

The Risk Management of the Main Body of Production and Management in Vegetable Industry

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Abstract: China is a country with a large population, which needs to consume a lot of vegetables every year. China's annual output of vegetables has reached 58% of the world's output, and has become the world's largest vegetable production base. With the rapid development of China's economy and the improvement of people's living standards, people's demand for fresh vegetables is higher and higher. All kinds of pollution-free vegetables, green vegetables, are sought after by people. Then vegetable production and management become a huge industry. However, at the same time, there are some contradictions, such as, it is difficult for residents to buy expensive vegetables, farmers' vegetables are not easy to sell, the price is low, and it is difficult to make money. In the long run, this kind of contradiction will cause great harm to our vegetable industry. This paper discusses and analyzes the problems and risks existing in the current vegetable industry, compares and draws lessons from the specific examples and the successful experience of the vegetable industry in developed countries, and makes an objective analysis and comparison by using the specific data such as the total output, total consumption, total export and income of the vegetable growers over the years, pointing out that the vegetable industry in China is facing the current situation Then find out the solution to the risk of vegetable industry in China, upgrade the vegetable industry in China, and improve the income of employees in the vegetable industry chain. Next, we will discuss and analyze the risks of the production and operation of the vegetable industry, and propose solutions for the main risks.

1. Introduction

Vegetable production and management is vital to the national economy and the people's

livelihood. It is particularly important to get through the relationship between production and management and logistics. There are four major vegetable production bases in China [1]. Shouguang, Shandong Province is the largest vegetable circulation place, Yantai City, Shandong Province, Shenxian County, Shandong Province and Zhangbei, Hebei Province are the largest vegetable bases for summer vegetables. Next, take Shouguang vegetable as an example to analyze Shouguang vegetable base, the largest vegetable base in China. Shouguang vegetables, produced in Shouguang City, Shandong Province, as a specialty of Shandong Province, are well-known. Shouguang's vegetable base has a very large planting scale and many varieties, which are called "green vegetables". It has good taste and nutrition, thus creating a unique brand of Shouguang and is well-known at home and abroad. So far, Shouguang's vegetables have been sold to many cities in China, and there are also large sales in the United States, Britain, France, Italy, the Netherlands, Switzerland, Japan, South Korea, Australia, which are welcomed and loved by a large number of consumers around the world. Shouguang vegetable base is not the same in terms of planting varieties. It constantly adjusts the planting varieties, mainly including tomatoes, Chinese cabbage, green melon, green beans, cantaloupe, red pepper, green pepper, balsam pear, cowpea, etc. [2], accounting for about 65% of the total planting area. There are also new economic crops, such as leek, onion, spinach, carrot, potato, garlic, rape flower, lettuce, oilwheat, etc., accounting for about 25% of the total base area. Unique varieties of vegetables include Chinese toon, baby cabbage, shengnv fruit, zucchini, Chaotianjiao, little ginseng fruit, etc., accounting for about 10% of the total base area. The success of Shouguang vegetable base has formed a huge industrial chain by expanding the planting scale and promoting its brand effect [3-4].

Secondly, vegetable production needs specific environment, climate and soil, and the conditions of establishing vegetable base are as follows: the most important task for the production of pollution-free vegetables is to select the suburbs with more developed transportation and communication to establish pollution-free vegetable production base and set up supporting facilities. It is required that the surrounding environment is free from pollution, the ground is flat, the water and irrigation system is good, the land is relatively fertile, rich in minerals needed for vegetable growth, and the vegetable garden planted for many years should be avoided. At the same time, it is necessary to conduct in-depth investigation and Research on the soil and local climate conditions of each vegetable base according to local conditions, find out the most perfect vegetable varieties integrated with the local natural environment, and then mix with excellent vegetable varieties to achieve the level of high yield and high quality. At the same time, it integrates with the surrounding industries. For example, the place is a tourist attraction, and there are many tourists from other places, so it can develop a green ecological picking park. This is a transportation hub, which can build a large wholesale market of vegetables with the help of local convenient logistics conditions. Furthermore, by strengthening marketing and promotion, we can build our own brand, form brand premium, and improve the added value of vegetable products. As time goes by, it will become a leading industry in the region and a whole industry chain model of vegetable production and management will be formed, which will not only greatly reduce the industrial risk, but also expand the income.

