

Research on the Development of Agricultural Products Industrial Chain under the Trend of Live E-Commerce

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Abstract: Based on the background of the rise of live e-commerce after COVID-19, this paper reviews the literature on the internal and external factors of the development of live e-commerce, aiming to study the changes in the industrial chain of agricultural product sales under the trend of live e-commerce. Based on the current status of the industry, the potential problems are found. It is found that the main problems of live broadcast e-commerce still exist in the selection of products. At the same time, the professional quality and logistics of the anchor are also worthy of the attention of enterprises. The study found that live broadcast e-commerce has a strong momentum of development in the future. Due to the changes in the industrial chain brought by live broadcast e-commerce, the realization of the scale effect of the origin can become a strong driving factor for the live broadcast e-commerce of agricultural products. Enterprises' independent contracting of planting or cooperative operation with farmers are all useful measures for sustainable development in the future.

Keywords: Live e-commerce, Agricultural products industry, Industrial chain, Scale effect

1. Introduction

live e-commerce is an emerging supply and marketing method for the integration of Internet development. Live e-commerce of fresh agricultural products is also called "helping farmers" live e-commerce, which is an innovative measure to help the recovery and development of the agricultural economy in the post-epidemic era. Taking the digital economy as the development background, e-commerce live e-commerce can promote the increase of agricultural product sales, enrich the types of agricultural products, and promote the improvement of the upstream and downstream industrial chains of the agricultural economy. Affected by COVID-19, traditional sales channels are blocked, and a large number of agricultural products are unsalable in the hands of farmers, causing economic losses. With the popularity of the 'East online shopping platform', e-commerce live e-commerce has brought lower-cost sales channels for agricultural products. More and more farmers participate in the live e-commerce industry of agricultural products, which has become an endogenous new driving force for the development of the real economy. At the same time, the e-commerce of agricultural products has also had a counterproductive impact on the physical retail industry. By studying the new model of live selling of agricultural products, this paper explores the sustainable development of online and offline integration in the future.

Wang and Wu deeply studied the impact of East's online shopping platform on the sales of agricultural products. Through the analysis of the heterogeneity of fans, the mechanism of the impact on sales is further discussed. It is found that the live account with a large number of fans has a more significant increase in sales under the new live e-commerce mode [1]. Xia analyzed the marketing mode of live e-commerce of agricultural products and pointed out that agricultural products have the inherent attribute of low added value. The combination of live e-commerce sales mode with low cost can form a better sales mode of low profit and high sales and can reduce the intermediate circulation links in the sales process of agricultural products so that farmers can benefit more and customers can buy more affordable products [2]. Cui and Xia used the SWOT model to analyze the development and dilemma of e-commerce live e-commerce of agricultural products. The article points out that this new sales method reduces sales costs, promotes the construction of related infrastructure, and provides more jobs. However, there is still a low degree of standardization of products, unqualified products will harm the interests of consumers [3].

Fu et al. studied the evolution process of a certain brand under the promotion of an e-commerce platform. In different stages of brand development, the government, e-commerce platform, and brand side attach importance to different interests, emphasizing that the development of e-commerce should pay attention to the strategic choices of different game players to protect the healthy development of the economy [4]. Lv found that price concessions, timely after-sales service, and live interaction greatly affect consumers' purchase behavior when investigating consumers' willingness to purchase fresh products provided by e-commerce platforms. Rich product information can enhance customers' perceived usefulness and stimulate consumption. Higher consumer willingness can enhance customer loyalty and promote the long-term effective development of e-commerce platforms [5]. Zhang et al. found that the use of live e-commerce marketing and cold chain logistics can increase the sales of agricultural products and achieve profit growth by constructing a game model of the fresh agricultural products supply chain. Cold chain logistics services can reduce the consumption rate of fresh agricultural products, and consumers can enjoy the 'high quality and high price' of fresh agricultural products [6].

Mittal et al. studied the hedonic motivation and utilitarian motivation of live shopping and found that the characteristics of product information orientation will affect the shopping behavior of viewers, and physical attractiveness and liking streamers will enhance celebrity-related intention and increase sales [7]. Heeks constructed a development model related to E-commerce in the research and proposed that in the development process of e-commerce, we should pay attention to the capacity strand and impact strand, and pay attention to the transformation, strategy, and trajectories of the business model of the enterprise [8].

