

# Research on High-quality Development Path of Agricultural Products Supply Chain in Fuzhou, Jiangxi Province in the Era of Digital Economy

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**Abstract:** With the advent of the digital economy era, the development of agricultural products supply chain has been hotly debated, and "agricultural products" have re-entered the public's field of vision with a new attitude. Relying on online sales and internet display to sell agricultural products has greatly improved the circulation efficiency of agricultural products, which is also a new idea of agricultural economic development in the digital economy era. Starting from the era of digital economy, this paper explains its basic concept and wide application, and gradually transitions to the current situation and problems of traditional agricultural product supply chain, and puts forward several innovative strategies for the high-quality development of agricultural product supply chain in the era of digital economy. At the same time, it analyzes the situation of agricultural product supply chain in Fuzhou, Jiangxi Province and puts forward innovative strategies, hoping to provide more theoretical guidance for the high-quality development of agricultural product supply chain.

**Key words:** Digital economy; Fuzhou, Jiangxi; Agricultural product supply chain; High quality development; Innovation strategy

## 1. Basic concept and wide application of digital economy

Digital economy is a derivative of the development of the Internet, which provides people with more diversified and diversified choices, leads human production and life into the data age, and is an important part of contemporary economic concepts. Therefore, it is also a new form to guide and realize the rapid optimal allocation and regeneration of data and achieve high-quality economic development. It is undeniable that the digital economy has promoted the transformation and development of the economy in the new era, and at the same time promoted the development of productive forces. At the technical level, it covers many emerging technologies such as big data, cloud computing and Internet of Things, which is the lifeblood of economic development in the new era.

## 2. Present situation and existing difficulties of traditional agricultural product supply chain

### 2.1. Present situation and difficulties of traditional agricultural product supply chain management

#### 2.1.1. The participating roles have insufficient understanding of market orientation.

If the participants have insufficient understanding of market orientation, they will easily make wrong decisions in the process of product supply, which will affect the construction and operation of the whole agricultural product supply chain. In the actual economic development, all links in the supply of agricultural products are likely to make mistakes, especially it is difficult to form a relatively uniform integrated supply chain of agricultural products with planning, production, transportation, trading, service and supervision, which is also the direction that relevant participants have been striving for. Take the production process of farmers as an example. Many farmers directly supply agricultural products to dealers, but a large part of them go to farmers' markets and other places to trade, which lacks planning, and regardless of market-oriented production and trading, which greatly weakens the degree of organization of agricultural products and makes the source of supply chain less competitive. In other words, only when every link and most participants in the agricultural product supply chain work in the same direction can an orderly and modern agricultural product supply chain be formed.

#### 2.1.2. The supply chain of agricultural products lacks core leading enterprises

At present, the lack of core leading enterprises is an important problem in the development of China's agricultural product supply chain, and the solution of this problem determines whether the related enterprises can unite in the right direction. As far as the current management experience is concerned, the core enterprises of edible agricultural products supply chain are mostly processing enterprises or sales enterprises. Due to the influence of business and scale, such enterprises cannot play a key leading role, which greatly weakens the competitive advantage of agricultural products supply chain as a strategic alliance. The whole supply chain of agricultural products lacks the ability to integrate social resources, so it is naturally difficult to achieve high-quality development, let alone innovate and develop under the background of digital economy. That is to say, most food processing and marketing enterprises pay attention to whether their own interests are affected, and more or less ignore the ecological and sustainable development of the whole industry, resulting in the lack of large-scale and influential enterprises in relevant industrial chains to play a core leadership role, which is not conducive to the virtuous circle of agricultural product supply chain.