The main risks of vegetable production are bad weather conditions and pests. The risk of vegetable production is also the most basic and serious risk of the whole vegetable industry. The following heavy rain will cause the vegetables to soak seriously, cause the root of the vegetables to rot, cause the reduction of production or even the harvest, and the drought is the same. These problems are often encountered by the vegetable industry and can be solved by technical means, such as drip irrigation technology and water flow guidance technology. Some rare but fatal disasters, such as sudden hail at the critical time of vegetable growth, can be solved by agricultural insurance. There are also a variety of diseases and insect pests, which are also very common risks in vegetable

production. Risk management and solution can be carried out through some common scientific and technological means of modern science and technology, such as spraying pesticides, UV trapping pests and other ways. The main risks of vegetable management are the fluctuation of price, the storage cost of vegetables and the waste caused by the rotten vegetables. The logistics cost is the channel between production and management. Therefore, the risks of production and operation are described in detail below, and then the methods of risk control are put forward, which are proved profoundly, and the reliability and rationality of the methods are obtained [5].

The innovation of this paper lies in the application of data comparison method to explain and demonstrate the conditions affecting vegetable production and management through specific and detailed data over the years. The specific data can show the impact of various conditions on the results intuitively, and provide strict evidence for the risk solution.

2. The Risk of the Main Body of Production and Management in Vegetable Industry

2.1. Unreasonable Overall Structure of Vegetable Planting Industry

The production of vegetables in China is particularly affected by natural conditions. The varieties planted are mainly common agricultural products. The quality of vegetable products is not high, and there are fewer excellent products and fewer brand effects [6-7]. In the distribution of vegetable planting, each farmer scattered planting, rarely adopt large-scale industrial planting. As a result, the income of farmers is small, and there are often unsalable and farmers destroying their own vegetables.

The selection of vegetable production industry base is unreasonable, and local conditions cannot be adapted to local conditions. The soil and local climate environment in many places are not suitable for planting this kind of vegetable. However, due to the hot sale or high price of a certain vegetable product, the vegetable farmers are swarming in. Because the land is not suitable for planting this kind of vegetable, the output is not high, and the original thing is rare. As a result, the supply of vegetables exceeds the demand, and the price of vegetable products drops rapidly. As a result, the scattered farmers not only don't get the huge profits, but also lose a lot.

2.2. Insufficient Investment and Weak Infrastructure

The capital investment in the construction of vegetable production base is not stable, the industrial structure layout is unreasonable, there are few standardized bases, most of the production sites are scattered, the infrastructure construction of many production bases is seriously backward, the ability to resist natural disasters is weak, and it is difficult to form large-scale industrialization [8].

When the price of a certain vegetable is relatively tight, and this place is particularly suitable for the cultivation of this vegetable. Due to the lack of sufficient investment funds, there is no way to expand the planting scale, and the huge profits that could have been obtained have not been made, but when there is money, the price drops, and the best opportunity to make money is missed.

The infrastructure of vegetable planting industry is very weak, such as the lack of drip irrigation facilities, greenhouse, drainage facilities, artificial light and so on. It will not only result in the ability to resist floods, droughts, diseases and insect pests, but also easily lead to large-scale production reduction. In case of extreme abnormal conditions, it will even end up with nothing. The weakness of infrastructure is also easy to cause poor quality of vegetables, poor sales, poor packaging, low price of products, resulting in lower profits, let alone the formation of brand effect, and greater added value of products.

2.3. The Problem of Vegetable Quality, Hygiene and Safety Is Still Prominent

With the rapid development of industrialization and urbanization, the pollution control of the environment is backward, which is easy to cause the production environment of vegetable base dirty and bad, and the environmental protection awareness of Chinese farmers is low, and the pesticide is abused in the whole process, which leads to the pesticide content of vegetable products exceeding the standard seriously, which brings great harm to the consumers, and their products can not better adapt to the needs of the market. Without brand effect, it has a bad impact on the export and overseas sales of China's vegetable industry [9-10].

