

Quality and Safety Control of Agricultural Products with Live Streaming under Consumers' Green Demands

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Abstract: With the increasing demand for green food among consumers, live-streaming has become a new way to sell agricultural products. However, there are also issues of quality and safety control in live-streaming. This article summarizes existing literature to analyze the current situation of quality and safety of agricultural products in live-streaming under consumer green demands, and proposes a management model based on pre-production, production, and post-production, explaining and analyzing it. The results show that the management model based on pre-production, production, and post-production can effectively improve the quality and safety of agricultural products in live-streaming.

Keywords: Green; Consumer; Live streaming; quality and safety.

1. Introduction

In recent years, there has been a continuous increase in consumer demand for green food products, and live streaming sales has become a new way of selling agricultural products. The advantage of live streaming sales is that it can directly face consumers, showcasing the quality and characteristics of products in real time, thereby attracting consumer purchases. However, live streaming sales also face challenges in quality and safety control. Due to the unique nature of live streaming sales, it is difficult to effectively monitor and control the quality and safety of agricultural products. Therefore, ensuring the quality and safety of agricultural products in live streaming sales has become an urgent issue to address. This article will conduct a review of existing literature, analyze the current status of consumer demand for green products in live streaming sales, and propose a management model based on pre-production, in-production, and post-production stages, in order to provide valuable insights for ensuring the quality and safety of agricultural products in live streaming sales.

2. Literature Review

The Live streaming e-commerce is a new type of business model, its advantage lies in being able to directly face consumers, showcasing the quality and features of products in real time, thereby attracting consumers to make purchases. However, due to the unique nature of live streaming e-commerce, it is difficult to effectively supervise and control the quality and safety of agricultural products, which poses a certain risk to consumers. Therefore, research on the quality and safety of agricultural products in live streaming e-commerce is crucial, yet currently there is relatively little research on this topic by scholars both domestically and internationally. In domestic research, Wang Yanming and Zhai Bin (2020) conducted a study on the upstream extension path of the mountainous characteristic agricultural product industry chain, taking the Hongxin sweet potato in Ziyun County, Guizhou Province as an example. The research explored the extension path of the industry chain upstream, specifically focusing on the pre-production, production, and post-production stages. The pre-production stage involves

planning of planting area and types, research and supply of seeds, fertilizer supply, and development of new technologies. The production stage provides guarantees for the product, ensuring the reliability of the supervision process. The post-production stage uses certain methods to maintain the original value of the product as much as possible while ensuring its safety. By addressing the issues in each stage, the production path can be extended to increase farmers' income, while the guarantee path provides policy, financial, and technical support to ensure the smooth extension of the production path. In foreign research, Anonymous (2022) conducted a study on the specific issues of live-streaming with goods and found that the concept most closely related to it is social media marketing. Different countries have different models of legal regulation of social media marketing and varying degrees of strictness in content regulation. Firstly, in terms of the responsibility of social media influencers, the United States uses the theory of causation to determine the responsibility of advertising endorsers, holding them accountable according to their degree of contribution. Secondly, in terms of the legal responsibility of online platforms, countries such as the United States and Germany focus on the role of self-regulation by online platforms, providing guidance on the design of format terms and introducing alternative dispute resolution mechanisms to encourage self-restraint by online merchants, and promote mutual supervision and restraint among various entities in online transactions under the guiding principle of autonomy.

3. Participants and Influencing Factors

3.1. Participants

3.1.1. Consumers

Consumers are the main participants in live streaming sales, and they have high requirements and demands for the quality and safety of agricultural products. The participation of consumers can promote the quality and safety control of agricultural products in live streaming sales.

3.1.2. Live streaming sales platform

The live streaming sales platform is the main channel for live streaming sales, and they are responsible for the organization and management of live streaming sales. The

live streaming sales platform can promote the quality and safety control of agricultural products by guiding and supervising the live streaming sales hosts.

3.1.3. Agricultural product producers

Agricultural product producers are the main suppliers of live streaming sales, and they are responsible for the production and supply of agricultural products. Agricultural product producers can improve the quality and safety of agricultural products and meet consumers' green demands through strict quality and safety control measures.