#### 2.1.3. Passivity and fragmentation within the supply chain of agricultural products

The disorder of the market makes the whole agricultural product supply chain passive and fragmented, which naturally leads to the characteristics of poor integrity and integration of the supply chain. First of all, the weakness of laws and regulations on agricultural products market and regional barriers isolate most grass-roots participants, such as farmers and traders. Secondly, the market embodiment, trading methods and service means of agricultural products trading are naturally affected. Without the support of Internet platform and digital means, it is even more difficult to move, and it is even more difficult to "take root" based on the digital economy. Finally, it is difficult for the supply

chain of agricultural products to form an efficient integrated network, and it is even more difficult to achieve “staying at home and eating everywhere”.

### 3. The fundamental path of high-quality development of agricultural product supply chain in the era of digital economy

#### 3.1. Strictly control the quality

After a period of rough development, the problem of food safety has become increasingly prominent. In recent years, related negative news has emerged in an endless stream, which has led to the decline of credibility of many food enterprises. But in fact, as long as we pay close attention to food safety and food quality from the source, we can effectively solve this problem. The corresponding regulatory authorities should also pay close attention to safety supervision and establish a system of quality tracing, tracing and tracing, so as to ensure that the safety problems of agricultural products can be implemented to the responsible person and the production enterprise, especially the major safety problems must be traced to the end, so as to ensure that they can be traced from the place of origin to the market and the place of origin from the market, and to comprehensively monitor the product origin environment, production environment, product inspection, packaging and transportation. In this way, we can effectively enhance the food safety awareness of all participants in the agricultural product supply chain and effectively ensure that agricultural products are safe from production to “serving on the table”.

#### 3.2. Building a new platform of “three networks in one”

“Three networks in one” includes Internet, Internet of Things and agricultural products logistics information network. The construction and integration of these “three networks” can build a brand-new agricultural products supply chain management platform. Among them, relying on the construction and development of information technology resources, the Internet can build a technology platform based on the digital economy era; The supply chain of agricultural products covers five important links: raw material supply, production, processing, trading and circulation, consumption and service. Through the Internet of Things, all important links can be monitored in real time, and then the whole supply chain of agricultural products can be managed remotely. In particular, the Internet of Things also has many functions such as analysis, prediction and early warning, which further improves the market responsiveness of enterprises. Logistics information network can trace back to the source, and it can establish an information platform for comprehensive management of agricultural product quality and safety through functions such as traceability, early warning and information release. It can be seen that the essence of “three networks in one” is to dynamically supervise the supply chain of agricultural products by integrating the advantages of each network, promote the sustainable development of agricultural products supply chain with advanced technology, advanced management concepts and advanced management models, and at the same time promote the modernization and digitalization of agricultural products supply chain while ensuring good quality.

### 4. Innovative Strategies of Building New Agricultural Products Supply Chain in Fuzhou □ Jiangxi under the Background of Digital Economy

#### 4.1. Innovating the organization mode of agricultural product supply chain

In view of the current situation of building a new agricultural product industry in Fuzhou □ Jiangxi, this paper holds that it is necessary to innovate the organizational model and development model, and to establish professional cooperatives for farmers and communicate with the market and the government efficiently through associations, so as to provide convenience in information communication and resource integration, realize the government-led shortening of supply chain links, increase farmers’ income, and let dealers and supply chain participate in the role to obtain benefits. In other words, the agricultural products industry should take the high-quality development path of integrated management. Such an integrated management model has obvious advantages: first, many participants in the cooperative can form a joint force and an organized and leading agricultural product supply order, which can not only change the original scattered supply state, but also effectively integrate social resources and strengthen information circulation. Second, the trading market of origin and cooperatives are actually led by the government, which facilitates the government’s supervision of food safety issues and can effectively supervise the originally scattered agricultural production links. Thirdly, integrated management has brought greater economic benefits to breeders, and its actual income and market reputation have greatly increased, which has solved the problem of entrustment and agency caused by information asymmetry.