The most serious and common problem is the problem of pesticide abuse. In China, the poisoning and even death caused by pesticide residues in vegetables occur from time to time. The main pesticide residues were organophosphorus pesticide and carbamate pesticide. These pesticides can inhibit cholinesterase, block the transmission of neurotransmitters and cause acute and chronic poisoning. According to reports, the number of pesticide poisoning due to the consumption of pesticide contaminated food in China is nearly 200000 per year, and the harm of pesticide residues to human body can be divided into the following two categories: 1. Chronic poisoning, long-term consumption of pesticide residues in vegetables, these pesticides will cause chronic poisoning after a certain time of aggregation, leading to some chronic diseases, such as cardiovascular and cerebrovascular diseases, diabetes, cancer, etc. In recent years, the incidence rate of these diseases has been increasing year by year, which has a great relationship with pesticide residues, and infertility is also related to pesticide residues. 2. Acute poisoning, when the amount of pesticide residues in vegetables is large, it is easy to cause diarrhea, respiratory infection, cardiac arrest, and even death. So it is urgent to solve the problem of vegetable safety.

2.4. Impact of Natural Disasters on Vegetable Industry

The impact of natural disasters mainly exists in severe natural weather conditions, such as storm, drought, rainstorm, hail, frost, and diseases and insect pests, such as pests, burglars, beet moths, *Plutella xylostella*, butterfly and other important aphids, such as red peach aphid, white cotton aphid, vegetable aphid, which are destructive to the production of vegetables Click [11].

General natural disasters such as floods and droughts, once such disasters occur, will cause serious production reduction or even crop failure. This kind of common disaster will be resisted to a certain extent in front of full preparation, but in the case of strong hail and frost, it needs some strong infrastructure and preparation to manage the risk.

There are also common pests during vegetable planting. In China, farmers generally use pesticides to treat them. Although this method is useful, it will cause food safety risks, which have problems to be solved.

2.5. Fluctuation Risk of Vegetable Sales Price

Merchants buy fresh vegetables at wholesale price from farmers, and then sell them to residents at a market price. So we can earn the difference. When the wholesale price is low and the selling price is high, the profit is high, otherwise, it is the opposite. Of course, businesses are willing to buy low and sell high. Under normal circumstances, the price difference between businesses fluctuates in a small range, and the profit space of businesses does not change much. At this time, the way to improve profits is often to exaggerate the sales volume. But in special circumstances, the price difference between these businesses is often very large. If the problem faced by the businesses is not huge profits or serious losses, they need to take precautions in advance [12]. For example, at the beginning of 2018, the sales price of vegetables in Shenyang market showed that on the fourth day

of January 28, the sales price of Cucumber in Wuhan supermarket was 6 yuan / kg, 61.5% higher than that on January 23; the sales price of tomato was 8 yuan / kg, 74.28% higher than that on January 23; the sales price of eggplant was 6.5 yuan / kg, 89.27% higher than that on January 23. Among the vegetables, the selling price of potatoes is 5.5 yuan / kg, 127.27% higher than that on January 23; the selling price of white radish is 5 yuan / kg, 2 times higher than that on January 23; the selling price of cabbage is 4.5 yuan / kg, 2.4 times higher than that on January 23 [13].

The main reasons for the increase of wholesale price of white radish and Chinese cabbage are as follows: first, farmers from the production area are not allowed to enter the villages and the land for direct purchase for self-protection, and wholesale business in our city can only wait for delivery and loading outside the villages, which increases the purchase cost; second, because it is still in the holiday, it is difficult to find logistics vehicles.

It can be seen that the sharp fluctuation of sales price has a great impact on the business profits. If a business hoards a large number of cheap vegetables years ago, it can get huge profits by selling them at market price.

Merchants can predict the price trend of vegetables. Generally, the price of fresh vegetables is relatively tight during the new year. At this time, the profit is quite considerable. They can increase the purchase quantity and store the wholesale Vegetables, so as to achieve the effect of low purchase and high sale. However, it is not necessarily the case that vegetable prices are extremely high during the Spring Festival, with some exceptions. For example, zucchini's purchase price in 2019 is like a roller coaster, which makes many vegetable farmers suffer a big loss. Some vegetable farmers who grow zucchini say that in the first half of this year, the purchase price of Zucchini was about 3 yuan a Jin, while in the second half of this year, it plummeted nearly 10 times. In some places, it's 5 cents a Jin, and in some places it's as low as 20 cents a Jin. In this case, if a large number of merchants wholesale zucchini before, and then store it, then it will be a serious loss.

The huge fluctuation of vegetable price is a great harm to both farmers and businesses [14]. It may appear that in one year, both farmers and businesses are losing money, while the vegetables purchased by consumers are not cheap. The sales volume is not good due to the huge fluctuation of price, the logistics companies have not made money, and the whole vegetable industry has no profit. This is a huge damage to the entire industrial chain.

