



Optimization of Sales Channels in Poultry Industry

Su Hao

College of Urban and Rural Construction, Zhongkai Agricultural Engineering Colleg, Guangzhou, 510550, China

13719196183@163.com

Abstract. Poultry farming industry is one of the main economic factors affecting farmers, but today most of the poultry industry supply chain is still in the traditional mode, through the agricultural super docking, online sales, the application of blockchain technology, and the development of rural tourism will be diversified poultry sales channels, to promote the consumption of poultry commodities, to improve the income of farmers and the quality of life, to drive the development of the rural economy, and to promote social equity.

Keywords: supply chain; poultry farming industry; sales channel optimization

1 Introduction

The Strategic Plan for Rural Revitalization clearly states that it will accelerate the modernization of agriculture and rural areas, make agriculture a promising industry, make farmers an attractive profession, and make the countryside a beautiful home where people can live and work in peace and contentment. Therefore, it is of great significance for the development of rural economy to do a good job in the work of "three rural areas". In recent years, China's agricultural economic system has undergone great changes and development, some social and ecological changes will bring some impact on agriculture, but on the whole, it is conducive to the development of agriculture. With the use and popularization of modern technology, it has brought many benefits to agriculture and impacted the traditional supply chain of agricultural products. The purpose of the work of the three rural areas is to solve the problem of farmers' income, agricultural development and rural stability, most farmers' income mainly comes from the sale of agricultural products, so optimizing the supply chain of agricultural products is the key to do a good job in the work of the three rural areas. This paper is based on this issue, in line with the concept of green development and sustainable development, the poultry industry as an example, to solve how to diversify the sales channels of poultry, improve the transaction efficiency of the poultry supply chain, improve the economic benefits of farmers, promote rural development, but also for consumers to provide a better consumer experience.

2 The current situation of the poultry industry

China is a large country in the poultry industry, poultry rearing, egg production has been for many years to maintain the world's first, the world's second poultry meat production. Poultry farming industry is one of the important components of agricultural products, but also one of the channels of income generation for the vast majority of farmers. Poultry is characterized by: vigorous metabolism, poor disease resistance, sensitive to environmental changes, high reproductive potential, high feed requirements. So poultry farming can bring both considerable income and great risks to farmers. According to statistics, in 2022, 16.14 billion poultry were slaughtered nationwide, an increase of 400 million or 2.5% over the previous year; 6.77 billion poultry were stocked, a decrease of 0.2% over the end of the previous year.

Zhou Yefu and Luo Luolu (2016) constructed an intuitive fuzzy hierarchical model to identify the supply chain risk of the poultry industry, and concluded that: in the poultry supply chain risk, the weight of the biological risk is the largest, followed by the industry risk ranked in the second place, the weight of the social risk and the anthropogenic risk ranked in the third place and the fourth place, respectively, and the weight of the natural risk is the smallest.[1] In recent years, many experts and scholars have proposed many measures and methods for controlling avian epidemics, and Wang (2019) proposed the use of six integrated prevention and control countermeasures in order to reduce the risk of epidemics[2]. On the basis of preventing and controlling epidemics, few experts and scholars have studied the perspective of diversifying poultry supply channels.

Today most of the poultry industry supply chain is still in the traditional stage, the traditional poultry industry supply chain is divided into three stages. The first stage is for poultry farmers to sell to local individual traders and origin wholesale market, both of which can sell goods to local consumers; the second stage is for the origin wholesale market and individual traders to sell goods to the outlet wholesale market and processing enterprises; the third stage is for the outlet wholesale market to sell goods to dealers, and then dealers to sell to consumers, as shown in Figure 1.

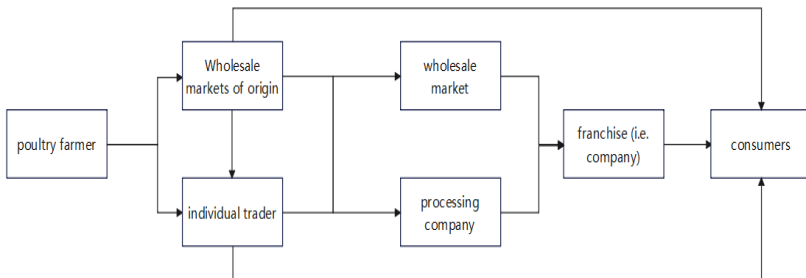


Fig. 1. Traditional poultry supply chain

3 Poultry industry supply chain development issues and analysis

3.1 The shortcomings of the traditional supply chain

The traditional poultry supply chain is long, the circulation links and each part of the information received will be unequal and lagging, the supply chain of the main body to consider their own interests to maximize the multi-party game, so that the supply chain in the various ends of the mistrust, so that the interests of poultry farmers too little, too much interest in the middlemen, when the flow of commodities to the consumer side of the price is too high, the formation of the layers of price increases in the behavior.

