

Development Status and Countermeasures of Cold Chain Logistics of Fresh Agricultural Products in China

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Abstract: Agricultural products are not only the foundation of human survival, but also the foundation of China's social and economic development. Because of its high water content and short fresh-keeping period, fresh agricultural products are easy to rot and cause losses in the circulation process. The development of cold chain logistics can greatly reduce the loss rate of agricultural products. Therefore, it is imperative to develop cold chain logistics, reduce the loss of agricultural products, improve the quality of agricultural products, and promote farmers' income. This paper will analyze the significance of developing cold chain logistics of fresh agricultural products and the current situation of cold chain logistics of fresh agricultural products in China, and put forward improvement countermeasures.

1. Introduction

With the continuous development of the times and economy, people's living standards have gradually improved, and the demand for agricultural products in life has gradually increased, which has led to the continuous expansion of the market demand for fresh agricultural products such as vegetables, fruits and meat at this stage. However, due to the nature of the product itself, corruption and decay often occur in the transportation process, which affects its own quality, and makes the freshness of fresh agricultural products and the delivery time of cold chain logistics become the primary concern of consumers.

2. Analysis on the Current Situation of Cold Chain Logistics of Fresh Agricultural Products

2.1. Management Status of Cold Chain Logistics of Fresh Agricultural Products

Due to the imperfect infrastructure construction of fresh agricultural products logistics in China, the management level of cold chain logistics is low, the loss is large in the transportation process, and the efficiency is low, which affects the quality of products. The enterprise lacks professional cold chain logistics talents of fresh agricultural products. In order to save costs, some enterprises only pay attention to immediate interests and do not consider long-term development issues, which makes the quality of the entire industry generally low and unable to meet the needs of the market. At present, many domestic colleges and universities have set up relevant courses and achieved certain results, but they lack practical teaching plans, which leads to the weakness of teachers in many schools and the inability to combine theory with practice. In addition, the governments in some regions have insufficient understanding of cold chain logistics, think that its investment is relatively large, and do not realize its importance, so their investment is small, which eventually makes the facilities and equipment in these places backward, seriously affecting China's food safety.

2.2. Sales Status of Cold Chain Logistics of Fresh Agricultural Products

From the perspective of sales channels of fresh agricultural products, they are mainly sold through supermarkets, farmers' markets, convenience stores and snack bars. Most farmers in China are engaged in the planting and production of fresh agricultural products in the way of family management. Due to the backward rural infrastructure and the lack of professional technicians and

experience, the agricultural development in these areas is slow, or even stagnant. In many big cities, there are special fruit and vegetable trading centers that can transport fresh fruits and vegetables to retailers, which greatly reduces transportation costs and losses.

2.3. Transportation Mode of Cold Chain Logistics of Fresh Agricultural Products

Firstly, cold chain logistics transportation. In the production and consumption of fresh agricultural products, the requirements for temperature are relatively high, which requires low temperature control. In this link, the most important thing is to maintain the freshness and quality of fresh agricultural products. To achieve this goal, we must adopt advanced technical means to ensure its quality. Secondly, refrigerated trucks. For ordinary farmers, they generally use traditional methods to store food, but with the development of society and the progress of science and technology, people's living standards are also improving, so the demand for fresh food is also growing. The new heat preservation vehicle has automatic adjustment function, which can take appropriate measures to adjust the packaging in time according to different weather conditions, so as to extend the shelf life of fresh agricultural products, which can not only save costs, but also improve efficiency. At present, some cities in China have begun to use it and gradually spread it to the whole country.



Figure 1 Common cold chain transportation models in China.

3. Effective Countermeasures for the Development of Cold Chain Logistics of Fresh Agricultural Products in China

3.1. Reasonably Plan the Consumption Structure of Fresh Agricultural Products

Consumption structure refers to the proportional relationship between consumers' consumption expenditure and total demand in a certain period of time, that is, people's income level, lifestyle, social habits and other factors affect the consumption structure. From the perspective of economics, the economic development of a country is closely related to the development of its cold chain logistics. The main feature of fresh agricultural products is that they are perishable and require high temperature. Therefore, temperature control during transportation is particularly important. In China, fresh agricultural products are mostly carried out in bulk in small batches, which leads to a high loss rate in the circulation link, thus increasing the cost of products. At the same time, due to the short shelf life of fresh agricultural products, they are easy to be restricted by natural conditions and man-made pollution, resulting in the decline of their quality, thereby reducing the income of farmers. In addition, with the increase of residents' disposable time and the adjustment of holidays, the traffic pressure in the city is increasing, which intensifies the surge in the number and types of refrigerated vehicles, which further promotes the rapid development of the logistics industry. In order to make the development of cold chain logistics of fresh agricultural products in China more rapid, relevant departments should take some measures to improve the current situation and future development trend.

3.1.1. Strengthening the Guiding Role of the Government

Under the guidance of national policies, actively encourage and support local people's governments at all levels, especially agricultural committees, to promote the attention of local government departments, and give corresponding subsidies and preferences to help them establish a good market environment. At the same time, enterprises should also play a leading role to drive other relevant subjects, such as farmers and cooperatives, so as to maximize the interests of the whole industry. The government should give some support and guidance in policy, formulate relevant laws and regulations, and issue the corresponding standard system to provide a good environment and favorable space for the development of cold chain logistics. In terms of finance, we should subsidize the development of cold chain logistics of agricultural products, and increase support for those small-scale enterprises with backward infrastructure, so that they can develop better. In addition, the government should also give full play to its service functions to help operators of fresh e-commerce solve some problems, such as how to deal with the relationship between fresh e-commerce and express delivery, how to control the transportation time and how to ensure the freshness of food.