3. Risk Management of Production and Management Subjects of Vegetable Industry

3.1. Pay Attention to Green Production of Vegetables and Ensure the Quality and Safety of Vegetable Products

The first is to strengthen the effective management of the environment of vegetable producing areas, vigorously promote the high-quality varieties resistant to disease and pests, comprehensive and comprehensive control technology, and vigorously promote the use of organic fertilizer. The second is to strictly implement the pollution-free vegetable production, strictly implement the rules and regulations issued by the Ministry of agriculture, and control the residues of pesticides and fertilizers. The third is to check the pesticide residues of agricultural products, strictly check the vegetables entering the market, and protect the legitimate rights and interests of consumers [15]. The fourth is to trace the circulation of agricultural products and prevent the safety of vegetable products. The fifth is to control the vegetable seeds and pesticide market, and strictly prevent inferior products from entering the market. Enterprises, cooperative organizations and farmers are encouraged to invest more in the production of green agricultural products, expand the market capacity of green agricultural products, vigorously develop agricultural information technology and intelligent equipment, create a vegetable quality and safety system[16-17]. The whole industry chain system of vegetables from planting to consumer's mouth should be built, and the whole

system network ecological model from planting, harvesting, processing, transportation, storage to the dining table of residents should be built. Through the integrated construction of production and sales, we can optimize the allocation of resources, solve the uncertainty and blindness of farmers' production, and reduce the risk of vegetable production and operation entities

3.2. Strengthen the Concept of Being Bigger and Stronger, and Strengthen the Brand Construction of Vegetables in China

To promote the regional construction of vegetable industry production as a whole, we should rely on the soil, climate and other advantages of each place, adjust measures to local conditions, make overall planning for the agricultural products planted in this place, form local characteristics, combine vegetable agriculture with other agricultural products, and form our own market competitiveness[18].

Develop a group of vegetable enterprises with market competitiveness, advanced management and local characteristics, combine local vegetable growers, vegetable processing, sales and logistics transportation, form a vegetable production and operation complex, form a strong market competitiveness, increase exports and form their own brand effect[19]. Explore the appropriate mechanism to meet the requirements, strive to promote the integration of terminal, production end, logistics channel and marketing, sign the contract system, and enhance the ability to resist risks. The trend of vegetable industry is to build vegetable brand, but at present, the awareness of vegetable brand in China is weak, the concept of vegetable brand has not been popularized, and vegetable producers and vegetable suppliers are independent of each other, which leads to the circulation of vegetables is not fast enough and does not form a complete production chain. With the development of the times, the construction of vegetable brand has become a trend. Enterprises should build their own vegetable brand, carry out national industrial layout, plan their own vegetable brand development plan, and take the road of brand effect. So that the price of vegetables is higher, the profit is greater, and there is brand spillover effect.

3.3. Carry out Scientific and Technological Innovation and Transform to Export-Oriented Foreign Exchange Earning Type

The research and promotion of new varieties and new technologies should be strengthened, the introduction of high-quality seeds and fertilizers should be promoted, and a large amount of research should be put into various seedling facilities and cultivation facilities, so as to promote the development of production and management of vegetable industry with advanced science and technology. Encourage and commend the advanced enterprises that introduce advanced science and technology, attract a large number of outstanding talents in vegetable cultivation and planting, strive to solve the objective problems in reality, improve the planting technology and quality of vegetable farmers, and form a closed-loop structure of the whole vegetable industry chain with the marketing of Internet. We will carry out industrial science and technology service activities, go deep into fields, vegetable bases and other areas to increase science and technology publicity, strengthen the safety control of vegetable quality, ensure food safety at the beginning of the production process, and strengthen supervision. At present, as an industry chain, vegetables rely on scientific and technological innovation. So far, China has been deeply integrated with science and technology in the whole vegetable industry chain.

Due to different ecological conditions in different parts of China, a certain scale of high-quality vegetable varieties with regional characteristics have been formed. With the development of market economy and the upgrading of planting technology, this kind of products will gradually attract the attention of the international market, so China will gradually tend to export vegetable products with

high technology content and high industrial added value in the future.

