American Journal of Engineering Research (AJER)
e-ISSN: 2320-0847 p-ISSN : 2320-0936
Volume-13, Issue-3, pp-48-54
www.ajer.org
Research Paper Open Access

A study of agricultural product deployment management models in the context of the post epidemic era

ShiwenZhang, XiaoLiu, MengnanLi, Roswei, YujieChen
(Zhujiang College, South China Agricultural University, Guangzhou, Guangdong, 510900, China)
Corresponding Author:QunDing

ABSTRACT : *The study found that in the post-epidemic era, the allocation and management of agricultural products faces multiple challenges, such as supply chain disruption, information asymmetry, and rising logistics costs. In the future, with the continuous progress of technology and continuous changes in the market, the allocation management mode of agricultural products will continue to optimize and innovate, and inject new vitality into the healthy development of the agricultural industry. This study focuses on the reform and optimization of agricultural product allocation management mode in the post-epidemic era. Through in-depth analysis of the challenges and opportunities faced by the current allocation management of agricultural products, the influence of the application of new technology on the allocation management mode of agricultural products was discussed.*

KEYWORDS*In the post-epidemic era, agricultural products circulation system, agricultural products allocation management, supply chain.*

Date of Submission: 10-03-2024 Date of acceptance: 23-03-2024

I. THE QUESTION IS POSED

the current status of agricultural marketing in the era of epidemics

First, the transportation and logistics channels for agricultural products have been severely restricted as a result of traffic control and closed management caused by the epidemic. As a result, the transportation capacity of agricultural products has been reduced and long-distance transportation has been blocked, so that many agricultural products have not been able to reach their sales destinations in a timely manner, thus creating a situation of stagnant sales. This not only affects the income of farmers, but also creates a shortage of supply in the agricultural market.

Second, the epidemic has led to disruptions in the agricultural supply chain. There have been shortages of some supply chains, such as pesticides, fertilizers and other raw materials for production, as well as packaging materials for the processing of agricultural products. This has prevented the smooth running of agricultural production and affected the processing and packaging of agricultural products. At the same time, the epidemic has also led to a decline in demand for agricultural products, especially in the food service sector, further exacerbating the disruption in the agricultural supply chain.

In addition, the epidemic has affected the employment of workers in agricultural production. Many migrant workers have been unable to return to their jobs in time due to the epidemic, which has limited the harvesting and processing of agricultural products. This not only affects the yield and quality of agricultural products, but also increases farmers' production costs.

II. RESEARCH OBJECTIVES

2.1 Optimizing the process and efficiency of the deployment of agricultural products

Optimizing the process of agricultural product distribution and improving distribution efficiency. This includes the introduction of modern scientific and technological means, such as big data analysis, Internet of Things technology and artificial intelligence, etc., to achieve real-time sharing of information on agricultural products and accurate matching, in order to optimize logistics routes and reduce transportation costs, thereby improving the operational efficiency of the entire deployment system.

2.2 Enhancing the stability and resilience of agricultural supply chains

In the post epidemic era, the stability and resilience of the agricultural supply chain is particularly important. By building a more flexible and reliable mode of agricultural products deployment management, we can cope with various risks and challenges that may arise. This includes improving the emergency response mechanism, enhancing the rapid recovery capability of the supply chain, and ensuring the continuity and stability of the supply of agricultural products.

2.3 Enhancing the quality of agricultural products and food safety

The quality of agricultural products and food safety are directly related to consumers' health and rights. By strengthening quality control and food safety management during the preparation of agricultural products, we can ensure that agricultural products comply with the relevant standards and regulations, and enhance consumer trust and satisfaction.

2.4 Promoting the greening and sustainable development of the management of agricultural products deployment

While pursuing economic benefits, it is also necessary to pay attention to the environmental impact of agricultural products deployment management. We should explore green and low-carbon ways of distributing agricultural products, reduce energy consumption and emissions, and promote the sustainable development of the agricultural supply chain. This includes promoting environmental protection measures such as green packaging and energy-saving transportation, as well as encouraging farmers to adopt environmentally friendly planting methods to reduce pollution at the source.

