

Research on the quality and safety of agricultural products industrial chain and supply chain

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How to cite this paper: Fang, L., & Wang, Y. (2025). Research on the quality and safety of agricultural products industrial chain and supply chain. *Annals of Management*, 1(1), 16-22. ISSN Print: 3079-5567; ISSN Online: 3079-5575. <https://doi.org/10.63313/Management.8002>

Published: 2025-03-17

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Abstract

The quality and safety of agricultural product supply chain is related to national economic security and social stability. Under the new situation of comprehensively and strictly governing the Party, ensuring the quality and safety of the supply chain of agricultural products has become an important task. Based on the analysis of the current situation of the quality and safety of agricultural products supply chain, this paper finds out the problems in the supply chain of agricultural products, and puts forward the countermeasures to improve the quality and safety of agricultural products supply chain.

Keywords

Agricultural products supply chain, Quality and safety, Industrial chain supply chain

1. Introduction

In recent years, the quality and safety incidents of agricultural products have occurred frequently, and the supply chain security of agricultural products has become an important task for China to implement comprehensive strict governance of the Party and improve the party's ruling ability. As a special trade and industry, agriculture has the characteristics of vulnerability and sensitivity. Once there is a quality problem, it will have a major impact on national economic security and social stability[1]. Therefore, it has become an urgent task to analyze the current situation of quality safety of agricultural products supply chain and put forward corresponding countermeasures. This paper analyzes the current situation of quality safety of agricultural product supply chain, finds out the existing problems of quality safety of agricultural product supply chain and puts forward corresponding countermeasures to strengthen the quality safety management of agricultural product supply chain and improve the quality safety level of agricultural product supply chain.

2. Research status

2.1. Government regulation

In terms of supervision, build a "government-enterprise-society" trinity of supervision mechanism, through the guidance of administrative departments, self-discipline of enterprises and supervision of social organizations to jointly build a food safety social co-governance pattern. On the basis of government supervision, we should further strengthen the construction of the credit system of food enterprises, record the dishonest behavior in the credit files of enterprises, and increase the cost of dishonest behavior[2]. But at the same time, some scholars have proposed to give full play to the role of social organizations and industry associations in food safety supervision. We will strengthen administrative and legislative work on the quality and safety of agricultural products, and establish and improve a system of laws and regulations on the quality and safety of agricultural products. At the same time, it is necessary to increase the penalties for illegal acts and increase the cost of illegal acts. Establish a sound food safety emergency management mechanism and a food safety risk assessment system. At the same time, we should establish and improve the information disclosure system and strengthen social supervision. In addition, it is necessary to establish a scientific and reasonable reward and punishment mechanism to improve the enthusiasm of enterprises' production and operation activities.

2.2. Industrial organization

The organizational structure of the industrial chain and supply chain of agricultural products is one of the key factors affecting their quality and safety. For agricultural production, the supply chain of agricultural products can be divided into industrial chain and industrial cluster[3]. Among them, industrial chain refers to the supply chain composed of agricultural production units, which is an important link between agricultural production and agricultural product consumption; Industrial cluster refers to a cluster composed of several similar enterprises, which usually has a certain scale and strong competitiveness; Industrial clusters are two main ways of modern agricultural development, and they play an important role in the development of modern agriculture in China. Based on the organizational structure of agricultural products supply chain network in China, this paper analyzes the problems existing in the network structure of agricultural products supply chain in China and puts forward the corresponding countermeasures[4]. This paper analyzes the network organization structure of the supply chain of agricultural products and points out that the network organization structure of the supply chain of agricultural products in China has two modes: vertical integration and horizontal integration. From the perspective of the current organization structure of agricultural products supply chain network in our country, there are some problems such as loose organization and difficult integration of resources.

As for the quality and safety of agricultural products, due to the imperfect market

mechanism and supervision system in our country, consumers are concerned about the quality and safety of agricultural products. In order to solve the problem, measures should be taken to improve the market system of agricultural products, strengthen the supervision system of agricultural products quality and safety, and improve the awareness level of consumers on agricultural products quality and safety.

