

E-Commerce Fresh Products Cold Chain Logistics Positioning and Tracking System Construction

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Abstract: At present, the sales channels of fresh products in our country have been extended to the development system of e-commerce. A very important part of the sales process of fresh products is the development of cold chain logistics of fresh products. Since the current development model of fresh food e-commerce is seriously behind the development of clothing, among which cold chain logistics is a major bottleneck restricting the development of fresh food e-commerce. This article analyzes the development of cold chain logistics of fresh and fresh products in China to discuss its current specific characteristics and development models in my country. Based on big data technology, the accuracy of the logistics positioning and tracking system has increased by 7.89%.

Keywords: E-Commerce, Fresh Products, Cold Chain Logistics Positioning, Tracking System

1. INTRODUCTION

At present, the development footprint of my country's e-commerce has involved the field of fresh agricultural products. With the development of this new business model, it has gradually been welcomed by more and more consumers. According to the current development situation, e-commerce companies such as Alibaba and JD.com have achieved remarkable results in the development of fresh agricultural products. Although the current e-commerce development system for fresh agricultural products has gradually formed and achieved certain results, there are still many problems. One of the more significant and relatively large factors is the development of cold chain logistics of fresh agricultural products [1-6].

One is to increase the number of cold storage. After being harvested, fresh agricultural products are directly sent to the corresponding warehouse in batches, which can effectively reduce the transportation time and distance of the agricultural products, which not only ensures the freshness, but also reduces the transportation cost. The second is to establish a sales model of "origin-sales platform-buyer", that is, the O2O model. It is possible to set up an agent purchase point for agricultural products in the place of origin of agricultural products, sign contracts with farmers, and purchase agricultural products on a regular basis. Then put the actual information of agricultural products on the network platform, open an online store, and publish the actual information of agricultural products through the platform to attract the attention of consumers. When a consumer places an electronic order, the product must be delivered to the consumer in a timely manner. Because of the high operating cost of this model, it needs to be targeted at special consumers. Therefore, before signing a contract with farmers, it is necessary to investigate and review the number of consumers and consumption capacity, and then formulate a specific distribution plan. This method can ensure the company's economic benefit. Take Yiguo.com as an example. As a well-known fresh agricultural product trading website, Yiguo.com is committed to building three modules: omni-channel transportation, anxinda transportation and procurement supply chain, mainly providing customers with refrigerated storage. Cold chain home delivery and other services, and launched the "on-time delivery" service for high-end users. In

the industry standard, the Mark standard system is implemented to promote the development of the industry. The daily purchase volume of fresh products on the website reaches 200 tons, 70% of which are distributed by cold chain logistics. The company is committed to building an open supply chain platform and has now completed the C+ round of financing [7-12].

The operation chain involved in the process of fresh agricultural products reaching the front of consumers from the production link is relatively long and the time span is relatively large. It is a relatively difficult problem to ensure their freshness. The most important thing to produce agricultural products is that they are relatively affected by the environment. How to use cold chain technology to ensure their freshness in the process of being transported is the first problem that needs to be solved. In the e-commerce sales system, the requirements for cold chain technology are relatively high. Therefore, how to solve the application of cold chain technology in the logistics process is a core problem in the development of cold chain logistics for fresh agricultural products [13-17].

In Europe, the United States and other countries, 80% of fresh agricultural products such as fruits and vegetables are transported through cold chain logistics. In my country, only 20% of fresh agricultural products use cold chain logistics. Due to the high cost of refrigerated trucks, transportation the high cost has led to an increase in transportation costs, which makes my country's logistics enterprises lack a certain amount of attention to cold chain logistics. For example, in an electronic transaction, the logistics cost of electronic products, shoes and hats is between 5% and 10%, while the transportation cost of fresh agricultural products is between 40% and 45% [18-21].

Different from other commodities, fresh agricultural products have the characteristics of seasonal and regional production, susceptibility to climatic conditions, long production cycle, fragile and perishable, and not easy to store. Therefore, in order to ensure the maximum "freshness" of fresh agricultural products, it is necessary to ensure that all stages of product transportation and distribution are completely under the corresponding low-temperature refrigeration environment, and fresh products are delivered to consumption in the shortest possible time. This can only be achieved through cold

chain logistics. At present, the development of cold chain logistics in my country is lagging behind, the distribution of related facilities is unreasonable, the traditional equipment is outdated [22-24].

2. THE PROPOSED METHODOLOGY

2.1 The E-Commerce Fresh Products Cold Chain Logistics

For the logistics service of fresh agricultural products, the most needed processing process is to carry out cold chain circulation. According to the development status of my country's industry in this area, the cold chain transportation rate of my country's agricultural products is relatively low. Most fresh agricultural products are still in circulation at room temperature, while the cold chain circulation rate of meat and poultry in developed countries in Europe and America has reached 100%, and the cold chain circulation rate of vegetables and fruits is also above 95%. The main reason is that the backwardness of my country's cold-chain logistics technology makes it difficult to realize the cold-chain logistics and transportation of fresh agricultural products on a large scale and on a large scale in my country. The technology here involves the problem of logistics transport vehicles and the problem of specialized cold chain technology.