3.4. Composition of Vegetable Industry Value Chain and Establishment of Whole System Industry Chain

The value chain industry system of vegetable industry starts from the cultivation of seeds, with farmers planting as the foundation, and the products are delivered to various food terminals through primary and secondary distributors. Each link in the industrial chain is interdependent and has strong integrity. First of all, seed cultivation is the key factor for the quality of finished vegetables. Vegetable planting is an important reason for determining the market commodity category. As a product with short shelf life, dealers are important performers in the realization of product value.

In general, the whole upstream and downstream industry chain of vegetables mainly includes vegetable planting, processing and sales, while the value chain of vegetable planting is vegetable seed procurement, vegetable seedling, vegetable finished products and fruit vegetable wholesale. Due to the influence of temperature, humidity, soil environment and other factors, vegetable production shows certain seasonal characteristics. With the development of planting technology, greenhouse and anti season vegetables gradually become the main driving force to regulate the uneven seasonal supply of vegetables. On the other hand, the development of related technologies will also promote the structure of vegetable planting and play the role of market regulation. Clean vegetable production is the first link in the processing of agricultural products. The so-called clean vegetable means that after the vegetables are collected, they enter the low-temperature processing workshop at 5-7 °C, where they are refrigerated, screened, cleaned, dried, sub packed, added, packaged, stored, and inspected for quality. At this time, it becomes a fresh vegetable that can be cooked with a little treatment.

3.5. Policy Environment and Guidance of Vegetable Industry and Integration of Wholesale Market

In 2014, the government document pointed out that it is necessary to strengthen the construction of vegetable product market system, promote the improvement of circulation efficiency and the construction of fair system, formulate the development plan of the national vegetable product market as soon as possible, and connect growers and retailers with large wholesale market as the center. Vigorously develop the storage system of fresh vegetables, build a modern storage and logistics system of vegetable products, and take the large wholesale market as the center to radiate around. Support small markets and distribution centers of vegetable origin.

The wholesale market of vegetable products is very important in the circulation of vegetable products. On the one hand, the wholesale market of vegetable products can connect farmers and retailers, play a bridge role, and optimize the allocation of market resources.. The State supports the upgrading of large vegetable products wholesale market, guides and encourages relevant large enterprises to construct modern logistics system, and ensures smooth logistics. At the same time, the relevant enterprises in the vegetable production chain are exempted from or under charged with relevant taxes. On the other hand, the state has strengthened the supervision and management of the wholesale market. At the same time, the wholesale market of agricultural products has belonged to a red sea, many investors enter the market, and the competition is more and more fierce. The application of Internet plus will upgrade the industrial chain of the whole vegetable production and management body. Since China's reform and opening up, the vegetable wholesale market has developed rapidly. Under the market economy, China's vegetable wholesale market plays a pivotal role in the whole circulation system of agricultural products, connecting numerous producers and end consumers. It is the distribution center of commercial leaves, logistics and information, and

shoulders the function of vegetable product circulation and market price formation. It promotes the formation of the pattern of specialization, commercialization and marketization of vegetable production, so as to guide the adjustment of vegetable industrial structure in China, so the vegetable wholesale market in China has an irreplaceable role. At present, the wholesale market of vegetable products will still play an important role in the vegetable circulation system for a long time to come.

3.6. Training and Selection of Excellent Vegetable Seeds

Good vegetable seeds are the cornerstone of the development of modern vegetable industry. The premise of the increase of yield, the optimization of structure, the mechanization and the investment of science and technology is to have good varieties. In the development of vegetable industry, when an enterprise has good seeds, it takes the initiative. China's economy has entered the fast lane of development, so has the vegetable industry. The development of enterprise financing, optimal allocation and the Internet has injected new vitality into the development of the vegetable industry,. In 2015, the government documents put forward general requirements for strengthening reform and innovation and developing modern agriculture. With the continuous improvement of vegetable products, in addition to good seeds, the safety of vegetables has become the top priority. Therefore, the use of pesticides has been restricted in China to ensure the standardization of the supply of pesticide products.

