

# The Current Development Status and Optimization Measures of Live Streaming E-commerce to Assist in Selling Agricultural Products

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**Abstract:** China has introduced various policies to comprehensively promote rural revitalization and accelerated the construction of the key project of “promoting agriculture through digital commerce”. The rapid development of live streaming on online platforms has brought a large influx of various fields and industries, resulting in continuous growth in traffic and revenue. The sales of a single live streaming room operated by farmers can reach over 100,000 yuan. Therefore, live streaming e-commerce to assist in agricultural product sales has become a major measure for future rural revitalization plans. Up to now, there are still some problems in the development of live streaming e-commerce, such as a single delivery model, weak market standardization, and poor traffic of ordinary small anchors, which hinder the further improvement of the rural economy. This article elaborates on the current situation of live streaming e-commerce assisting in the sale of agricultural products, analyzes the existing problems, and proposes optimization measures for reference and reference, making a certain contribution to the country's promotion of rural industrial development and comprehensive promotion of rural revitalization.

**Keywords:** live streaming; agricultural product sales; E-commerce

## 1. Introduction

On January 4, 2022, the “Opinions of the Central Committee of the Communist Party of China and the State Council on Doing a Good Job in the Key Work of Comprehensively Promoting Rural Revitalization in 2022” proposed to implement the “Digital Commerce Revitalization of Agriculture” project and promote the entry of e-commerce into rural areas. The concept of “digital commerce promoting agriculture” refers to the process and concept of utilizing digital technology and business model innovation to promote agricultural modernization and rural industrial development. The connotation of the “Digital Commerce Revitalizing Agriculture” project is abundant, including digital agricultural management, rural financial services, rural scientific and technological innovation, as well as agricultural e-commerce and rural e-commerce cultivation. Among them, the development of rural e-commerce has become the main activity that each province focuses on after laying out the “demonstration counties for e-commerce in rural areas”.<sup>[1]</sup> At present, e-commerce has two main channels: firstly, through e-commerce platforms, agricultural products are directly connected to consumers, optimizing the supply chain, improving sales channels and market competitiveness, and promoting the circulation and value-added of agricultural products; Secondly, through live streaming platforms, cultivate rural live streaming internet celebrities, rely on traditional e-commerce logistics distribution systems, strengthen the development and growth of rural e-commerce, and enhance rural economic vitality and employment opportunities.

Tiktok Live Broadcasting Platform held a 20 day live broadcast special activity of agricultural aid projects, which focused on the promotion of 100 types of agricultural special products for the New Year through shelf area, source tracking live broadcast, short video home flavor challenge, etc. After the event, the live streaming platform released sales data. This agricultural assistance event helped 66.47 million local specialty agricultural products enter the market, with the shelf scenario driving a year-on-year increase of 298% in sales of agricultural specialties<sup>[2]</sup>. During the event, the number of consumers purchasing agricultural products reached 2.1 times that of the same period last year. The live broadcast of agricultural products during the event also lasted for nearly 420000 hours. Taking Sichuan Province as an example, the five live broadcasts of agricultural tracing conducted in the province attracted 6.3 million viewers, selling a total of 600000 kilograms of Pujiang rake citrus, 200000 kilograms of apples,

and 62000 kilograms of Liangshan hickory. The Inner Mongolia internet celebrity "Warmth One" sells over 120000 units of Inner Mongolia beef, mutton, milk and other agricultural specialties per day, with the most distant sales reaching Sanya, Hainan. With the increasing popularity of live streaming platforms, live streaming e-commerce has become an important pillar in activating the vitality of rural industrial chains to help sell agricultural products.

