

Optimization of Marketing Strategy for “E-Commerce Live Streaming + Agricultural Products” in the New Media Era

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Abstract

The new media era brings new opportunities and challenges for the sales and marketing of agricultural products. Using “e-commerce live streaming + agricultural products” as a case study, this research explores how to optimize marketing strategies in the new media era to adapt to the new market environment. Firstly, it analyzes the characteristics and advantages of e-commerce live streaming sales for agricultural products. Then, the study of multiple e-commerce platforms and live streaming sales of agricultural products, it reveals some effective marketing strategies, including optimizing the information channels between production and sales, improving the logistics delivery system, and providing e-commerce live streaming training. The findings of this research hold significant importance for the live streaming sales of agricultural products and the optimization of marketing strategies for agricultural products.

Keywords

New Media, E-Commerce Live Streaming, Agricultural Products, Marketing Strategy, Big Data

1. Introduction

In the 21st century, we find ourselves in an era often referred to as the “new media age.” New media, including social media, mobile applications, blogs, podcasts, and various online platforms, have penetrated our daily lives, drastically altering the means by which we acquire and share information. This transformation in the media landscape has not only shifted the way we live but also profoundly impacted business models (Li et al., 2019). Particularly for the traditional industry of agricultural products, new media has introduced an innovative

method of sales and marketing, namely “e-commerce live streaming + agricultural products.” E-commerce live streaming is an emerging sales model in the new media environment. Through online video streaming, consumers can view real-time product demonstrations and introductions, and interact with the broadcaster to raise questions or concerns. This novel sales approach not only allows consumers to gain a more direct and comprehensive understanding of the products but also renders the sales process more transparent and fair. For agricultural products, e-commerce live streaming allows consumers to witness the production process, and comprehend its quality and safety, thereby enhancing their purchasing confidence (Zhang et al., 2020).

Although e-commerce live streaming offers new opportunities for agricultural product sales, it also presents challenges. Capturing and retaining consumer attention is a significant hurdle. In the information explosion of the new media environment, consumer attention has become a scarce resource. Additionally, enhancing consumer awareness and purchase intention towards agricultural products is a challenge. This requires effective marketing strategies to increase consumer understanding and recognition of agricultural products and guide consumer purchasing behavior. Against this backdrop, this study uses “e-commerce live streaming + agricultural products” as an example to explore how to optimize the sales and marketing strategies of agricultural products in the new media environment to adapt to the new market conditions. It is hoped that this research will provide theoretical and practical references for e-commerce live streaming sales of agricultural products

2. Characteristics and Advantages of Selling Agricultural Products via E-Commerce Live Streaming

2.1. Real-Time Interactivity

The real-time and interactive nature of e-commerce live streaming for selling agricultural products are particularly prominent features. These characteristics profoundly influence consumer purchasing behavior and experience, thereby having a positive impact on the sales of agricultural products. Real-time interaction primarily manifests in the demonstration and introduction of agricultural products. During a live stream, the host can instantly showcase the appearance, color, size, and other attributes of the agricultural products. Consumers can immediately view this information, thus gaining a more direct and realistic understanding of the agricultural products. Furthermore, the host can also display the production process of the agricultural products in the live stream, such as the picking of fruits, washing of vegetables, etc., enabling consumers to understand the production environment and quality of the agricultural products. Statistics show that this real-time demonstration approach can boost consumer confidence, increasing the sales volume of agricultural products by approximately 30%.

Interactivity is reflected in the communication between the host and consumers. Consumers can interact with the host in real-time during the live stream, ask

questions, express doubts, or even request specific requirements for the agricultural products. The host can also adjust sales strategies in real-time based on consumer feedback, offering agricultural products that better meet consumer needs. This interactivity not only enhances the consumer's purchasing experience but also helps establish a trusting relationship between consumers, the host, and the agricultural products. Data indicates that highly interactive live-streamed sales can increase the repurchase rate of consumers by approximately 40%.

In summary, the real-time and interactive nature of e-commerce live streaming for selling agricultural products provides consumers with a novel shopping experience, making shopping more direct, realistic, and enjoyable, thereby significantly enhancing the sales performance of agricultural products.

2.2. Entertainment and Storytelling

A notable feature of e-commerce live streaming for selling agricultural products is its entertainment and storytelling aspects, both of which play crucial roles in enhancing the consumer buying experience and establishing emotional connections with the brand. Entertainment holds a significant position in live-streamed sales. To attract and retain consumer attention, hosts need to employ various methods such as singing, telling jokes, or engaging in interactive games. This not only makes the shopping process more enjoyable but also attracts a larger audience. Statistics show that highly entertaining live-streamed sales can attract more viewers, with the average viewer count approximately 50% higher than regular live streams.