4. Data Analysis

In order to solve this problem, we need to look at the whole vegetable industry chain and supply chain . Integrate the relationship among farmers, businesses, consumers and logistics system, so that the whole vegetable production and operation become a whole and become more three-dimensional. The 2019 China Vegetable Industry Conference opened in Yinchuan, Ningxia on July 17, Xinhua reported. Data released at the meeting showed that China's vegetable production last year was 700 million tons, an increase of 1.2% year on year. The planting area of vegetables is 1.96 million hectares, with a total output value of 2.2 trillion yuan (about US \$320 billion), including a net output value of 1.2 trillion yuan. From 1998 to 2019, China's vegetable output value increased from 2395 yuan / mu to 9655 yuan / mu, which has exceeded the total grain output and become the largest agricultural product in China. However, the cost of agricultural production has also increased significantly, and the profit margin has been reduced. The highest profit margin is 107%, and the lowest is 66% in 2010. According to the total output of vegetable industry over the years (Figure 1) and the total consumption of vegetable industry over the years (Figure 2), the total export of vegetable industry over the years (Figure 3) China's vegetable industry development has achieved great results so far, increasing the income of farmers. Distribution of vegetable production in each province (Figure 3). In 2018, the per capita net income of rural residents from the vegetable industry was 2140 yuan. Make per capita income and profit statement of rural residents from vegetable industry over the years

According to Figure 1, vegetable planting is one of the important sources of farmers' economy, and the development of its industry is the main channel for farmers to increase their income. With the continuous improvement of China's vegetable production structure and the continuous increase of product types, annual production has been achieved so far, which can meet the basic supply demand. In recent years, China's vegetable production has increased year by year. In 2018, China's vegetable production reached 70.347 million tons, compared with 2017 An annual increase of 11.54 million tons. From 2012 to 2018, China's total vegetable output has steadily increased, and the growth rate has remained stable, indicating that China's vegetable production base is quite stable, stable and good, and the growth rate is high and stable. China's vegetable industry has a vigorous

development trend and will create greater output value in the future.

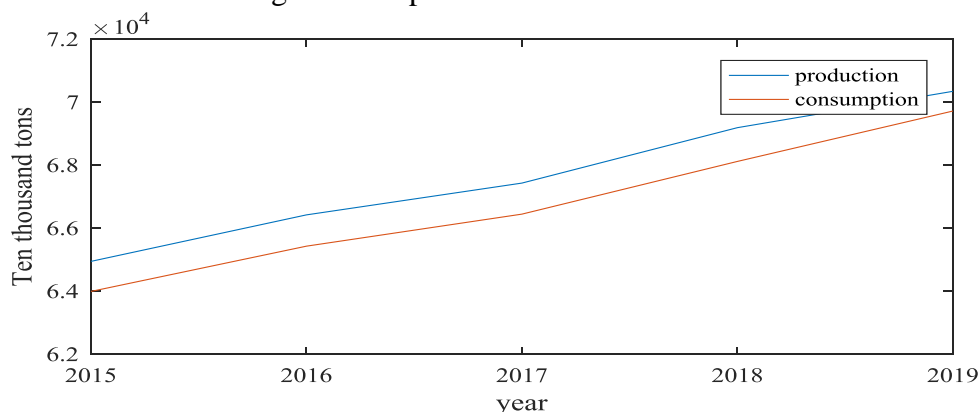


Figure 1. 2014-2019 Production and consumption of vegetables

According to Figure 1, vegetables are essential for people's life. In China, their output is only lower than food, but the total output value is higher than food. In recent years, vegetables have become necessary food for people's life, especially for urban residents. With the development of China's modern cities, people's demand for vegetables is growing every year. In 2018, the apparent consumption of vegetables in China reached 692.71 million tons, an increase of 11.49 million tons compared with 2017. Among them, Guangzhou, Shanghai, Shenzhen and other economically developed regions with large population increase the demand for vegetables. It shows that China's market demand is growing and very stable, and the market potential is huge. It is a blue ocean, which is worthy of further exploration. Compared with figure 1 and Figure 2, it is found that the total demand for vegetables is always less than the total production of vegetables every year, which shows that China's vegetables are completely self-sufficient for the whole country, some of the surplus is wasted, and some of them are used for export to create foreign exchange. Vegetable industry is an important industry in China. To strengthen the investment in vegetable industry and encourage the development of vegetable industry, the government should play an active role. Building vegetable industry chain and high-quality vegetable base is very important for the healthy development of the whole vegetable industry in China.

