

Research on Agricultural Products Logistics Supply Chain Model Based on Information Network

Liu Xuexue

Shaanxi Fashion Engineering University, 712000, China

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Abstract: Based on the analysis of the current situation of the development and supervision of the network information platform of agricultural products supply chain and the characteristics of the network era, this paper puts forward the method of establishing the network information platform. The advanced and restrictive factors of agricultural product logistics management mode based on information network platform, as well as the application examples and their influences and the thinking and research caused by them are briefly discussed. The agricultural product logistics e-commerce supply chain network structure can reduce the cost of agricultural products logistics in China, prevent the huge fluctuation of agricultural product prices, and realize the rapid deployment and optimization of agricultural products. This explains the application status and prospects of information network platform in agricultural product supply chain logistics management.

1. Introduction

In the era of "Internet +", big data and information have become an important basis for enterprises to optimize resource allocation, grasp market direction, and improve competitiveness [1]. China is a big agricultural country with abundant agricultural products. The development of agricultural product logistics should have a big breakthrough in the whole, and it must be introduced into the modern and rational logistics management mode--the supply chain management of agricultural products, and manage all the activities of agricultural products logistics and enterprises as a unified process [2]. Among them, the supply of agricultural products is a very critical part. Traditional agricultural product supply methods, such as the purchase and sale of individual farmers and the purchase and sale of wholesalers, have certain drawbacks. With the continuous development of science and technology, the improvement of agricultural production efficiency, and the rapid development of information technology, these drawbacks are particularly Obvious [3]. The "small-scale, large-group" circulation system of agricultural products corresponding to the units of peasant households in agricultural production and management has become increasingly unable to meet the requirements of modern agricultural product logistics and agricultural industrialization [4]. Under such circumstances, in order to maintain competitiveness, agricultural product logistics enterprises must continuously shorten product development time, improve product quality, reduce production cost and shorten delivery cycle. Therefore, it is of great theoretical and practical significance to study the market supervision policy of agricultural product supply chain network information platform.

2. Current Situation of Agricultural Products Logistics Management Mode

2.1. Wholesale market is not fully developed

In order to complete the highly integrated value-added process of providing agricultural products and services, shorten the circulation time of agricultural products, reduce post-natal losses of agricultural products, and improve logistics efficiency. When problems arise in the quality of agricultural products, it is difficult for government regulators to achieve timely traceability, or in the process of traceability will consume more human and financial resources [5]. Mainly reflected in: First, the wholesale market logistics facilities and equipment for agricultural products are backward,

and the level of storage and preservation facilities is low. The scale of agricultural production is low: China's agriculture is in the stage of small-scale farming economy, production is not scale, there is no close organization, leading to stable procurement and marketing channels of agricultural products [6]. The second trading method is backward. Because the fresh-keeping facilities can't keep up, the agricultural products are not standardized, and they can only be traded in real time, and it is impossible to conduct open and fair auction transactions. The undisclosed and opaque market information, the hidden factors of serious information lag caused farmers to lack guidance when choosing planting varieties, and blindly follow the wind to make the planting structure unreasonable. Due to the basic conditions and product preservation technology, the loss is huge. When the agricultural products are concentrated in the market, the logistics and information flow are not smooth, the processing capacity is insufficient, the production and sales are out of line, and the loss is more prominent.

2.2. Distinguishing between production and sale in agricultural supply chain

Agricultural producers are not fully involved in the agricultural product supply chain and are in a passive position and become risk takers. They are often excluded from the supply chain, unable to fully grasp all the information in the circulation of agricultural products, and even less likely to arrange production based on this information [7]. The agricultural product logistics supply chain is a management mode that integrates upstream and downstream enterprises as a whole, cooperates with each other, and shares information to improve the rapid response capability of logistics and reduce logistics costs. At the same time, the level of logistics information services is low, resulting in a lack of ability of agricultural products to respond quickly to the market [8]. The lack of an effective information network platform in China's agricultural product supply chain logistics leads to the unsmooth exchange of information and the lack of timely and effective information in all links of the supply chain, which is not conducive to the development of the supply chain. With the development of agricultural product supply chain network information platform, the regulatory cost of government regulatory agencies has been greatly reduced. With the help of big data from the information platform, government regulatory agencies can timely trace the root causes of problems arising from agricultural products and find out the crux.

