including seedlings, orchards, light processing, logistics, e-commerce, marketing, etc. It is recommended to actively develop the citrus deep processing industry. This can extend the industry chain, improve the value chain, effectively absorb employment of local labors, promote local economic development, take the canned processing factors as example, 18 – 55 year-old people can be absorbed into the employment. Besides, it is recommended that the government provide certain preferential policies or subsidies for citrus deep processing enterprises to raise the competitiveness of citrus deep processing products in domestic and foreign markets.

5.5 Accelerating the brand building of citrus products Hunan Province is the main citrus producing province. Although the price of citrus in Hunan Province rose in 2017, compared with similar domestic products, the price still remains at a medium level, and the benefits are not significant. One of the reasons is that the development of brand building lags behind. In recent years, although Hunan Province has vigorously promoted its agricultural products through exhibitions such as "Exhibition of Agricultural Products" and "Rock Candy Orange Festival of Hongjiang City". Shimen Honey Orange and Qianyang Rock Candy Orange have become well known in the whole country. However, compared with Gannan navel orange, and Yunnan Chu orange, the benefits of citrus in Hunan Province are lower. Therefore, government should provide guidance and strengthen the construction of basic production capacity of citrus to ensure product quality. Besides, it is recommended to help enterprises establish and improve the product quality traceability through advertisement, exhibition, and product festival, guide enterprises to enhance sustainable management and operation of brands, guide proper competition of sales enterprises, so as to bring into play the brand effect and overall advantages^[8].

5.6 Strengthening the construction of information early-warming system for the citrus industry In line with unsmooth market information of production and marketing areas and fruit growers' failure to obtain market information in time, it is recom-

mended to strengthen the early-warning and information issue of domestic citrus industry market, enhance the connection between production and marketing, to effectively increase production and operation income of citrus growers.

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(From page 31)

3 Conclusions

Countries such as Indonesia, Thailand, Vietnam, India and China are the major tropical crop producers in Asia. In 2015, the cocoa and coconut production in Indonesia was the highest, the rubber, cassava, sisal, coffee and pepper production ranked second, the banana production ranked third, and the sugarcane production ranked fifth in Asia. The rubber and cassava production in Thailand ranked first, and the sisal and sugarcane production ranked third in Asia. The coffee and pepper production in Vietnam was the highest in Asia, the rubber and cassava production ranked third, and the banana and coconut production ranked fifth. The sugarcane and banana production in India ranked first in Asia, the cocoa production ranked second, the coffee, coconut and pepper production ranked the third, and the rubber production ranked the

fourth in Asia. The sisal production in China was the highest in Asia, the banana and sugarcane production ranked second, the pepper production ranked fourth, and the rubber, cassava and coffee production ranked fifth.

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