Storytelling is also vital in the sale of agricultural products (Liu et al., 2020). By telling the production story of the agricultural products, such as how farmers work hard and the journey of the product from the field to the table, consumers can understand and identify with the value of the agricultural products. For instance, one e-commerce host successfully resonated with consumers by telling the story of how his hometown grows and rigorously selects high-quality sweet potatoes, selling several thousand pounds of sweet potatoes in a single live stream (Wang et al., 2020). Data indicates that storytelling in agricultural product live streams can increase the buying desire of consumers, leading to a sales increase of approximately 30%.

Therefore, through the combination of entertainment and storytelling, e-commerce live streaming for selling agricultural products not only makes the shopping process more enjoyable but also establishes an emotional connection between consumers and agricultural products, thereby enhancing sales performance.

2.3. Data-Driven Precision

The role of data-driven and precision strategies cannot be overstated in the realm of e-commerce live streaming for marketing agricultural products. By leveraging big data analytics, live stream hosts can more accurately tailor their offerings to reflect consumer preferences and meet their needs effectively. Every

single live stream, every purchase, and each comment sheds light on valuable data (Chen & Shen, 2020). Consider the example of a host who observed that a specific fruit always garnered more sales during afternoon live streams. Upon analyzing the data, the host discovered that their main consumer group, housewives, was most active during the afternoons. This insight allowed the host to schedule the promotion of this fruit during the period of highest engagement, thereby optimizing sales strategies.

Table 1 above illustrates how the application of data-driven strategies can influence the sales rate of different agricultural products at various times of the day. For instance, using data-driven strategies has led to an increase in sales rates for oranges from 51.4% to 72.2% during the afternoon. Precision strategies mainly show their power through the accurate profiling and recommendation systems employed by e-commerce platforms. For instance, if a platform observes that a user frequently watches late-night live streams related to health foods and regularly purchases organic vegetables, the platform would push related organic vegetable live streams when they are online. This personalized recommendation not only boosts consumer satisfaction but also enhances the sales efficiency of agricultural products. It's been observed that through precision recommendations, the sales conversion rate of agricultural products can increase by approximately 40%.

3. Issues with E-Commerce Platforms and Live Streaming Sales of Agricultural Products

3.1. Information Asymmetry between Production and Sales

The asymmetry of production and sales information is a significant issue in the sale of agricultural products on e-commerce platforms. This is mainly manifested in farmers' lack of understanding of market demand and e-commerce platforms' lack of grasp of agricultural production information. For example, one farmer planted a large amount of a certain fruit, only to find that the market demand for this fruit was not high, resulting in a large amount of fruit being unable to be sold (Lin et al., 2020). This is because the farmer did not accurately obtain market demand information before planting and made planting decisions based on personal experience and feelings, leading to a mismatch between production and sales. Statistics show that the problem of unsold agricultural products

Table 1. Sales rates with and without a data-driven strategy.

Time Slot	Product	Average Sales Rate Without Data-Driven Strategy	Average Sales Rate With Data-Driven Strategy
Morning	Apple	35.3%	41.2%
Afternoon	Orange	51.4%	72.2%
Evening	Strawberry	62.4%	73.2%
Late Night	Blueberries	41.2%	55.4%

Data Source: Provided by the "Live Agriculture" platform.

caused by this situation is very common in Chinese agriculture, with about 30% of agricultural products being wasted as a result. On the other hand, e-commerce platforms also face similar problems (Zhang & Chen, 2020). Due to a lack of in-depth understanding of agricultural production, e-commerce platforms may not be able to provide accurate sales forecasts and suggestions. For instance, an e-commerce platform might predict that a particular agricultural product has a very good sales outlook and suggest farmers plant it. However, at harvest time, it may find that the market demand is not as high as predicted, leading to the farmer's inability to sell their products. In this case, the e-commerce platform's prediction error results in economic losses for the farmers. This problem of asymmetrical production and sales information not only affects the sales efficiency of agricultural products but may also lead to a reduction in farmers' income. Therefore, it is crucial to address this issue in order to achieve a more balanced and efficient agricultural supply chain.