2.5 Improving the policy and institutional framework for the management of agricultural commodity allocation

Policies and systems play an important role in guiding and guaranteeing the deployment management of agricultural products. We analyze the shortcomings of the existing policies and systems and put forward suggestions for improvement, so as to provide strong support for the optimization of the management of agricultural products deployment. This includes formulating more reasonable and flexible policies on the deployment of agricultural products, strengthening the formulation and implementation of relevant laws and regulations, and establishing a long-term mechanism for the deployment of agricultural products.

To sum up, the study of agricultural product distribution management mode in the post epidemic era aims to build a more efficient, stable and sustainable agricultural product distribution management system to meet the needs of the society and promote the healthy development of the agricultural industry by optimizing the process, enhancing the stability, improving the quality, promoting the greening and perfecting the policy system and other aspects.

III. THE OBJECT AND METHODOLOGY OF THE STUDY

3.1 Subjects of the study

Agricultural products deployment management system: the study will analyze the structure, function and operation mechanism of the agricultural products deployment management system, including the management of information flow, logistics, capital flow and other aspects.

3.2 research methodology

Literature review: By combing the relevant literature at home and abroad, to understand the theoretical basis, research status and development trend of the agricultural products deployment management mode, to provide theoretical support and reference basis for the research.

Case analysis: Select typical cases of agricultural products deployment management for in-depth analysis, analyze their operation, problems and challenges as well as innovative practices in the context of the epidemic, and distill successful experiences and models.

Empirical research: using computer simulation technology to build a platform for agricultural products deployment management, simulating the deployment process under the closed situation of epidemic, assessing the effect of different strategies, and providing support for decision-making.

IV. THE CONTENT AND PROCESS OF THE STUDY

4.1 The content of the study

Analyze the impact and influence of the epidemic on the deployment management of agricultural products. Study the operation mechanism of the online trading platform for agricultural products on the non-contact sales of agricultural products. Introduce the application of modern information technology in agricultural products

deployment management, such as online platforms and artificial intelligence. To study the intelligentization of agricultural products deployment management, informationization of agricultural products market, informationization of agricultural production and agricultural management, and low-carbonization strategy. Analyze the role of new services such as online trading platforms for agricultural products in distribution management.

4.2 The research process

4.2.1 Literature research

Xu Rui (2022) proposed a multi-distribution center path optimization model with temperature zone refinement for studying the fresh food distribution problem under large-scale orders.

Based on the key factors affecting the supply and price of important agricultural products in China, Du Ying (2022) analyzes in depth the main problems existing in the regulation and control of important agricultural products in China, and then puts forward opinions and suggestions on several important aspects of the future regulation and control of important agricultural products in a coordinated manner in conjunction with Document No. 1 of the Central Committee of the People's Republic of China (PRC) for the year 2022.

4.2.2 Case studies

DuoDuoMaiCai is an e-commerce platform dedicated to connecting producers and consumers of agricultural products and building an efficient distribution system for agricultural products. In the process of agricultural development, the government usually manages the market through the regulation of agricultural products, protects the rights and interests of farmers, and maintains the market order and price stability. The following is a detailed case study on the regulation of agricultural products.

(1) Price regulation

The Government adjusts the prices of agricultural products by means of issuing price guidelines and providing subsidies in order to maintain market order and the interests of farmers. Buy more food needs to pay close attention to the government's pricing policy and flexibly adjust the selling price to ensure that the price of agricultural products is within a reasonable range and to protect the reasonable income of farmers.

In order to realize price control, DuoDuoMaiCaican establish a flexible pricing mechanism, adjusting product prices in a timely manner according to market changes, cost fluctuations and other factors. At the same time, it establishes a stable supply and marketing relationship with agricultural producers to ensure that farmers receive a fair return.

(2) supply chain control

The government is likely to strengthen regulation in the agricultural supply chain to ensure the quality and safety of agricultural products and the adequacy of supply. DuoDuoMaiCaineeds to actively participate in the monitoring of the quality of agricultural products, the construction of traceability systems, and other work, and cooperate with government departments to jointly maintain the quality of agricultural products.