According to Figure 2, China's vegetable export trade is an important part of agricultural products trade. In recent years, with the opening of the vast international market, China's vegetable export volume has increased year by year. In 2018, China's vegetable export volume reached 9 million 481 thousand and 700 tons, an increase of 2.48%; the export volume reached 88 billion 200 million yuan, a decrease of 4.12%. Among them, from January to July 2019, China's vegetable export volume reached 5.2408 million tons, an increase of 3.72%; the export volume reached 48.3 billion yuan, a decrease of 3.52%. From 2012 to 2017, the export volume showed a steady growth, but the growth rate was less than the growth of vegetable production and consumption. It shows that the incremental part of vegetable production in China is mostly consumed by domestic consumers, which shows the huge consumption potential of China and the decline of export. And the export volume has increased even less since 2017. From Figure 3, we can see that the export price has not increased significantly, so the export amount has declined for the first time. It shows that there is still more room for progress in the export of China's vegetable industry, which requires great efforts. The development of the whole vegetable industry can not only depend on the improvement of quantity, but also the improvement of quality and the increase of profit. Combined with Figure 1 and Figure 2, it is found that with the increase of total vegetable production and total vegetable consumption, and with the increase of surplus after the reduction of production and consumption, the export of vegetables to foreign countries is not growing fast, especially after 2018, which

reflects that the waste situation of Chinese residents is becoming more and more serious when their wallets are getting richer and richer. We should put an end to extravagance Waste behavior, reduce waste, use this part of vegetables for export, which not only changes people's living habits, but also creates benefits for the whole industry and export.

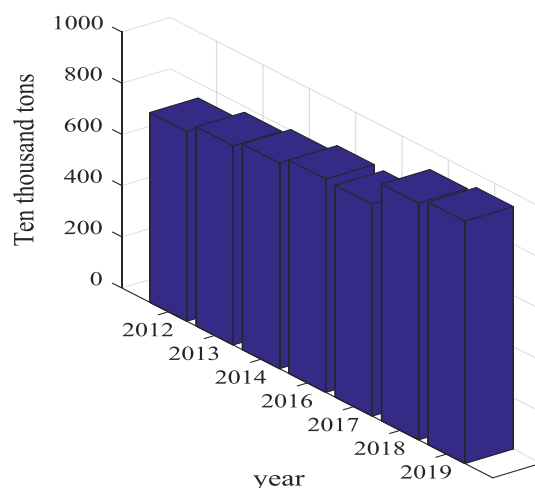


Figure 2. 2014-2019 China's total vegetable exports

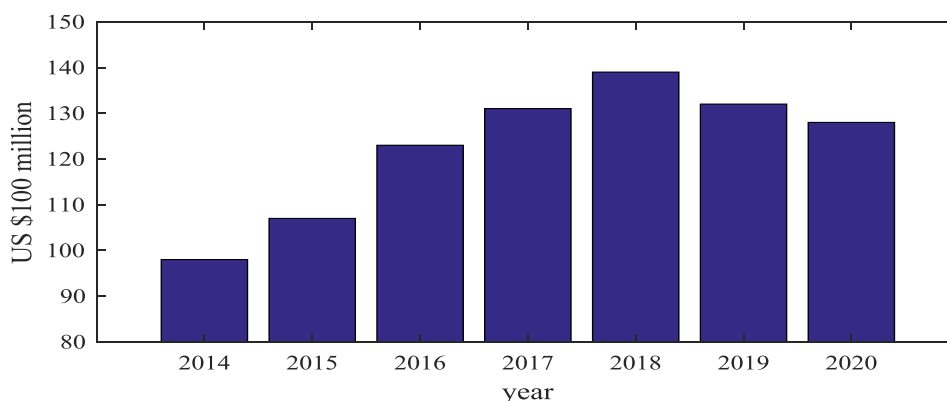


Figure 3. 2014-2020 Vegetable export price

According to Figure 4, we can find the distribution of total vegetable production in all provinces of China. It can be seen intuitively from the figure that Shandong Province has the largest vegetable production (mainly due to Shouguang vegetable base), followed by Henan Province. It can be found that the output of Henan Province is still very objective, mainly because Henan is the largest province of China's population, with sufficient cheap labor resources. Compared with Shandong Province, the vegetable planting mode in Henan province mostly adopts decentralized planting management, which is not as effective as the centralized planting in Shandong Province, so it is difficult to form the scale advantage and upgrade the industrial chain. Then there are Jiangsu Province, Hebei Province, Guangdong Province and so on. Their strengths and advantages are mainly due to the good environmental position and suitable climate of the vegetable planting area, making it a major vegetable production province. The government can carry out a general investigation on the nature of land in each province, what vegetables are suitable for planting, and improve the market competitiveness of vegetables according to local conditions.