3.1.2. Increasing Capital Investment

In the development of cold chain logistics of fresh agricultural products, a large amount of infrastructure investment is required, which requires that the financial expenditure of the local government must have sufficient capacity to support. Therefore, this puts forward high requirements for the financial revenue of the local government. In addition, due to the relatively backward economic level in rural areas, it will also lead to the imperfect infrastructure, and the existence of these problems will further affect the development speed of logistics. At the same time, we should also strengthen the construction of agricultural production bases and improve the quality and safety level of agricultural products, so as to promote the rapid and stable development of agriculture in China. In terms of market, the government also needs to actively play its role in macro-control, and build a more convenient channel for communication between consumers and producers by establishing and improving information platforms.

3.2. Strengthening the Cold Chain Logistics Service System of Fresh Agricultural Products

In order to better solve the loss of fresh agricultural products in the transportation process, we must establish a perfect cold chain logistics service system, so as to provide consumers with a better service experience.

First of all, enterprises can integrate the existing distribution center, build it into a comprehensive distribution center integrating information collection, processing and analysis, and take it as the core link of the whole supply chain to realize the effective management of fresh agricultural products. Secondly, strengthen the cooperative relationship with third-party logistics companies, and use their own resource advantages to reduce costs and improve efficiency. Finally, the government should increase the investment in refrigerated trucks, so that they can meet national standards, so as to ensure the quality and quality of products. At the same time, large logistics teams should be encouraged to compete with them and given certain preferential policies to attract more customers to join the industry. In addition, in order to further promote food safety in China, the state should also issue relevant laws and regulations to fundamentally ensure food safety. The state also needs to formulate corresponding punishment measures to severely punish those who violate the regulations.

3.3. Establishing a Cold Chain Logistics Service Platform for Fresh Agricultural Products

At present, the cold chain logistics service platform in China is still in the preliminary stage, but with the support and guidance of national policies, relevant departments are also constantly improving and establishing the cold chain logistics platform of fresh agricultural products. Through the analysis and prediction of market demand, combined with the actual situation at home and abroad, formulate the planning scheme in line with their own development, and determine the

corresponding service standards according to different customer groups, so as to provide better services for enterprises. At the same time, in order to improve the quality and quality of fresh agricultural products, it is necessary to establish a unified platform for management, make it more standardized, and realize resource sharing, so as to reduce costs and increase revenue. To build a cold chain logistics and transportation system for fresh agricultural products, first of all, strengthen infrastructure construction, such as roads and railways, to ensure the circulation of food under low temperature conditions. Secondly, the state should speed up technological innovation, such as adopting advanced automation equipment and reducing manual operation links, so that it can maximize efficiency, save human and material resources, and then improve the operation level of the whole system. Finally, the state should strengthen the training of professionals, introduce some excellent foreign agricultural production experience, and lay the foundation for the development of domestic agricultural products planting and breeding industry.

3.4. Building Cold Chain Logistics Channels for Fresh Agricultural Products

Establishing and improving the cold chain logistics channel of fresh agricultural products is the key to solve the problem of fresh e-commerce in China. From the perspective of the development of cold chain logistics of fresh agricultural products, the current construction of cold chain logistics system in China is still in the primary stage, and a perfect circulation network has not been formed in terms of market demand. Therefore, in order to better solve this problem, we need the joint efforts of the government and enterprises.

First, improve infrastructure construction, improve transportation efficiency, reduce costs and losses. Secondly, strengthen the management and control of refrigerated vehicles, ensure the normal operation of vehicles, and avoid unnecessary losses caused by human factors. Finally, the government should strengthen the supervision of food safety, crack down on illegal production, counterfeiting and other illegal acts, and create a good consumption environment for consumers. On the Internet, you can set up a special website to publish information and sell products, or cooperate with a third-party platform to use the advantages of the Internet to realize the trading and distribution of agricultural products. At the same time, it can also carry out in-depth strategic alliances with some large e-commerce enterprises to achieve win-win results through resource integration. It can also set up its own secondary distribution outlets on well-known B2B e-commerce platforms nationwide and provide corresponding technical support. In the traditional offline marketing mode, due to geographical restrictions, goods cannot be delivered directly to customers, so we need to rely on various intermediaries, such as express companies, self built distribution centers, etc.

4. Conclusion

To sum up, China is a large agricultural country, but with a large population and a small per capita cultivated land area, the production and consumption of agricultural products in China are lower than the world average, so the demand for fresh agricultural products is more urgent. In this context, the development of cold chain logistics is particularly important. Therefore, the state should speed up the construction and improvement of cold storage facilities for fresh agricultural products, increase investment, improve their quality, enhance their market competitiveness, and promote the sustainable and healthy development of agriculture.

References

- [1] Li Xiaojuan, Liu Qing. Analysis on the current situation and development of food cold chain logistics[J]. Grain Section Technology and economy, 2018 (4): 5-6.
- [2] Zhu Qin. Research on the development status and Countermeasures of cold chain logistics in China[J]. Science and technology economics guide, 2016 (21): 5-6.