2.3. Quality management

Under the background of economic globalization and trade liberalization, the quality and safety of agricultural products has been paid more and more attention by the international community[5]. Since the 1990s, with the continuous occurrence of food safety incidents, the Chinese government began to strengthen the quality and safety supervision of agricultural products. Since the formal implementation of the Food Safety Law, relevant state departments have issued a number of documents on the quality and safety management of agricultural products, including the Notice of The General Office of the State Council on the issuance of Management Measures for Agricultural Product Quality and Safety Testing Institutions.

3. Current situation analysis

From the perspective of supply chain, the supply chain of agricultural products is a process of product circulation from producer to consumer. According to the provisions of China's Agricultural Product Quality Safety Law, the production, processing, transportation and sales of agricultural products should be carried out at the place of origin or sale. However, in the actual operation process, many links are still operated by scattered farmers, and there are many problems, which are embodied in the following aspects.

(1) Low level of production standardization. There are many irregularities in the production process of agricultural products, such as the arbitrary use of agricultural chemicals, pesticides and excessive use of chemical fertilizers. However, the standardization degree of agricultural product production in our country is low, which leads to the production of agricultural products do not meet the relevant standards, and the quality is not up to standard. For example, vegetables, fruits before the use of bulking agents, resulting in different sizes of products, skin fragile, easy to rot; Another example is the illegal use of antibiotics or hormones in the breeding process, resulting in poisoning of animals or humans; Another example is that the product is not cleaned and disinfected as required during processing, resulting in contamination of the product.

(2) Many circulation links and low efficiency. Because there are many links in the supply chain of agricultural products, these links are very closely linked. For example, in the planting stage, after harvesting seeds from the land, farmers need to send them to the seed bank for storage. Raw materials need to be cleaned and processed in the processing stage of agricultural products; The product should be refrigerated and disinfected during transportation; Finally, the quality inspection and packaging

of agricultural products should be carried out in the marketing stage. These links are very closely linked, and any problem in any link will affect the operation of the entire supply chain.

(3) The informatization degree of agricultural product supply chain is low. At present, China's agricultural product supply chain information construction is relatively backward, and the information of each link of the agricultural product supply chain cannot be comprehensively collected, real-time updated, shared and exchanged. For example, farmers can not get market information and technical information in time after planting crops, resulting in the blindness of agricultural products. Because there is no unified information platform for agricultural product supply chain, it is difficult for farmers to get help from other farmers or professional organizations. In the production stage and marketing stage, farmers have incomplete grasp of market information and have not formed a complete sales system, which will lead to the quality and safety of agricultural products.

(4) The supervision mechanism is not perfect. At present, there are many deficiencies in the supervision of agricultural product quality and safety in our country. For example, from the national level, the relevant laws and regulations are not perfect, the supervision mechanism is not perfect, and the law enforcement is weak, which will cause the quality and safety problems of agricultural products. From the local level, the quality and safety supervision system of agricultural products also has many shortcomings, such as poor information exchange between regions, differences in agricultural production conditions in different regions, and inconsistent understanding of quality and safety standards among regions.

(5) Consumers have weak awareness of the quality and safety of agricultural products. Due to the low level of agricultural production in our country, many farmers have insufficient understanding of food safety and weak awareness of food safety. For example, the use of pesticides in vegetable cultivation to control pests and weeds, and the use of hormones in livestock and poultry breeding; Many consumers have not formed correct eating concepts and habits, lack of food safety knowledge. These factors will cause consumers to have wrong understanding and behavior habits on the quality and safety of agricultural products. For example, some consumers think that pesticide residues in vegetables and fruits are safe, and they will ingest a large amount of pesticides when eating such vegetables. Some consumers believe that as long as it is green food is safe.

4. Countermeasures

In view of the above problems in the agricultural products industrial chain and supply chain, the following suggestions are put forward[6]:

First, we will strengthen legislation on the quality and safety of agricultural products, improve the regulatory system for the quality and safety of agricultural products, and accelerate the formation of a regulatory system for the quality and safety

of agricultural products with clear powers and responsibilities, coordinated operation, effective supervision, and rapid response.

The second is to establish and improve the quality and safety standards system for agricultural products, accelerate the construction of standardized production bases for agricultural products, and formulate and improve the agricultural standards system compatible with the production and operation of agricultural products.

The third is to strengthen the publicity and education of food safety, increase the publicity of food safety, and improve consumer awareness of food safety.