In addition to horizontally unifying the source of production, relevant participants should build a vertical integration model and form a supply chain management model led by core enterprises. First, establish a controllable quality inspection system, strictly control the quality from production inspection and vaccine supply before breeding, and realize the system quality inspection system from source-process-terminal sales. Second, establish a traceability system for quality and safety problems that can trace back to the source, reduce the probability of moral hazard, opportunism and other behaviors, ensure the safety and reliability of agricultural products supply, and ensure the proper source and quality clearance. Third, the safety management department should control the supply chain products from the source, strictly supervise and inspect them, and use new technologies to investigate safety problems. Fourthly, the participating roles of the whole supply chain should realize the importance of food safety and reduce moral hazard and opportunistic behavior attempts under the framework of organizational model. In this way, we can build a collaborative development model of cooperatives and agricultural production bases led by core enterprises, with the collaborative participation of government supervision departments and safety management departments.

#### 4.2. Innovate the operation and management mechanism of agricultural product supply chain

The importance of core enterprises in industrial development is self-evident. The high-quality development of agricultural product supply chain can not be separated from core enterprises, and it is more necessary to establish a long-term contract-based supply chain network led by them. At the same time, core enterprises should infiltrate and participate in the circulation nodes of agricultural products, monitor their quality status and value-added space, strive for the lowest economic cost of agricultural product supply chain, and strive for the maximum benefits of agricultural product supply links. On this basis, all participants in the supply chain of agricultural products participate fairly, not only in the fair distribution of benefits, but also in the need to establish a coordination mechanism to promote the fairness of resources and information, solve the problems of information asymmetry and trust crisis, maintain the stable development trend of the supply chain, and ensure the quality and safety of supply. Only in this way can we give full play to the management advantages of core enterprises, contract information centers and information subjects, so that confidence can be accurately and timely transmitted to all supply chain links, and the production and processing of agricultural products can be more orderly and unified.

In terms of information construction, the management information system is the most indispensable part in the supply chain of agricultural products. It is necessary to build a platform on the basis of information transmission and sharing, make full use of new technologies and new formats under the current background, and establish an information platform for the production and circulation of edible agricultural products to promote enterprises to respond to market changes and government regulation more quickly. At the same time, the close cooperation between confidence dissemination and information reception can effectively enhance the efficiency of supply chain, and achieve efficient and high-quality development by innovating the operation and management mechanism of agricultural product supply chain.

#### 4.3. Strengthening policy support and building early warning mechanism of agricultural product supply chain

Policy support and assistance is an important guarantee for the healthy development of agricultural product supply chain. In the process of accelerating the development of China's agricultural product supply chain, it is necessary to fundamentally increase policy support and build a corresponding supply chain early warning mechanism. First of all, the supply chain finance of agricultural products at the source needs to cooperate closely with banks, and the R&D and management team of the bank's supply chain products will tilt the enterprise's business, explore its internal demand and market demand, and provide financial support for building the chain of agricultural products production, refrigeration and preservation. Secondly, we should also support the development of cold chain logistics finance business, reduce the loss of agricultural products supply in all links, change the agricultural products supply chain and development status, and reduce the technical risks and quality and safety risks of agricultural products supply chain. Agricultural product supply chain itself is a complex network structure, which needs to be grasped from both macro and micro perspectives in order to effectively avoid the negative impact of emergencies. Based on the network structure of supply chain, relevant enterprises and factories must establish an early warning mechanism. Once a link is omitted, resources and strength can be called in time to resolve the crisis and all kinds of risks can be minimized by scientific means. At the same time, this early warning mechanism can also quantify the risk loss, resolve the risk before the crisis breaks out and minimize the risk loss.

### Concluding remarks

To sum up, after entering the era of digital economy, China's agricultural product supply chain management model has been continuously innovated and developed with the support of new technologies and new channels, bringing more possibilities for the healthy development of agricultural products industry. Aiming at the management mode of agricultural products supply chain in Fuzhou, Jiangxi, it should innovate the organization mode, operation and management mechanism of agricultural products supply chain, intensify the promotion of agricultural products cold chain logistics, increase policy support and build agricultural products supply chain mechanism, optimize and improve all details in the supply chain, and open up a new road for its high-quality development and innovative development.

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