3.1.4. Government regulatory agencies

Government regulatory agencies are the main regulatory bodies for the quality and safety control of agricultural products in live streaming sales. They are responsible for regulating and managing the quality and safety of agricultural products in live streaming sales. Government regulatory agencies can strengthen the regulation and management of the quality and safety of agricultural products in live streaming sales by establishing and improving relevant laws and regulations.

3.2. Influencing Factors

3.2.1. Consumer green demands

Consumers have high requirements and demands for the quality and safety of agricultural products, which is an important influencing factor for the quality and safety control of agricultural products in live streaming sales.

3.2.2. Guidance and supervision of live streaming sales platforms

Live streaming sales platforms can promote the quality and safety control of agricultural products by guiding and supervising live streaming sales hosts.

3.2.3. Quality and safety control measures of agricultural product producers

Agricultural product producers can improve the quality and safety of agricultural products and meet consumers' green demands through strict quality and safety control measures.

3.2.4. Regulation and management by government regulatory agencies

Government regulatory agencies can strengthen the regulation and management of the quality and safety of agricultural products in live streaming sales, safeguarding consumers' rights by establishing and improving relevant laws and regulations.

4. Identification of Current Situation

The current situation of quality and safety of agricultural products in live-streaming under consumer green demands is mainly manifested in the following aspects.

4.1. Unstable Product Quality

The unstable product quality: The unique nature of live streaming e-commerce makes it difficult to effectively supervise and control the quality of agricultural products, resulting in unstable product quality as a widespread issue. Consumers often find it challenging to ensure consistent quality levels with each purchase.

4.2. Non-standardized Production Processes

Non-standardized production processes: The unique nature

of live streaming e-commerce also makes it difficult to effectively supervise and control the production processes of agricultural products, leading to non-standardized production processes. This may involve fertilization, pesticide use, harvesting, and packaging, lacking uniform standards and supervision.

4.3. Insufficient Brand Effects

Inadequate brand effect: Live streaming e-commerce makes it difficult to effectively enhance the brand effect of agricultural products, which means that the brand awareness and reputation of agricultural products are difficult to guarantee. Consumers find it challenging to fully understand the brand background and reputation of products on live streaming platforms, leading to a widespread issue of insufficient brand effect.

5. Management Model Based on Pre-production, Production, and Post-production

To address the above-mentioned issues, this article proposes a management model based on pre-production, production, and post-production. This management model includes the following aspects

5.1. Pre-production Stage

During this stage, the farm needs to carry out a significant amount of preparatory work. Firstly, it involves selecting land suitable for planting or breeding, and conducting soil improvement and fertilization to ensure a favorable growth environment for crops or animals. In terms of planting, it also involves selecting suitable seeds and carrying out seed treatment and seedling cultivation to ensure the quality of the planting. In animal husbandry, it involves selecting appropriate animal breeds and carrying out breeding and reproduction work to ensure the quality and quantity of breeding.

5.2. Production Stage

This stage is the core stage of planting or breeding. In terms of planting, management work such as cultivation, watering, fertilization, weeding, and pest control should be carried out to ensure the healthy growth and development of crops. In terms of breeding, management work such as feeding, vaccination, disease prevention, and control should be carried out to ensure the healthy growth and development of animals.

5.3. Post-production Stage

This stage involves harvesting, processing, packaging, transportation, and sales. In terms of planting, it requires timely harvesting based on the crop's growth cycle and ripeness to ensure the quality and taste of the produce. In animal husbandry, it involves timely slaughtering and processing according to the animals' growth cycle and market standards to ensure the freshness and safety of the meat. Subsequently, the agricultural products are packaged and labeled to ensure their quality and safety. Finally, the products are transported and sold, delivering the agricultural products to the market or consumers.