The term cold chain was first proposed by J.A. Leduci and Arbat Barrier at the end of the nineteenth century. With the increasing awareness of people's food safety, the research on the cold chain in supply chain management continues to develop and deepen. Combining the opinions of relevant experts and scholars, the cold chain is defined as: in order to maintain the quality of perishable products, after acquisition, processing, inactivation, and sterilization, in the process of product processing, storage, transportation, distribution, and retail consumption, each All stages are always in a special low-temperature environment necessary for the product to reduce losses and prevent deterioration and pollution in a special supply chain system. Cold chain logistics, also known as low temperature logistics, is a special type of logistics. It means that the frozen and refrigerated products are kept in the corresponding low temperature environment from the beginning to the end from production, transportation and storage, sales to consumption, in order to reduce product loss and ensure product quality. A system engineering of. Cold chain logistics is a kind of comprehensive cross-type application subject, based on the refrigeration process, supplemented by the low temperature logistics process of refrigeration technology. It plays an important role in the logistics system. Wang Yongsheng(2014) divides logistics into normal temperature logistics, constant temperature logistics and cold chain logistics according to the difference in temperature. Weng Xingang and others further classified cold chain logistics in detail based on temperature.

2.2 The Cold Chain Logistics Positioning

As a fresh food e-commerce company, the requirements for cold chain logistics are higher, and the "last mile" refrigeration is the top priority. Is it to cooperate with a third party for distribution and storage, or to build a cold chain system? It can be seen from the current market structure that major e-commerce platforms are striving to build their own cold chain systems. In addition, they have almost consistently chosen direct sales methods.

For example, the No. 1 shop adopts the direct harvesting method of direct access to the orchard and farm in the

procurement of goods. In the key fruit production areas, it is guaranteed that the directly picked fruits enter the No. 1 warehouse, thus shortening the entire transportation process. In addition, JD.com has established a direct supply base to create a "origin-platform-consumer" model. In this process, the guarantee of product quality requires a powerful cold chain system, which increases operating costs and increases the price of goods. At present, fresh food e-commerce consumer groups are generally positioned as white-collar workers and high-income groups. This group of people has higher requirements for food and other quality and safety, but there is a good profit margin.

The Food Special Committee has begun to publicly solicit enterprises and institutions with certain technical strength that are involved in the production, transportation, storage, research, equipment, testing and other businesses of perishable food registered in China to participate in the "Perishable Food Motor Vehicle Cooling The work of the national industry standard drafting unit. The main purpose of formulating this standard includes the following points: one is to meet the demand for food supply, and to ensure that the basic living requirements of people in cities with a population of one million are effectively supplied; the other is to ensure that food is effectively transported from remote farms to various cities. Reduce waste during processing, transportation and storage, and improve food quality to meet people's growing material needs; third, as food safety issues are becoming more and more prominent today, ensure that all kinds of refrigerated and fresh foods are safe and reliable in transportation and distribution, and eliminate major problems. Food safety hazards; the fourth is to export fresh and high-quality domestic food to all parts of the world, so that people all over the world can enjoy high-quality Chinese food in the first time, improve the global competitiveness of China's agricultural product industry, and effectively increase farmers' income while calling on relevant national ministries and commissions to provide policy support.

2.3 The E-Commerce Cold Chain Logistics Tracking System

The strategic planning of fresh agricultural products e-commerce includes not only the choice of business models but also the choice of cold chain logistics models. This chapter describes the current three main models of self-built cold chain logistics, third-party cold chain logistics, and "self-operated + third-party" composite cold chain logistics of fresh agricultural product e-commerce cold chain logistics. Two scholars, Chen Jingyu and Huang Hui, studied 84 fresh agricultural product e-commerce companies in 2015 and found that the current cold chain logistics of fresh agricultural product e-commerce in my country is mainly self-operated. As shown in the figure, 60% adopt the self-operated cold chain model, 25% of the fresh agricultural product e-commerce enterprises choose the cold chain logistics outsourcing model, and 15% belong to the cold chain logistics self-operated + third-party hybrid model. E-commerce fresh agricultural products cold chain logistics is very important in that its carrying objects are fresh agricultural products.

First of all, the quality of fresh agricultural products has a direct impact on personal health and the desire to buy again, and it also determines the survival and development of fresh food e-commerce companies. Therefore, safety is the first and most important factor considered in the cold chain logistics operation of fresh agricultural products in e-commerce. Secondly, the shelf life of fresh agricultural products is very short, even if they are circulated and stored at low

temperatures. Therefore, whether it is from the consideration of the product itself or the operating cost of the enterprise, high-efficiency operation is the common pursuit of all fresh agricultural products cold chains. In addition, the integration of the evaluation index system should also be considered. The quality of fresh agricultural products is related to the life safety of consumers. At any time, the safety of fresh agricultural products is the first important thing. In fact, in addition to some irresistible transportation accidents, various risk factors that endanger the safety of fresh agricultural products are hidden in the entire logistics process. A little careless control will have an irreversible impact on the product. , Such as whether the hygiene standards in each link, whether the temperature and humidity are appropriate, whether the connection between each link is smooth and tight, etc.

3. CONCLUSIONS

In summary, in the era of e-commerce, promoting the development of cold chain logistics for fresh and fresh products can promote agricultural progress. On this basis, Tong Logistics Company will cooperate with large hotels, and continue to develop customers by signing contracts and adopting appropriate methods of concession. At the same time, fresh fresh products are directly sent to the corresponding warehouse in batches after being harvested, which can effectively reduce the transportation time and distance of fresh products, which not only ensures freshness, but also reduces transportation costs.

4. REFERENCES

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