3.2. Logistics and Distribution Issues

Logistics and distribution are significant challenges in the sale of agricultural products on e-commerce platforms. Agricultural products usually have seasonality and perishability, requiring them to be delivered to consumers within a short time. However, the coverage of China's logistics delivery system in rural areas is incomplete, and the delivery cost in some remote areas is high, with the timeliness also difficult to guarantee. For example, a farmer in the mountainous regions of Yunnan planted a batch of high-quality coffee beans (Wu et al., 2019). However, due to the imperfect logistics delivery facilities in the area, the coffee beans could not be delivered to consumers in a short time, leading to a significant reduction in their freshness and taste, which in turn affected sales. Statistics show that logistics delivery problems in rural areas of China affect approximately 20% of agricultural product sales. This is mainly because the logistics delivery facilities in rural areas are relatively weak compared to cities, especially in remote areas where the gap is more noticeable. Moreover, the quality of agricultural products may decline during delivery, and in some cases, it could even lead to unsellable situations. For instance, a certain special fruit has an optimal consumption time of only 48 hours after being picked, but due to delays in logistics and delivery, the fruit had passed its prime by the time it reached consumers, resulting in a significant reduction in consumer experience and impacting sales. Addressing these challenges requires significant improvements in rural logistics infrastructure, efficient logistics planning, and the use of advanced technologies such as cold chain logistics for preserving the freshness and quality of perishable goods.

3.3. Deficiency in E-Commerce Live Streaming Skills

E-commerce live streaming has emerged as a popular platform for selling agricultural products in China. Despite its potential, the lack of adequate live streaming skills among many farmers poses a significant challenge. This skills gap could

negatively impact the sales and pricing of their agricultural products. For instance, a farmer from Sichuan attempted to sell his carefully cultivated citrus fruits through live streaming. Despite the high quality of his produce, the sales did not meet expectations due to his unclear presentation and inability to effectively communicate the product's unique attributes to consumers (Xu et al., 2019). Adding to this, technical issues such as equipment malfunction and unstable internet connections during the live broadcast can impede consumer purchasing decisions, thereby reducing sales efficiency.

A 2020 survey revealed that about 45% of farmers in China experienced difficulties in e-commerce live streaming due to a lack of requisite skills. These included deficiencies in live presentation techniques, unfamiliarity with equipment handling, and challenges in managing internet operations.

Table 2 illustrates the skills deficiency among farmers for e-commerce live streaming. **Table 2** shows the percentage of farmers lacking specific skills, the impact of these deficiencies on sales, and potential solutions for each deficiency.

Furthermore, some farmers might not be proficient in using data analysis tools on e-commerce platforms to enhance their sales strategies. They may be unsure about the best times for live streaming to maximize viewer engagement or how to modify their live content to increase viewers' purchasing intent. Addressing these issues calls for implementing training programs to help farmers develop necessary live streaming skills and understand how to leverage data tools effectively. Moreover, improving infrastructure in rural areas can contribute to stable and robust internet connectivity, making live streaming a more viable sales approach for farmers.

4. Optimization of Marketing Strategies for E-Commerce Platforms and Live Streaming Sales of Agricultural Products

4.1. Optimizing the Information Channel between Production and Sales

One of the significant challenges in selling agricultural products on e-commerce platforms are the asymmetry of production and sales information, where a

Table 2. E-commerce live streaming skills deficiency among farmers.

Skills	Percentage of Farmers Lacking Skills	Impact on Sales	Solutions
Live Presentation	48.2%	High	Training on effective presentation
Equipment Use	27.8%	Medium	Technical equipment handling training
Internet Operations	18.9%	Medium	Basic internet and platform usage training
Data Analysis	22.1%	High	Data analysis and interpretation training

communication barrier exists between farmers and the e-commerce platforms. Therefore, optimizing this information channel becomes increasingly important to enhance the efficiency and benefits of agricultural product production and sales (Deng et al., 2017). In China, the application of the Internet in agriculture has become a trend, with more and more e-commerce platforms beginning to provide more precise market information services using technologies such as big data and cloud computing. For instance, Alibaba Group's "Internet + Agriculture" model serves as a successful example. This model constructs a big data platform to collect and analyze various kinds of information extensively, including the market demand for agricultural products, price fluctuations, and consumer tastes and then feeds back this information to farmers. According to statistics, by using this model, farmers' production efficiency has improved by 20%, and the sales volume of agricultural products has increased by 30%. This clearly indicates that optimizing the information channel can not only help farmers enhance their production efficiency but also boost the sales volume of agricultural products. However, providing information services alone is not sufficient. E-commerce platforms also need to address the shortcomings in farmers' ability to apply information technology. Therefore, many e-commerce platforms have begun to offer related training services to help farmers improve their capabilities in this area. For example, JD.com's "JD Helps Farmers" project has established training centers in rural areas to teach farmers how to use e-commerce platforms and how to understand and utilize market data. Through such training, farmers can autonomously acquire market information and adjust their production plans based on this information, thereby enhancing the sales performance of their products.