Zhang used the SWOT model and The Marketing Theory of 4Ps to study the new operation strategy of FRESHIPPO and found that in digital management, Freshippo should integrate online e-commerce and offline physical stores to create a new strategy for e-commerce supplements [9]. Fabri and Márquez based on the e-commerce statistics of Italy and Spain, studied the impact of the development of e-commerce on the traditional retail industry. Although the traditional physical store model will be destroyed, the integration with the e-commerce platform will bring new development vitality in the future [10].

Based on the trend of live broadcast e-commerce of agricultural products sales and the comparison with traditional agricultural operations, this paper aims to study the changes in various sales entities and the changes of the entire industrial chain, and thus analyze the existing deficiencies, to optimize the future development path of live e-commerce of agricultural products.

2. Development Status of Live E-Commerce in the Agricultural Products Industry

2.1. Scale

The scale of live e-commerce for agricultural products in China is immense and continues to grow rapidly. China has emerged as a global leader in live streaming commerce, with platforms like Taobao Live, Douyin (TikTok), and Kuaishou driving the trend. Agricultural products are particularly popular for live-streaming sales due to consumers' increasing demand for fresh, high-quality produce and the desire for transparency in food sourcing. Through the statistics of Douyin live e-commerce(China Financial Times,2023), it is found that from September 2022 to September 2023, Douyin e-commerce helped sell 4.73 billion agricultural products, with an average of 13 million packages containing agricultural products sold throughout the country every day. In one year, the types of agricultural products sold on the platform increased by 188 % year-on-year, the number of rural talents in TikTok e-commerce increased by 105 % year-on-year, and the number of agricultural merchants increased by 83 % year-on-year. There are more than 24,000 agricultural merchants whose annual sales exceed one million yuan. Through live e-commerce, the consumer market of agricultural products is constantly activated, and the live e-commerce of agricultural products will enter a deeper and more comprehensive development chain, constantly driving the development and upgrading of the agricultural products industry.

2.2. Category

The categories of live e-commerce of agricultural products mainly include agricultural products necessary for daily life, products needed for agricultural production (such as pesticides, fertilizers, etc.), agricultural production tools (such as seeds, agricultural equipment, etc.), and the most popular local characteristic agricultural products. Through the introduction and interaction of the anchor in the live e-commerce room, the viewer will be interested in the unique agricultural products of other cities and the desire to buy them, which can promote the development of characteristic agricultural industries in various regions.

2.3. Pattern

Live commerce should be considered based on two parts. The first is live screaming, which involves short video operation and hotspot analysis to guide network traffic. Then it is necessary to complete live e-commerce planning, account operation, and data analysis to find product types that consumers prefer and pay more attention to. The second is to sell goods. Operators select high-quality and low-cost products by analyzing customer preferences and accurately controlling profit indicators. At the same time, we should also pay attention to delivery logistics, after-sales service, and sales management, to improve customer satisfaction. There are three main types of live e-commerce, namely:

Single product live mode. The anchor will introduce the characteristics, functions, and uses of a specific agricultural product, and mention the dog purchase link or coupon code to guide the audience to buy;

Brand live e-commerce mode: This mode is aimed at the whole brand or brand series for live publicity and sales, in the live sales of agricultural products, common is given priority to specific areas, the local characteristics of agricultural products for centralized display and sales.

Theme live mode: This mode is based on a specific theme or scene for live e-commerce, such as holiday promotions, seasonal products, etc. The live e-commerce of agricultural products mainly chooses the seasonality of products as a selling point, increasing the audience's sense of urgency and guiding purchases.

3. Analysis of Changes in the Agricultural Products Industry Chain Under the Trend of Live E-Commerce

An industrial chain refers to the interdependent and interrelated relationship network between all links and participants in an industry. It consists of a series of links such as production, processing, manufacturing, circulation, and sales of raw materials. In traditional agriculture, the industrial process is mainly farmers' planting, production, and processing, transportation companies or farmers spontaneously deliver goods, and agricultural products are delivered to farmers' markets or physical retail malls, waiting for customers to purchase, and customers' payment behavior is completed, and the whole production, supply, and marketing link is over. With the progress of the Internet and the development of the new retail industry, the purchase of goods has broken through the limitation of time and space.

For the development of agriculture, the preservation technology of agricultural products has promoted the progress of warehousing services, coupled with the growth of customers' demand for cross-regional agricultural products, making long-distance and fast logistics possible. Under the trend of live e-commerce, the industrial chain of agricultural products has also changed accordingly. The live e-commerce industry chain consists of the supply side, platform side, and consumers.