3.2 Concealment behavior in commodity circulation engineering

The information opacity behavior of processing enterprises that overuse chemical products to process poultry meat in order to make it look fresher will not only cause harm to consumers' bodies, but also affect consumers' senses of consumption, which will lead to a decrease in the efficiency of transactions in the supply chain.

3.3 Consumers' Growing Commodity Quality Requirements

With the stable development of today's society, consumers seek better and higher quality poultry meat, but poultry farmers do not pay attention to the process of cultivation in order to make poultry reach the requirements of slaughtering earlier, which makes the quality of poultry meat drop greatly, and the weight is not quality, which will reduce the consumer's consumer experience when the commodity is traded to the consumer side.

3.4 Problems of young laborers

With the development of society, the popularity and fairness of education so that more and more young people from the countryside to the city, the countryside, most of the teenagers out of the countryside with the idea of the development of the city, and gradually take root in the city, even if they did not get into high school or college youth would rather work in the city's factories rather than countryside to carry out poultry farming activities, so the countryside in the countryside will be a shortage of So there will be a lack of young laborers in rural areas. In the future, there may be a shortage of young labor in the poultry industry.

4 Measures to diversify the sales channels of poultry industry and analysis

In order to solve the above problems, the main measures to diversify the sales channels of the poultry industry are: docking between farmers and supermarkets, online sales, the application of blockchain technology, the development of rural tourism and other additional industries.

Docking refers to poultry farmers directly skipping the middlemen to sell to the local supermarkets to reduce the loss due to the long supply chain, in which the poultry can be categorized in terms of quality, and the superior poultry meat can be sold directly to the supermarkets, the middle-grade poultry meat can be sold to the wholesalers, and the second-grade poultry meat can be sold to the processing enterprises. Individual poultry farmers expanding their scale will bring a series of problems, such as: increased feed costs, epidemics and diseases are difficult to prevent, insufficient land, resulting in ecological damage to the land, etc. Therefore, poultry farmers should cooperate in the development of farmers' economic cooperatives to carry out large-scale and efficient farming production, which can better improve the efficiency of transactions in the supply chain, and enable the poultry industry and the local ecosystem to develop in a sustainable manner. The establishment of farmers' economic cooperatives can realize the synergistic effect and learning effect in the functional effect of the industrial chain. The synergistic effect means that each farmer in the cooperative continuously cooperates in sharing information, and the learning effect means that each farmer in the cooperative trusts each other, shares information and learns. Quality screening and classification is particularly important in this link, the use of sensory to identify the quality of poultry meat is too rough, should use the relevant instruments to classify the quality.

Online sales refers to the use of "Internet +" way and agricultural products to combine the characteristics of local agricultural products presented to consumers[3], which live with goods and is now quite popular one of the sales methods, you can use the star effect brought about by the anchor to promote consumption, but the goods themselves need to pay attention to the quality of the quality of ordinary Poultry meat can not attract consumers, so farmers should create a poultry meat brand with characteristics and quality to attract consumers, poultry meat to consumers the most intuitive consumer experience is its own taste and freshness, from the microscopic level, the diameter of the muscle fibers, the number of types and other important impact on the taste of the meat, and intramuscular fat, inosinic acid and thiamine content, etc., can significantly affect the taste and flavor of the meat. Therefore, poultry farmers need to properly graze their poultry so that they have enough exercise to ensure the quality of poultry meat. [4] Local enterprises should cooperate with farmers to carry out scientific cultivation, scientific planning of land, scientific feeding, reflecting social responsibility and promoting rural economic development. The practice requires poultry farmers to accept modern technology and culture, and can make better use of electronic products or the Internet, and accept the modern mode of product sales [5].

Apply blockchain technology to poultry sales[6]. The use of blockchain technology's decentralization, openness, autonomy, tamper-proof and other characteristics of the poultry industry's sales operation, to provide strong support and a strong guarantee, can

provide a safe and reliable platform for the sale of agricultural products, can enhance the trust between the main body of the transaction, to provide a safe trading environment for the main body of the transaction, and to improve the efficiency of the related enterprise logistics [7]. Blockchain technology is a way of information sharing, which is true and reliable information, and can allow each node in the sales link to make better decisions. The blockchain-based poultry sales model is as follows: suppliers purchase from poultry farmers and upload the purchase contract to the blockchain system; suppliers send the commodities to the testing station for testing, and the monitoring station uploads the testing information to the blockchain system; commodities will be stored in the warehouse and have to upload the storage information to the blockchain system; processors pick up the commodities from the warehouse and carry out the processing and then upload the processing information to the blockchain system; The logistics provider receives the products from the processor and uploads the logistics information to the blockchain system; the logistics company delivers the goods to the users, who can then use the blockchain system to check the anti-counterfeiting; the users can also buy from the sales platform, which uploads the orders to the poultry farmers and uploads the orders to the blockchain system. However, nowadays blockchain technology has not yet matured, and relevant laws and regulations have not yet been perfected, and it is in the initial stage, so we can refer to the blockchain technology of Europe and the United States and other countries, take the essence and discard the dregs, and put forward the corresponding strategies for the problems that may arise.