DuoDuoMaiCai can establish a sound supply chain management system, including supplier auditing, product testing, transportation monitoring and other links, to ensure the quality and safety of agricultural products. In addition, by promoting the construction of the traceability system for agricultural products, it can improve the transparency of the supply chain and provide more data support for government supervision.

(3) Openness and transparency of information

The government may require e-commerce platforms to publicize information on the price and quality of agricultural products to enhance market transparency. DuoDuoMaiCai can take the initiative to disclose product information to consumers by establishing an information disclosure platform and providing traceability query functions for agricultural products to increase information transparency and enhance consumers' trust in the products.

At the same time, buying more food can strengthen communication with the government and agricultural producers, share market information in a timely manner, and work together to maintain market order. Transparent information flow can help reduce information asymmetry and improve the efficiency of the whole market.

(4) Implementation of supportive policies

The government may introduce policies to support agricultural development, including subsidies and tax cuts. As an e-commerce platform, DuoDuoMaiCai can actively respond to the policy, help farmers understand the content of the policy, help them enjoy the relevant policy dividends, and enhance the income of agricultural producers.

Buy more food can help farmers better understand and utilize policy benefits and promote sustainable agricultural development by establishing online training platforms and providing policy advisory services.

(5) Responding to market volatility

In a volatile market, the government may take measures to stabilize the market and reduce the adverse effects of price fluctuations. DuoDuoMaiCai can work closely with the government to study market changes and adjust sales strategies in a timely manner to reduce market risks.

DuoDuoMaiCai can set up a sensitive market monitoring system to keep abreast of the market dynamics, so as to quickly adjust the purchasing plan and sales strategy. In collaboration with the government, we can formulate crisis management plans and contribute to the stable development of the agricultural market.

By working closely with the government, DuoDuoMaiCai can better fulfill its social responsibility, promote the healthy development of the agricultural market, and provide consumers with better quality and safer agricultural products. At the same time, by actively participating in the regulation of agricultural products, DuoDuoMaiCaican also maintain its competitive advantage in the market competition and realize sustainable operation.

4.2.3 Model construction and analysis

(1) The philosophy behind the establishment of the platform

In order to solve the problem of scheduling of agricultural products in the context of rural revitalization and to ensure the matching of supply and demand, this platform has a simple and convenient product interaction function and a certain publicity function. This platform has a simple and convenient product interaction function and a certain publicity function, which can provide a great help in promoting agricultural development and realizing the road of rural revitalization.

(2) An introduction to the functionality of the platform

The platform has three modules, namely, the daily user login and registration browsing platform, the merchant backstage management platform, and the general management platform. These three parts correspond to different users and can perfectly realize the work of segmentation processing. User browsing platform allows users to clearly find the commodities they need, but also in the search for their own commodities at the same time to see other commodities, for the promotion of other commodities can also play a good role in publicity; merchant management platform is the merchant for some of their own product dependencies and their own commodity sales data to monitor the dynamics of the platform in real time, so that the data is more tangible; the total management platform is the person in charge for the The total management platform is the person in charge of the management of the entire platform set up to be able to take charge of the dynamics of the entire platform, with the management of the entire platform operation.

The sustainability of the platform

In the growth of the platform has a certain response to the results, there will be more users through different channels to learn about our platform, not only need to get help from farmers, but also allows more users with the need for a good resource procurement platform, the platform will also be used with the increasing number of users and constantly optimize and improve, to create a user-friendly, energy-saving platform.

Platform Benefits

Through big data analysis, the platform can grasp the market demand and supply of agricultural products, which can help regulate the price of agricultural products and promote the balance between supply and demand; help farmers increase their income: the platform can help farmers broaden their sales channels and increase the sales of agricultural products, which can increase farmers' income; and facilitate the purchase of consumers: consumers can easily purchase fresh and high-quality agricultural products through the platform to meet their personalized needs.

Problems with the platform

Unstable supply: The supply of agricultural products is affected by seasonal and climatic factors, which may lead to unstable supply.

Market competition: Agricultural products distribution platforms face fierce market competition, how to improve the competitiveness of the platform and market share is the operator needs to think about the problem.