The increase in live e-commerce platform links has promoted the development of related live e-commerce service providers, channel platforms, and anchors. In terms of supply, agricultural products with live e-commerce are classified into direct supply mode of origin and processing and sub-storage mode of origin. As long as some agricultural products that require high timeliness, such as fruits, vegetables, or fresh products, are directly displayed in the way of sample live e-commerce in the place of origin, and then picked according to the order quantity of the platform, and then directly processed and packaged by the place of origin and sent directly to the consumer.

The mode of producing area processing and sub-warehousing refers to that after agricultural products are picked, they are directly transported to the partners in different cities through basic processing and packaging, stored in the cold storage warehouse of the partners, and then delivered directly by the "logistics pre-warehouse" nearby. This new mode greatly shortens the interval from placing an order to receiving goods, improves consumers' satisfaction, and helps to improve the repurchase rate. The traditional supply chain model, with farmers, farmers' markets, wholesalers, and retailers as the main body, circulates agricultural products in the form of spontaneous trade, which has the disadvantages of unstable supply, large price fluctuation, uneven quality, and single trading channel.

4. Current Problems and Relevant Suggestions for Live E-Commerce of Agricultural Products

The following are some cases of problems in the process of live e-commerce of agricultural products collected based on the TikTok platform, and corresponding development suggestions are given based on these problems.

Li Jie, the anchor of Rizhao, Shandong Province, began to sell chestnuts live in the autumn of 2022. However, in the process of sorting and packaging chestnuts, only insects or bad ones were picked out, but the size was not distinguished, which would lead to the problem that the weight of a single fruit did not reach the promised size. In the autumn of 2023, Li Jie also intends to classify chestnuts according to large, medium, and small. It is impossible to avoid omissions by manual work, but the bumps of machine screening will cause damage to some chestnuts, which makes it difficult to ensure the instability of commodity quality and standardization. At the same time, because the labor cost cannot be reduced, the price of chestnut may not be accepted by consumers, and consumers may change their target businesses.

The peaches sold on the East Buy complained that they were moldy and hairy. According to the logistics records of the buyers, it took five days for the peaches to be delivered from the place of origin to the customer's receipt. Due to the perishable nature of the peaches themselves, they may not be fresh when they are delivered to the customers. Sun Dongxu, CEO of New Oriental Online, once said that the grasp of quality control and logistics problems are the difficulties of live e-commerce of agricultural products with goods.

In the short video of Vibrato, the live video of the female anchor with black garlic was posted on the hot search as a funny video. Because the anchor is unfamiliar with the actual taste of the promoted product, the performance in the live e-commerce process is not consistent with the description and is even disgusting. This leads to the product itself being rich in value, but because the anchor is unfamiliar with the business in the promotion process, it will mislead customers' understanding of the product and affect their buying behavior.

To sum up, to improve the standardization of live e-commerce of agricultural products, brands or platforms can contract upstream farmers and formulate stricter product standards; or vertically integrate, establish their planting base or farm, and make products that customers care about very much and have high repurchase rate into self-operated products, so that the research and development, production, manufacturing, packaging, logistics, delivery and customer service of self-operated products are more stable and controllable.

To solve the problem of timeliness of agricultural products, it is necessary to strictly control the unit cost of cold chain logistics. When goods form scale effect, cold chain resources can reduce the time of being vacant, build regional centralized warehouses, realize centralized warehousing and joint transportation and distribution, and then share costs and reduce operating expenses.

For the problem of familiarity with the anchor business, it is necessary to improve the professional quality of the hired anchors and strengthen training. For the agricultural products that are broadcast live on the same day, the anchors must be familiar with it in advance. The positioning of the anchor should be more accurate, and the traffic should not be the highest. The customer's recognition and satisfaction with the live e-commerce products are the most important content for the enterprise.

5. Conclusion

By studying the changes in the industrial chain under the live e-commerce of agricultural products, it is found that the number of intermediaries in the new model has become less, showing the characteristics of direct supply from the place of origin or direct supply from the transit warehouse. Because of the timeliness of agricultural products, it has driven the development of the logistics industry. Live e-commerce makes the live broadcast platform and anchor become the core part of sales so that sales and publicity are realized at the same time. At the same time, there are still many problems in the live e-commerce of agricultural products.

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