2.3. Information flow between supply chain nodes is not smooth

There is a big gap in the degree of informatization among enterprises in the supply chain nodes of agricultural products logistics in China. Many enterprises have not realized the important impact of informatization on their own development, let alone use advanced information technology to serve themselves. Logistics is an integrated supply chain constructed by the manufacturer's agricultural product process, which extends the two functional activities of material purchasing and material distribution to its suppliers and customers. Agricultural product logistics information platform is the cooperation and collaboration among supply chain nodes, and information sharing is the basis. There is a lack of a unified information platform between enterprises in the supply chain for information exchange between enterprises, which results in the lack of necessary understanding between enterprises that should be multilateral and win-win, and hinders the development of agricultural products logistics. The traditional regulatory agencies and organizational structures do not adapt to the characteristics of real-time data sharing in the network era, and the regulatory system is not perfect enough to make the role of government supervision compromised. For logistics companies, the use of information sharing platforms has also made it possible to improve the planning, management and deployment of agricultural products in a timely manner.

3. Logistics Management Model of Agricultural Product Supply Chain Based on Information Network

3.1. Proposed mode

Supply chain is not only a logistics chain, information chain and capital chain connecting

suppliers to consumers, but also a value-added chain. Agricultural products in the supply chain increase their value due to processing, packaging, transportation and other processes, bringing benefits to related enterprises. In order to make information flow smoothly in the agricultural product supply chain and reduce the uncertainty of information transmission in the supply chain, it is necessary to establish the e-commerce supply chain network structure of China's agricultural product logistics information platform to realize "win-win" cooperation. Through the close cooperation between trading partners, to provide customers with the greatest value and the best service at the lowest cost, so as to improve the operation efficiency and economic benefits of the whole supply chain logistics. Therefore, it is the best choice to solve the above problems by establishing a modern agricultural product supply chain logistics system that integrates production, processing, transportation and sales based on the information network platform. Therefore, it is necessary to construct a logistics information network management system for fresh agricultural products, widely use information network technology, and accelerate the integration of modern logistics and e-commerce. A win-win strategy for cooperation is the preferred strategy for each member of the supply chain. The key to forming a strategic partnership is the trust of all parties in the supply chain. The traditional agricultural product logistics management mode should be reformed, and the agricultural product logistics supply chain management mode based on information network should be established.

3.2. Advantages of patterns

Agricultural products logistics supply chain management mode is an electronic commerce information platform of Supply Chain Based on information network, which organically combines the production, processing, circulation and consumption of agricultural products. It is regarded as a dynamic supply chain formed by partners based on technical support and services provided by specialized information service centers. Relying on the modern network information platform, we can timely and effectively understand the information of each link in the logistics process of agricultural products supply chain, so that we can according to the production situation, sales situation, transportation and storage situation. In this model, the core enterprise wholesalers are connected with the production and processing fields, and they are connected with the distributors, and they are all included in the supply chain for management; the wholesalers turn to the production and processing units to order, and let them decide Production quantity, development of order farming. Consumers can query the quality and safety of the purchased agricultural products through the network terminal of the information platform, and can trace the origin, effectively guarantee the rights and interests of consumers, and also facilitate the creation and protection of agricultural product brands.

3.3. Research and thinking on agricultural product supply chain logistics management mode based on information network platform

We conduct an empirical analysis of the freshwater product supply chain logistics management model. Aquatic product producers are divided into large and retail households according to the scale of production. Large households use their own specialized product websites, and retail investors are connected to the supply chain information network platform through their established intermediary brokerage organizations. Before the introduction of informatized supply chain logistics management, aquatic products management faced a situation of low economic efficiency, backward transportation and marketing communication facilities, worrying security risks, lack of technical support and backward service system. China's agricultural product logistics e-commerce supply chain network is also an economic system. Information technology is used to transfer information from top to bottom to realize information sharing among supply chain members, so as to guide correct decision-making and improve the response ability of supply chain to the market. The logistics system of the supply chain has been redesigned, the logistics management of the supply chain has been strengthened, and the harmonious and balanced development of all links of the supply chain has been promoted. The whole freshwater product supply chain logistics process structure is greatly simplified. Farmers, processing enterprises, wholesalers, retail terminals and

consumers in the supply chain are the direct beneficiaries. For farmers, if they are large households, they have their own scale advantages.

4. Conclusions

With the advent of knowledge economy and network era, in order to create our agricultural products brand and improve the international competitiveness of our agricultural products, the agricultural industry should make full use of advanced information resources and information technology to determine the supply chain management strategy of agricultural products logistics. The logistics management mode of agricultural product supply chain based on information network platform has greatly improved the overall benefit of agricultural product supply chain and the benefit of participating in all links of the supply chain. Closely combined with advanced production, operation and management mode, the supply chain of agricultural products will further develop towards systematization, integration and leanness. Agricultural product logistics E-commerce supply chain competition needs to abandon the valueless partners on the basis of performance and actively acquire new partners. The agricultural product supply chain logistics based on the information network platform combines production, processing, packaging, storage, transportation and sales into a unified whole, forming a strict and organized system.

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