## **2. The development status of live streaming e-commerce to assist in selling agricultural products**

### **2.1 China has Strong policy support for "live streaming e-commerce to help sell agricultural products"**

In September 2020, the General Office of the State Council of China issued the "*Opinion on Accelerating the Development of Emerging Consumption with New Business Forms and Models*," which guided physical enterprises to develop more digital products and services through multiple regulations and encouraged the development of new models of live streaming e-commerce; In September 2021, the General Office of the Ministry of Commerce, the General Office of the Development and Reform Commission, and other departments jointly issued the "*Notice on Further Promoting the Rural Commercial Mutual Aid Union to Assist Rural Revitalization*," which clearly requires each province to build regional e-commerce channels for promoting agriculture and assisting agriculture. Provincial competent departments should select eligible e-commerce platforms, live streaming e-commerce and other enterprises to join based on local reality, and regularly carry out agricultural product public welfare assistance and interaction; In November of the same year, the Ministry of Agriculture and Rural Affairs issued the "*Guiding Opinions of the Ministry of Rural Agriculture on Expanding the Multiple Functions of Agriculture to Promote the High Quality Development of Rural Industries*", proposing to cultivate new models such as retail, wholesale, distribution, social media, live streaming e-commerce, and form a diversified and multi-level online sales system; In February 2023, the Central Committee of the Communist Party of China and the State Council issued the *Opinions on Doing a Good Job in the Key Work of Comprehensively Promoting Rural Revitalization in 2023*, emphasizing the in-depth implementation of the "Digital Commerce for Agriculture" and "Internet plus" agricultural products out of the village and into the city project, encouraging the development of e-commerce direct procurement of agricultural products, customized production and other modes, and building a live broadcast e-commerce base for agricultural and sideline products. Further refinement of national policies, rational view of live streaming to assist agriculture, and live streaming e-commerce to assist in selling agricultural products have become a new path to drive the development of rural industries, helping to continuously promote rural revitalization<sup>[3]</sup>.

### **2.2 Compared to traditional e-commerce, live streaming e-commerce has obvious advantages**

Compared to traditional e-commerce, live streaming e-commerce is easier to assist in the upward trend of agricultural products. The upward trend of agricultural products refers to using agricultural e-commerce to expand the promotion and sales channels of agricultural products, so that agricultural products can truly reach consumers directly from the fields. In addition, live streaming e-commerce has a significant advantage in assisting in the sales of agricultural products.

(1) Strong real-time interactivity and personalized recommendations based on actual situations. Live e-commerce can interact and communicate with audiences in real-time through real-time video live streaming, providing product displays, demonstrations, explanations, etc., enhancing consumers' shopping experience. The anchor can also recommend personalized products based on the audience's needs and feedback, improving the conversion rate of purchases.

(2) Consumers have high trust in anchors and to some extent have social effects. Broadcasters in live streaming e-commerce usually have a certain influence and fan base, and their recommendations and collaborations will gain the trust of the audience. At the same time, audiences can also share purchasing experiences and evaluations through interactive methods such as bullet screens and comments, forming a social sharing effect and increasing confidence in purchasing decisions.

(3) Real time limited promotional activities can be organized based on consumers' real-time dynamics. Live streaming e-commerce often sets up promotional activities such as limited time flash buying and flash sales, allowing viewers to instantly learn about this promotional information in the live streaming room and make quick purchases. This real-time promotion method can stimulate the audience's purchasing desire and increase sales volume.

(4) Real time display and demonstration of the full range of product content, making it more attractive to consumers. Live streaming e-commerce can provide a comprehensive display and demonstration of products through video live streaming, showcasing their appearance, functions, and uses, enabling consumers to have a more intuitive understanding of product characteristics and advantages, which helps improve the efficiency of purchasing decisions.

### 2.3 Large scale of live streaming e-commerce and agricultural product shopping consumption

Agricultural product e-commerce has become a new engine for county-level economy in many regions of China. According to the 2021 Evaluation Report on the Development Level of County-level Agricultural and Rural Informatization in China, the online retail sales of agricultural products in county-level areas reached 752.05 billion-yuan, accounting for 13.8% of the total sales of agricultural products. The coverage rate of administrative villages for e-commerce service stations reached 78.9%. Li Mingtao, Chief Expert of the China International E-commerce Center of the Ministry of Commerce, stated that the overall development of China's live streaming e-commerce industry is in an upward stage. Statistical data(Figure 1) shows that the number of live streaming e-commerce users achieved a blowout growth in 2020, with a growth rate of 48.8% compared to 2019. In 2022, the number of live streaming e-commerce users in China reached 473 million, with a market size exceeding 3.4 trillion yuan. It is expected that the scale will exceed 4.9 trillion yuan by 2023.