As shown in Figure II.

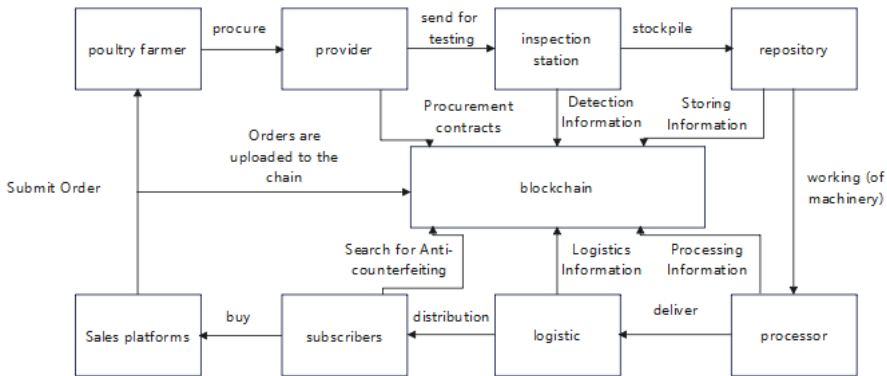


Fig. 2. The use of blockchain technology in poultry marketing

Develop the development of rural tourism and other additional industries, create a distinctive rural tourism brand, and explore rural characteristics [8]. Consumption can be stimulated by opening farms. Opening farms in local rural areas or near rural areas can realize a fast supply path from poultry farmers to consumers and reduce the consumption of poultry meat in the intermediate path. Poultry meat can be cooked with specialties to enhance the consumer experience, such as: fruit wood roasted chicken, kiln chicken, etc., to attract consumers and promote consumption. It can also cooperate with local schools, and can use poultry meat as the daily meal for students, so that

students can participate in daily poultry farming activities, learn more about the relevant knowledge, cultivate students' love for the countryside and return to nature, and cultivate a group of rural revitalization forces who know the technology and know how to run the business.

5 Conclusion

In the context of rural revitalization and the rapid development of modern society, combined with the development trend of the supply chain, the use of digital technology and put forward relevant specific measures and suggestions to solve the problems arising in the poultry sales channel, the information sharing of goods in the trading and circulation links, to ensure the interests of supply and demand, increase the trust between the various nodes, and also to ensure the quality of the goods and the consumer's consumption experience. Diversify the sales channels of the poultry industry, so that the poultry industry sustainable development, and constantly broaden the income channels of farmers, comprehensively improve rural production and living conditions, drive the rapid development of the agricultural economy, and promote social justice.

References

1. Zhou Yefu & Luo Lu. (2016). Risk Identification and Regulation of Agricultural Supply Chain--The Case of Poultry Industry in Jiangxi Province. *East China Economic Management* (11), 33-37.
2. Wang, Xiaofeng. (2020). Supply chain risk control and innovation development in poultry industry. *Chinese Journal of Animal Husbandry* (02),174-177. doi:10.19556/j.0258-7033.20190725-02.
3. Li Tingni. (2023). Research on supply chain optimization and upgrading of agricultural product supply efficiency under the background of big data. *Logistics Technology* (08), 117-120. doi: 10.13714/j.cnki.1002-3100.2023.08.032.
4. C. Castellini, C. Berri; E. Le Bihan-Duval, G. Martino (2008) Qualitative attributes and consumer perception of organic and free-range poultry meat. *World'S Poultry Science Journal*, 64(4): 500-512
5. Peng Jiali, Xu Wenjun & Mu Shiming. (2023). Research on the digital development path of agricultural products supply chain under the background of rural revitalization. *Southern Agricultural Machinery* (15), 126-128 + 137.
6. Wei Xiaoguang, Geng Wenqi, Zhang Qian, Li WangJingrui & Gao Jiayue. (2023). Blockchain technology enables agricultural products sales supply chain research. *Southern Agricultural Machinery* (06), 24-27.
7. Vladimir Paruakjan, Ekaterina Sizova. (2008) In-crease of efficiency of interaction of production and transport in the logistic chains of material traffic of enterprises. *Transport Problems*, 3(3): 95
8. Wang, Xiangrun & Zhao, Ziqi. (2022). Research on the supply chain model and optimization of agricultural products sales - A case study of Shouguang, Shandong. *Rural Economy and Technology* (14), 222-224+242.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