Fourth, strengthen the government's administrative supervision and inspection and testing efforts, constantly improve the inspection and testing system, and establish and improve the food safety risk monitoring system and early warning system.

Fifth, strengthen the supervision and inspection of the production, circulation, consumption and other links of agricultural products, severely punish violations of the law, and investigate the responsibility of relevant units and personnel according to law.

Sixth, establish and improve the management system for agricultural inputs. Strengthen the supervision and administration of agricultural inputs, establish and improve the management system of all aspects of the purchase, sale, use, storage and recovery of agricultural inputs.

Seventh, strengthen the promotion of agricultural standardization and accelerate the process of agricultural standardization.

4.1. General idea

First, adhere to the main line of supply-side structural reform in agriculture, focusing on the issues of agriculture, rural areas and farmers, with the goal of achieving the quality and safety of agricultural products, taking market demand as the guide, and comprehensively improving the overall production capacity of agriculture as the core, accelerate the transformation of the mode of agricultural development, and promote agriculture from yield-oriented to quality-oriented.

Second, adhere to the concept of green development, vigorously implement the "quality grain project" and "vegetable basket project", and promote standardized production, large-scale management, industrial development and brand construction.

Third, adhere to the principle of combining standardized production and safety management, and speed up the formulation and improvement of agricultural standards that are compatible with the production and operation of agricultural products.

Fourth, adhere to the principle of combining the source management of agricultural product quality and safety, whole-process supervision, and social co-governance, and establish a sound system for agricultural product quality and safety risk assessment, monitoring and early warning, and information notification.

Fifth, adhere to the principle of "output to" and "management out", and establish and improve the quality and safety supervision system of agricultural products.

Sixth, adhere to the principle of combining government leadership with market operation, and innovate the management mechanism and supervision methods of agricultural inputs.

Seventh, adhere to the principle of combining the dominant position of farmers with the leading role of the government, and further improve the effective mechanism for farmers to participate in the supervision of agricultural inputs.

Eighth, adhere to the principle of combining industrial development and brand cultivation to create a number of agricultural products brands.

4.2. Development strategy

(1) Increase investment and accelerate development. Increase investment in agricultural product quality and safety through various channels, strengthen technical guidance and services for agricultural production, and provide a strong guarantee for the quality and safety of agricultural products.

(2) Improve system and improve quality. We will improve laws, regulations and management systems, increase penalties for violations of laws and regulations, and provide a strong guarantee for the quality and safety of agricultural products.

(3) Strengthen coordination and form synergy. Governments at all levels should strengthen coordination and cooperation in the industrial chain and supply chain of agricultural products, and all member units should strengthen information communication and coordination and cooperation to form synergy.

(4) Innovative mode to improve efficiency. Accelerate the development of the integrated management mode of agricultural product supply chain, implement the operation mode of "company + base + farmer", and promote the integration of production, processing and marketing. Encourage the establishment of agricultural product processing, storage, transportation enterprises and farmers benefit linkage mechanism.

(5) Focus on key points and make overall plans. Starting with the development of industries with comparative and competitive advantages, we should make full use of existing resources to drive the development of agricultural products industrial chain and supply chain.

(6) Strengthen monitoring and improve early warning. Strengthen the investment in the construction of agricultural product quality and safety monitoring system and the improvement of technical capacity, and realize the dynamic monitoring and risk early warning of agricultural product quality and safety; Establish and improve emergency rescue plans and information release systems for agricultural product quality and safety accidents.

The quality and safety of agricultural products is the basis for ensuring our economic development, social stability and national security. China has paid more and more attention to the quality and safety of agricultural products. The government has also taken a series of measures to ensure the quality and safety of agricultural products, but generally speaking, the quality and safety of agricultural products in our country

still needs to be improved. With the development of information technology and big data technology, the supply chain of agricultural products can realize information and automatic management. The government should provide support in terms of funds, talents and laws, build an information platform for the supply chain of agricultural products, and make the information flow smoother, so as to better guarantee the quality and safety of the supply chain of agricultural products.

Acknowledgements

Major commissioned project of Social Science Planning Fund of Liaoning Province in 2023: Assessment and Countermeasure Research on the Resilience and safety level of agricultural products industrial chain and Supply chain, Approval number: L23ZD068.

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