Figure 1 User scale of live streaming e-commerce in China from 2018 to 2022

The head of the E-commerce Department of the Ministry of Commerce stated in his introduction to the development of the online retail market in 2022 that the overall growth of China's online retail market was steady in 2022. Data shows that in 2022, the national online retail sales reached 13.79 trillion yuan, a year-on-year increase of 4%. Among them, online retail sales of agricultural products have shown good growth momentum. The national rural online retail sales reached 2.17 trillion yuan, a year-on-year increase of 3.6%. Among them, the online retail sales of rural physical goods reached 1.99 trillion yuan, a year-on-year increase of 4.9%. The national online retail sales of agricultural products reached 531.38 billion yuan, an increase of 9.2% year-on-year, with a growth rate of 6.4 percentage points higher than in 2021<sup>[4]</sup>. According to the data released by Pinduoduo, the platform had over 3 billion agricultural product orders in 2020, indicating a significant contribution rate of live streaming e-commerce to the sales of agricultural products<sup>[5]</sup>.

## 3. The Existing Problems of Live E-commerce Assisting in Marketing Agricultural Products

### 3.1 The live streaming agricultural assistance model is relatively single

At this stage, the live broadcast methods of the three major agricultural aid platforms are: Taobao shop+live broadcast, Tiktok small window+live broadcast, Pinduoduo channel+live broadcast. The

commonality of the three live streaming methods is to bring agricultural product samples into the live streaming room for display and explanation. However, the products sold through the purchase link in the live streaming room are all from the origin of agricultural products, and consumers can only see a small part through the live streaming window, unable to truly know the production environment, picking standards, packaging standards, and a series of standardized processes of agricultural products. According to the author's statistics, only 12 channels of the real-time live broadcast of the Top 100 Chinese Douyin (Tiktok) Agricultural Aid Channel were established in the production place of agricultural products and showed the growth of agricultural products to consumers, and these 12 channels were farmers themselves selling their agricultural products through live broadcast, and well-known anchors with high traffic were all broadcast live in closed live broadcast rooms. Therefore, the way of selling agricultural products through live streaming is relatively single, without diversified display methods.

### ***3.2 Lack of regulation leads to a gradual decrease in consumer trust***

The weak supervision of the platform has led to insufficient quality control of live streaming products, and various types of chaos have emerged in the industry. At present, whether it is brand merchants or major content social platforms, live streaming sales are becoming the standard configuration for digital transformation and upgrading<sup>[6]</sup>. However, the live streaming industry is plagued by frequent disruptions, and a large number of consumers' trust in "live streaming sales" is rapidly declining due to their lax quality control.

Firstly, there are quality and after-sales issues with the goods being shipped. The product quality problem is mainly caused by two reasons: One, the live broadcast platform usually uses WeChat, Alipay, etc. for transactions, and the third-party platform cannot be supervised. The fast speed of live broadcast with goods sales and high frequency lead to difficulties in obtaining evidence, and it is difficult for consumers to contact the anchor to return or replace goods after finding problems. Unlike traditional e-commerce, which can directly contact after-sales customer service, consumers find it difficult to protect their rights. Two, there is data fraud on the live streaming platform. For example, a large amount of data such as real-time views, fans, sales, and traffic obtained through these live streaming rooms may not necessarily be true. Traffic is crucial for a live streaming room, so merchants will increase the attention of the room through behaviors such as purchasing "fake orders", "fake fans", and "fake comments". Even related companies that specialize in selling this service have evolved. After purchasing, consumers find that it is completely different from what "fake fans" describe, and their trust level continues to decrease.