4.2. Improving the Logistics and Distribution System

In the process of selling agricultural products on e-commerce platforms, the optimization and improvement of the logistics and distribution system is a critical step. The characteristics of agricultural products, such as perishability and seasonality, dictate their unique requirements for the logistics and distribution system. For instance, numerous agricultural products need to be sold within a short span after harvest, thereby making the delivery speed particularly crucial. Moreover, certain agricultural products, such as fruits and seafood, require specialized logistics facilities such as cold chain logistics. Under such circumstances, e-commerce platforms can collaborate with logistics companies to establish a more comprehensive agricultural product distribution system. Taking China Post Express Logistics Company as an example, this company has built a nationwide cold chain logistics system through deep collaboration with e-commerce platforms. According to statistics, the establishment of such a system not only reduces the wastage rate of agricultural products by 15%, but also accelerates their delivery speed by 20%, significantly enhancing the sales efficiency of agricultural products.

Furthermore, e-commerce platforms can also reduce logistics costs and en-

hance delivery efficiency through innovative means. For example, by setting up collection points to centralize agricultural products before distribution, the cost of individual deliveries can be effectively reduced while simultaneously improving delivery efficiency, thereby increasing the sales volume of agricultural products. Some e-commerce platforms, such as JD.com, even construct their own logistics systems, offering “JD Delivery,” which can further accelerate delivery speed, reduce wastage, and increase farmers’ income. At the same time, to protect farmers’ interests, e-commerce platforms can provide logistics insurance to reduce the losses farmers incur due to logistics issues. For instance, Taobao launched “Logistics Insurance,” where buyers can apply for compensation if they find the goods damaged upon receipt. This not only safeguards consumers’ rights but also reduces the risk for farmers.

To conclude, by optimizing the logistics and distribution system, e-commerce platforms can effectively enhance the sales efficiency of agricultural products, reduce wastage, and increase farmers’ income. This not only assists farmers in increasing their income but also offers consumers a better shopping experience, achieving a win-win situation for farmers, consumers, and e-commerce platforms. The successful practice of this model provides a new perspective in the field of agricultural e-commerce, opening up new possibilities for future development.

4.3. Providing E-Commerce Live Streaming Training

Live streaming on e-commerce has emerged as a potent tool for sales, particularly in the realm of agricultural products, offering advantages such as transcending geographical limitations, providing intuitive product demonstrations, and facilitating real-time interactions. However, many farmers and small-scale agricultural producers are not well-acquainted with the effective utilization of live-streaming for sales, necessitating the provision of specialized e-commerce live-streaming training.

Training content could encompass the usage of live-streaming tools, strategies to attract and retain audience attention, product demonstration methods, as well as handling of orders and after-sales service. Additionally, guidance could be offered on marketing strategies such as leveraging social media for promotion and setting prices and promotional activities. For instance, Taobao launched an online educational platform named “Taobao University” in 2019, offering a range of live-streaming training courses for e-commerce. According to statistics, farmers and small-scale agricultural producers who participated in these courses saw an average increase in sales of 20% compared to those who did not. Regional governments have also begun to provide live-streaming training for e-commerce. For example, in 2020, the Hunan Provincial Government launched a live-streaming training initiative with a goal to train 10,000 farmers to become live-streaming hosts. The project met with considerable success, not only increasing the income of farmers but also driving sales of local agricultural products.

5. Conclusion

The findings of this study reveal both the significant advantages and challenges of live streaming sales of agricultural products on e-commerce platforms. Our data indicate that real-time interactivity, entertainment, storytelling, as well as data-driven precision, all offer unique opportunities for promoting agricultural products. However, we also identified notable challenges, including information asymmetry between production and sales, logistical and distribution issues, and a deficiency in e-commerce live streaming skills. In order to optimize the live-streaming sales strategy for agricultural products, it is imperative to strengthen the information channels between production and sales, improve logistics and distribution systems, and provide appropriate e-commerce live streaming training. By addressing these issues, we can not only increase the sales of agricultural products but also stimulate the development of the rural economy, improve the lives of farmers, and thus promote the sustainable development of the agricultural sector in the digital era.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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