After-sales service:How to deal with customer complaints, returns and after-sales service is a challenge that the platform needs to face.

Through the in-depth discussion of the above research content and process, we can have a more comprehensive understanding of the management mode of agricultural products deployment in the context of the post epidemic era, and provide strong support for the optimization and innovation of agricultural products deployment management.

V. FINDINGS AND ANALYSIS

5.1 The current status of the management of agricultural products deployment

The study found that the management of agricultural product distribution in the post-epidemic era faces many challenges, including supply chain disruptions, information asymmetry and rising logistics costs. These problems have led to a decline in the efficiency of agricultural distribution and an unstable market supply, which have had a significant impact on farmers and consumers.

5.2 Technology applications and model innovations

The results of the study show that modern information technology plays an important role in the deployment management of agricultural products. For example, the platform's big data has helped enterprises to accurately predict market demand and optimize inventory management, and its application in the centralized distribution of agricultural products has improved transportation efficiency.

5.3 Policy and Institutional Implications

The study found that government policies play a key role in the management of agricultural products deployment. The government has provided a strong guarantee for the deployment of agricultural products through the introduction of supportive policies, optimization of the business environment, strengthening of supervision and other measures. At the same time, the improvement of relevant laws and regulations also provides the basis for the standardization and standardization of agricultural products deployment management.

5.4 Risk assessment and response

The study evaluates the risks that may be faced in the distribution management of agricultural products, including market risks, natural risks, technological risks, etc. The study proposes corresponding strategies to deal with different risks, such as establishing a contactless agricultural products distribution platform, providing specialized logistics and transportation channels. To deal with different risks, the study proposes corresponding coping strategies, such as establishing a no-touch agricultural products sales platform and providing specialized logistics and transportation channels.

5.5 Integrated analysis

Taking the above findings into account, the following conclusions can be drawn: in the context of the post epidemic era, the deployment management mode of agricultural products needs to be continuously innovated and optimized in order to adapt to the changes in market demand and cope with the challenges of various risks.

VI. THE CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY

6.1 Conclusions of the study

Technology led innovation: In the post epidemic era, the management mode of agricultural product allocation has achieved significant innovation and upgrading driven by information technology. In particular, the application of big data, Internet of Things and other technologies has made the deployment of agricultural products more accurate, efficient and safe.

Improvement of policies and systems: The Government has played a key role in the management of agricultural product distribution, providing a favorable external environment for agricultural product distribution by improving relevant policies and systems. At the same time, it has also strengthened supervision to ensure the quality and safety of agricultural products.

Enhancement of risk awareness: The study points out that the risks faced by agricultural products in the post epidemic era have become more complex and volatile, therefore, both enterprises and the government need to enhance risk awareness and strengthen risk management to ensure the stability of the supply chain of agricultural products.

Sustainable development has become a trend: with the increase of environmental protection awareness, green and low-carbon modes of agricultural products distribution are gradually favored. This not only helps to reduce energy consumption and emissions, but also enhances the added value of agricultural products, realizing a win-win situation for both economic and social benefits.

6.2 Recommendation

Increase technological investment: Encourage enterprises to increase technological investment in the deployment and management of agricultural products, especially in the fields of big data, Internet of Things, artificial intelligence, etc., so as to enhance the efficiency and accuracy of agricultural products deployment through technological innovation.

Optimizing the policy environment: The Government should continue to improve the relevant policies and systems for the management of agricultural products deployment, and provide a more convenient business environment for enterprises. At the same time, it should strengthen the publicity and interpretation of policies to ensure that the policies are put into practice.

Strengthening risk management: Enterprises and the Government should set up a sound risk early warning and response mechanism to identify and deal with risks that may arise in the process of agricultural product

distribution. In addition, risk management training should be strengthened to enhance the risk awareness of enterprises and employees.

(b) Promoting green deployment modes: Encouraging enterprises to adopt green and low-carbon modes of agricultural product deployment to reduce energy consumption and emissions. At the same time, strengthen environmental protection publicity and education, enhance public awareness of environmental protection, and jointly promote the sustainable development of agricultural product distribution management.