### ***3.3 Excessive usage of traffic resources by top anchors***

After the rise of live streaming platforms, the number of short video companies relying on live streaming sales has rapidly increased. In recent years, short video institutions mainly focused on "internet celebrity IP" have achieved professional content monetization and industrial development of live streaming and sales by connecting with agricultural product suppliers and internet celebrity anchors upwards and major platforms downwards. By the end of 2022, there have been more than 1500 Taobao short video registered companies, and more than 800 Chinese Tiktok short video companies with e-commerce as the main type of development. Due to the significant number of followers owned by the company's professional streaming and internet celebrity IP, as well as the fact that short video companies provide content output behind the scenes, the company has a high degree of penetration and control over the entire industry chain, resulting in a significant Matthew effect. From the current development perspective, the top anchors of live streaming with goods occupy a serious amount of traffic and have high "pit fees". Even if they can promote sales and expand sales channels, the actual benefits brought to farmers in the process of assisting in selling agricultural products are still relatively small.

Taking Taobao as an example, in 2021, during a live streaming event themed on domestic products, Li Jiaqi, the "Taobao Top Brother", had nearly 60 million netizens watch it online, with sales exceeding 70 million yuan<sup>[6]</sup>. Taking Tiktok platform as an example, in 2022, the brothers of "LittleYang Brother" IP will have more than 10 million netizens watching online during the live broadcast of goods with the theme of domestic snacks, and the retail sales will exceed 8 million yuan. Compared to small anchors of the same type, the number of people in the live broadcast room is only 100, and even if the unit price is lower or the origin is produced, it cannot compete with large internet celebrity IPs. From the current development perspective, the top anchors of live streaming with goods occupy a serious amount of traffic and have high "pit fees". Even if they can promote sales and expand sales channels, the actual benefits brought to farmers in the process of assisting in selling agricultural products are still relatively small.

#### **4. Optimization measures for live streaming e-commerce to assist in selling agricultural products**

##### ***4.1 Diversified live streaming modes***

To solve the problem of single live streaming mode and insufficient user stickiness, the key project for adjusting and improving the live streaming platform is to diversify the live streaming mode. In the context of the live streaming industry, where content is the core output of content, achieving differentiated output of live streaming modes and combining the characteristics of agricultural products with the overall environment to achieve high-quality content output are the key to improving the efficiency of live streaming e-commerce.

Firstly, in terms of enriching the live streaming mode, the live streaming platform needs to integrate a large amount of resources, collaborate with local governments or leading production enterprises of agricultural products, innovate the live streaming mode, and try to avoid the problem of only introducing boxed agricultural products in the live streaming room, making the live streaming mode more vivid and interesting. For example, a video blogger posted a recorded video of Coca Cola's digital assembly workshop on Bilibili Animation Video website, and it had over 1.9 million views in just three days. At the same time, the video was used to sell Coca Cola in the comments section, and the transaction volume of the link exceeded 2000 orders in one day. Compared to well-known anchors sitting in the live broadcast room to introduce products, live streaming in the processing workshop not only saves the cost of hiring anchors, but also increases the richness of live streaming mode, attracting more consumers to understand the entire industry chain of product production and generate purchasing desire.

Secondly, the scene and interaction are the characteristics of live streaming compared to traditional showcase e-commerce. Currently, the live streaming mode has a relatively large proportion of live room explanations, neglecting the dynamic characteristics of the scene and interaction, and failing to fully utilize the maximum benefits that live streaming can bring. Live streaming platforms should set different themes for agricultural product channels, and carry out scene based live streaming around different themes to keep users fresh and enhance their sense of immersion in the scene, thereby increasing consumers' stay time in the live streaming room and increasing their purchasing probability. Especially the experience in planting and breeding agricultural products, assembly, and sharing the taste or price of the same products from different origins can effectively impress users to a certain extent.