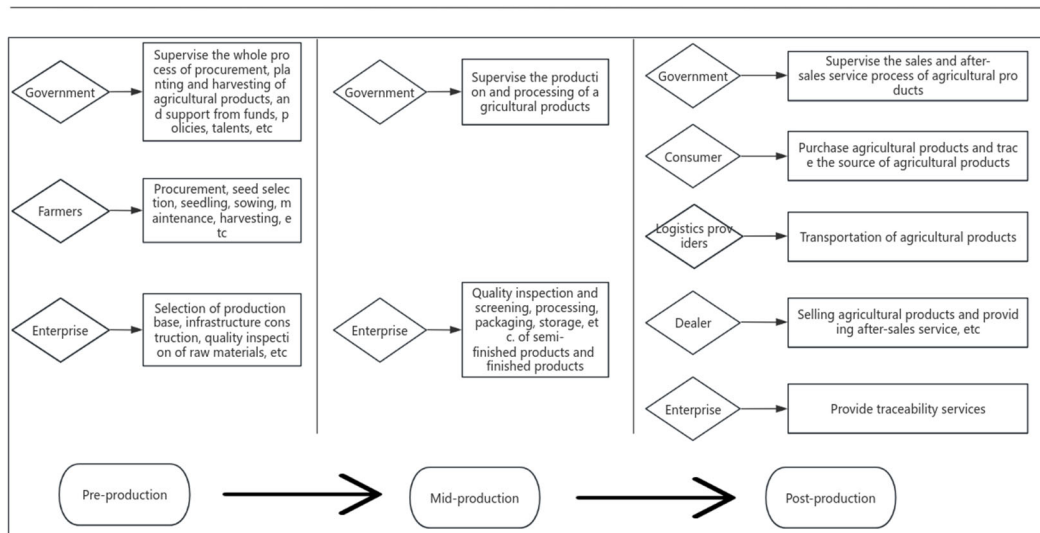


Figure 1. is the entire flowchart

5.4. Process analysis

In this flowchart, each stage has corresponding steps and processes. The pre-production stage includes steps such as land selection, soil improvement, fertilization, seed selection, seed treatment, and seedling cultivation. The production stage includes steps such as cultivation, watering, fertilization, weed control, pest and disease prevention, feeding, feeding, vaccination, and disease control. The post-production stage includes steps such as harvesting, processing, packaging, transportation, and sales. This flowchart can help readers understand and grasp the pre-production, production, and post-production model of farm products more clearly, and can also serve as a reference tool to assist farmers or agricultural practitioners in planning and management in practical operations. The entire process is a cyclic process, where each stage is interconnected and dependent on each other. The preparatory work of the pre-production stage provides a foundation for the smooth progress of the production stage, while the management and maintenance of the production stage directly affect the product quality and market competitiveness of the post-production stage. Therefore, the pre-production, production, and post-production model is a comprehensive management model aimed at improving the yield, quality, and market competitiveness of agricultural products. The implementation of this management model requires the joint efforts of the government, enterprises, and consumers. The government should strengthen the regulation of agricultural products and establish a sound regulatory mechanism; enterprises should strengthen the quality and safety management of agricultural products and establish a sound brand effect; consumers should enhance their awareness of the quality and safety of agricultural products and choose green food.

6. Explanation and Analysis

Based on the pre-production, in-production, and post-production management model, the quality and safety of agricultural products sold through live streaming can be effectively improved. Firstly, through pre-production management, the safety and stability of agricultural product

production can be ensured, fundamentally solving the issue of product quality and safety. Secondly, in-production management can strengthen supervision of the production process to ensure the quality and safety of agricultural products. Lastly, post-production management can enhance supervision of product quality and establish after-sales service mechanisms to safeguard consumer rights. The implementation of these measures can effectively improve the quality and safety of agricultural products sold through live streaming, meeting consumer demand for green food. Furthermore, the pre-production, in-production, and post-production management model can also enhance the production efficiency and market competitiveness of agricultural products. Advance planning and preparation can help avoid waste and losses during production, increasing the yield and quality of agricultural products. In the in-production stage, increased supervision and management of the production process can lead to timely identification and resolution of issues, ensuring product quality and safety. Establishing a sound after-sales service mechanism in the post-production stage can improve consumer satisfaction and enhance the market competitiveness of agricultural products. Therefore, the pre-production, in-production, and post-production management model not only improves the quality and safety of agricultural products but also promotes the development of the agricultural industry and enhances the market competitiveness of agricultural products.

7. Conclusion

This article provides an overview of existing literature to analyze the current status of the quality and safety of agricultural products sold through live streaming in response to consumer demand for green products. Based on this analysis, a pre-production, in-production, and post-production management model is proposed and explained. The results indicate that this management model can effectively enhance the quality and safety of agricultural products sold through live streaming. Therefore, it is essential for the government, businesses, and consumers to collaborate in strengthening the management and supervision of the quality and safety of agricultural products sold through live

streaming to meet consumer demand for green food.

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