To sum up, the agricultural product allocation management model in the post epidemic era has achieved remarkable results in technological innovation, policy improvement, risk management and sustainable development. However, we still need to continue to work hard to optimize and innovate the management mode of agricultural product allocation, so as to better meet market demand and promote the healthy development of agricultural industry.

VII. GAINS AND EXPERIENCES

7.1 Harvesting

Firstly, it deepened the understanding of the agricultural product deployment management model

Through the in-depth study of the agricultural product distribution management model, we have gained a deeper understanding of its operation mechanism, influencing factors and optimization strategies. We realize that the management of agricultural products not only involves the production, processing, transportation and marketing of agricultural products, but also involves the government, enterprises, consumers and other stakeholders. Therefore, the optimization of agricultural products distribution management mode needs to consider the interests and needs of all parties in order to maximize the overall benefits.

Secondly, valuable practical experience has been gained

During the implementation of the project, we have actively participated in practical activities of agricultural products deployment management, such as field trips, research and interviews, etc. These practical activities have enabled us to understand the current situation and problems of agricultural products deployment management more intuitively, and also provided us with valuable experience and insights. These practical activities enabled us to understand the current situation and problems of agricultural products distribution management more intuitively, and also provided us with valuable experience and inspiration. Through the practical activities, we have clarified our research direction and objectives, and enhanced our ability to solve practical problems.

culminating in the creation of interdisciplinary research teams

The research of this project involves many disciplines, such as economics and engineering, so we have formed an interdisciplinary research team. The team members learn from each other, inspire each other, and form a good cooperative atmosphere. This interdisciplinary research mode not only helps us to analyze the problems from multiple perspectives, but also cultivates our teamwork spirit and innovation ability.

7.2 Experience

In the research process, we deeply realize that only by combining theoretical knowledge with practical problems can we propose practical solutions. Therefore, we emphasize on field research and case analysis in the research process, and strive to make the research results more close to the actual situation and operable. Because the management of agricultural products involves multiple stakeholders and a complex social environment, at the same time, we need to maintain an open and inclusive attitude, and fully listen to the views and suggestions of all parties. This will not only help us understand the problem more comprehensively, but also enhance the credibility and influence of our research results. The deployment management model of agricultural products is a constantly developing and changing field, therefore, we need to maintain a continuous learning attitude and update our knowledge and concepts. Through continuous learning, we can better grasp the development trend and cutting-edge dynamics of agricultural products deployment management, and provide strong support for the optimization and innovation of agricultural products deployment management mode.

To summarize, the implementation of the research project on agricultural products deployment management mode in the post epidemic era has brought us rich harvests and profound experience. We will continue our efforts to optimize and innovate the management mode of agricultural products and contribute to the healthy development of the agricultural industry.

ACKNOWLEDGE

Project type: Innovation and entrepreneurship training project for college students
Project name: Allocation and Management of agricultural products in the post-epidemic era
Project number: S202212623020

REFERENCES

[1]. Xu Rui, Research on Optimization of Fresh Agricultural Product Allocation Path of Multiple Distribution Centers Based on Temperature Zone Refinement [D] Tianjin University of Technology, 2022. DOI: 10.27360/d.cnki.gtlgy.2022.000100

[2]. Du Ying, a brief analysis of several major aspects of regulation of important agricultural products in China [J] Modern Agricultural Machinery, 2023, (03): 31-33
[3]. Xiangui Zeng, Development of Recommendation System for Agricultural Products E-commerce Platform. Guangdong Province, Zhongkai Agricultural Engineering College, 2022-05-19. ,
[4]. Fang Tao, Cao Fenglian, Ma Weishun Smart agricultural product transportation analysis based on logistics supply chain development [J] China Logistics and Purchasing, 2023, (22): 99-100 DOI:10.16079/j.cnki.issn1671-6663.2023.22.046.
[5]. Wang Weizheng, Analysis of Agricultural Products Marketing Mode Based on E-commerce Platform [J] Mall Modernization, 2024, (05): 63-65 DOI:10.14013/j.cnki.scxdh.2024.05.013.