Thirdly, combining VR, AR, metaverse and other technologies, explore new modes and innovate new gameplay in live streaming rooms. The continuous development of digital technology and information exchange have brought broader development space to digital platforms. Live streaming platforms should take some active and effective measures to cope with the rapidly changing market in the future. While outputting high-quality content in the live streaming room, it is also necessary to combine modern digital technology to provide users with a richer experience.

##### ***4.2 Detailed regulatory process***

From the perspective of the platform itself, live streaming platforms should strengthen the supervision of platform anchors, cooperative merchants, and product reviews. For anchors and merchants who settle on the platform, more detailed inspection content and proof materials need to be provided to prevent market disruption and consumer deception; For agricultural products sold on the platform, establish more scientific and sound inspection standards and entry thresholds, and conduct regular spot checks on live streaming products to ensure product quality meets standards. Due to the unique nature of agricultural products, they may encounter problems during transportation. The platform should make detailed requirements for broadcasters and merchants in response to this phenomenon, and clarify liability clauses to ensure the interests of consumers.

From the perspective of consumers, the platform should adhere to promoting and calling on consumers to strengthen their awareness of rights protection, and provide consumers with easy communication and feedback channels for reporting and information feedback. Provide timely feedback and resolution to any issues discovered by users during the viewing process and quality issues with purchased products, so that the live streaming platform can understand the relevant situation and collect data for subsequent rectification.

From the perspective of external regulation, the media should also play a role of public opinion supervision, not only by discovering problems themselves, but also by providing users with opportunities and channels to speak up. The media should promptly collect a series of issues arising from users

watching live streaming and purchasing, expose and criticize them through the media, and supervise the public opinion of the live streaming platform. The government's internet regulatory departments should also further introduce policies and regulations to regulate the live streaming industry, guiding platforms to achieve high standards of regulation from a policy perspective, so that the live streaming industry can serve users with a better atmosphere.

#### 4.3 Platform data transparency

Live streaming e-commerce is essentially a dissemination model that focuses on product information promotion<sup>[7]</sup>. Information and traffic determine whether the content of the live streaming room can be seen by more people. The fact that live streaming platforms only display total data statistics has led to the emergence of many companies selling fake accounts and fake comments. Therefore, to avoid broadcasters constantly purchasing traffic data, the platform should introduce policies to display all data in the live streaming room comprehensively<sup>[8]</sup>. Enforce transparency of business data through policy measures, and gather and organize various data through technical means to verify the final summary data statistics. Enable live broadcast room hosts, merchants, and consumers to access and understand real data traffic, and use digital tools for statistics and analysis to better understand the operational status and trends of the live broadcast room or the host, and improve data credibility.

#### 5. Conclusion

The live streaming industry has developed to this day and has been integrated with various fields. Among them, live streaming e-commerce has expanded the sales channels for agricultural products and provided channels for farmers to increase their income. The live streaming e-commerce model makes the information of agricultural products more three-dimensional and intuitive, meeting consumers' needs to fully understand product information before purchasing agricultural products, and also making the shopping experience more diverse<sup>[9]</sup>. Live streaming has gradually become the main channel for increasing income in agricultural products. However, the particularity of agricultural products and the rampant chaos of live streaming have led to a gradual decrease in consumer trust in live streaming<sup>[10]</sup>, and there is a trend of returning to offline market purchases.

This article elaborates on the current situation of live streaming e-commerce assisting in the sale of agricultural products, and analyzes a series of problems in the process of live streaming assisting in the sale of agricultural products through practical cases and data: the live streaming mode is relatively single, regulatory efforts are insufficient, and the purchase traffic of top anchors occupies too many resources. After sorting out the urgent problems that need to be solved, some optimization measures have been proposed for the development of live streaming e-commerce and agricultural assistance channels, in order to improve the attractiveness of live streaming to users and the trust of users in anchors, and ensure the reputation of the live streaming platform. Make practical contributions to increasing the sales of live streaming agricultural products and increasing farmers' income in the future.

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