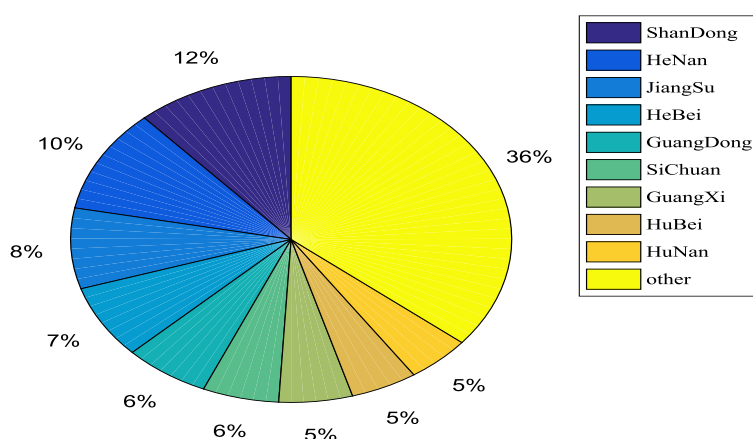


Figure 4. 2018 The distribution of vegetable production in each province

From the table, we can see that vegetable production also operates in the industrial chain. The profits are mainly concentrated in the hands of logistics transportation and large-scale vegetable suppliers. However, the income of hard-working vegetable farmers does not enjoy a large dividend with the increase of market and price. This is a huge injury to vegetable farmers, which is the so-called low price of vegetables. In the long run, this has a great impact on the enthusiasm of vegetable farmers, which will cause many vegetable farmers to abandon their land and not grow, and then lead to the reduction of the whole vegetable production, while the demand for vegetables is still strong, resulting in the soaring price of vegetables. When consumers buy high priced vegetables, the vegetable farmers then plant vegetables in a beehive, which leads to overcapacity, and the whole industry is unprofitable. After several setbacks, the whole industry chain of vegetable production and management will collapse, while vegetables are related to the national economy and people's livelihood, have a great impact on people's lives, and even lead to economic problems.

Farmers are mainly responsible for planting and harvesting. They know the most about vegetables. When farmers work hard for a year, the pricing power of vegetable products is not in their hands. When their families have problems, they will not care about the quality and safety of vegetable products. This is a great harm to the whole vegetable industry, not only is it not conducive to the vegetable industry going to the world, but also to reduce domestic consumption. People trust them, let alone build their own brand, As shown in Table 1.

Table 1. 2016-2020 Income and profit statement of vegetable growers in China

Particular year	2016	2017	2018	2019	2020
income	13000	14500	15800	16600	17200
profit	3500	3700	3600	4200	3200
profit margin (%)	27	26	23	25	19

5. Conclusion

The development of vegetable industry is greatly influenced by social factors, especially population factors. Although China's vegetable industry is constantly strengthening and its international competitiveness is enhanced, there are still many problems, which seriously restrict the further development of China's vegetable industry in the international market.

As a developing country, China is a large agricultural country, but it is quite backward in

technology and management concept. At this time, we can learn from the agricultural experience of developed countries, and our vegetable production and management can make long-term progress. In order to improve the vegetable production in the United States, the whole process of production is mechanized and automated. Before planting, the land should be surveyed to guide the use of chemical fertilizer and pesticide. The government provides transparent and open information, vegetable industry loans and vegetable industry insurance system to support farmers. China can learn from the experience of the United States and adopt advanced modern production technology and process. The government should play a leading and supporting role in the production and operation of the whole vegetable industry. For example, it should provide the information needed for various vegetable production, identify the suitable vegetable varieties in different places, adjust measures to local conditions, integrate the production, sales and logistics of vegetables on the Internet, make the information open and transparent, which can greatly dissolve the circulation and information The risk of interest asymmetry. We will give strong support to the banks that provide low interest loans to vegetable farmers, so as to eliminate the risk of financing difficulties in the vegetable industry. The government vigorously supports the insurance companies of vegetable industry insurance, so that the risk response ability of vegetable industry is greatly enhanced under the conditions of serious price fluctuation, severe inventory squeeze, bad weather environment and diseases and insect pests. To enhance the quality and safety of the vegetable industry, build its own brand, generate brand premium, improve profit margin, and make solid preparations for export.

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Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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