

# Strategies for Short Video Platforms to Empower Agriculture - Taking douyin platform as an example

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**Abstract.** Short video platforms have gradually become a new engine for agricultural development under the Chinese rural revitalization strategy. The phenomenon of the short video platform empowering agriculture has essential theoretical and practical significance for promoting agricultural modernization and improving farmers' living standards. Using Douyin as a case study, this paper discusses how short video platforms empower agriculture through case analysis. Research finds that short video platforms can effectively increase agricultural product sales and shape rural areas' image. However, problems include uneven content, lack of e-commerce live broadcast talents, and reduced competitive advantages. Therefore, it is necessary to strengthen the supervision of short video content and cultivate live e-commerce broadcast talents through agricultural Multi-Channel Network organizations. This paper has significant reference value for using short video platforms to empower agriculture, solve problems in developing e-commerce-assisted agriculture, and improve farmers' living standards. At the same time, it also provides essential decision-making references for policymakers and helps promote the implementation of rural revitalization strategies.

## 1 Introduction

With the popularity of short video platforms, more and more users are beginning to use short videos. Additionally, the commercialization process of short video platforms is accelerating. The emergence of various business models, such as live streaming, e-commerce, and paid membership, has brought more business opportunities to short video platforms. Also, the short video industry is actively exploring integrated development with other industries, such as e-commerce and agriculture, to expand its market share further. Among the short video platforms in China, the Douyin short video platform stands out with its unique advantages. The Douyin platform maintains its leading position among short video platforms, and Douyin's user base continues to grow. Firstly, the number of daily active users of Douyin has reached 750 million [1]. Secondly, the short video content on the Douyin platform is full of diversity. Video content on Douyin covers music, dance, food, travel, and other fields, attracting different types of users. This diverse content strategy helps keep users interested and the platform attractive.

Regarding commercialization, Douyin, as an advertising platform, has improved the display effect and economic benefits of advertising by introducing artificial intelligence technology and algorithm recommendation models. Douyin's live broadcast is an integral part of Douyin's commercialization. Douyin's live broadcast has already broken through a single dimension and included more diverse and rich content, including on-site makeup

teaching, musical instrument performance, ethnic customs display, online classes, and agricultural assistance. It covers multiple fields, such as crafts, art, humanities, and education. Facing the iteration of the live broadcast itself, Douyin can keenly grasp product dynamics, amplify product influence, and leverage product value. In addition, Douyin adds Taobao links to serve as an entrance for Taobao, which is conducive to establishing e-commerce platforms.

Driven by today's digital development, Three Rural Issues, including the development of agriculture, rural areas, and farmers, can be solved through short video platforms [2]. Currently, three major problems exist in agricultural development. Firstly, the dissemination of information in rural areas could be more extensive. Farmers can not get access to accurate market information, leading to problems with the wrong planting scale. Poor information communication between agricultural product producers and consumers limits agricultural product sales channels. Secondly, the sales channels of agricultural products need to be more varied. Many farmers still rely on traditional purchasers and need more independent sales capabilities, so agricultural products are prone to unsaleability. Finally, brand awareness in rural areas needs to be stronger. Many agricultural products do not have a brand effect and only rely on low prices to compete, resulting in low added value of agricultural products and weak market competitiveness. Due to the three rural issues involving farmers' living standards, rural infrastructure, economic development, and agricultural production efficiency and modernization levels, The

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Chinese government proposes to launch the cultural industry empowerment rural revitalization plan [3]. Furthermore, the government has implemented the rural revitalization strategy and the "Business and Revitalization of Agriculture" project to solve the three rural issues [4]. Therefore, short videos are a feasible way to promote the integrated development of agriculture, and a brand image is created through short video content promotion and farmer e-commerce live broadcasts.

As a social entertainment platform with short videos as its core, the Douyin platform has made many contributions to empowering agriculture. Therefore, this paper takes the Douyin platform as an example to explore the advantages of short video platforms in solving the Three Rural Issues through live streaming. Secondly, this paper analyzes the current problems of short video platforms empowering agricultural products and provides solutions. Furthermore, this paper can help people related to agriculture and rural areas, as well as farmers, understand the way short videos empower agriculture and how to solve their issues through short videos. At the same time, it helps relevant companies understand the current situation and development opportunities of e-commerce in helping farmers.

## 2 The development of short video platform

### 2.1 Status of short video platform

The content ecosystem of short video platforms undergoes continuous optimization, fostering a trend of collaborative creation and widespread sharing across society. The fundamental status of short videos in social life continues to strengthen. Short videos possess three attributes: ideological, commodity, and instrumental. Because of this, the short video platform has great functional scalability and has become a tool hub linking all walks of life and an essential application in social, economic, and cultural life. In the Internet of Things and digitalization context, developing China's short video platforms integrates technological trends such as multi-terminal interconnection and personalized recommendations and actively explores cross-border cooperation and commercial development. The short video platform enables content dissemination and viewing on multiple terminals through interconnection with terminal devices such as smartphones, smart TVs, and smart speakers.

Furthermore, short video platforms can more accurately understand users' interests and preferences by collecting and analyzing users' behavioral data, thereby achieving personalized content recommendations. Also, short video platforms use technology and data advantages to conduct cross-border cooperation with other industries. For example, cooperation with e-commerce platforms enables live streaming of goods. This cross-border cooperation brings short video platforms more business opportunities and profit models. As shown in Figure 1, short videos are developing all-round, and the number of short video users has increased from 648 million in December 2018 to 1.6 billion in June 2023. At the same

time, the user utilization rate also increased from 78.20% to 95.20%. Short videos have become a universal application.

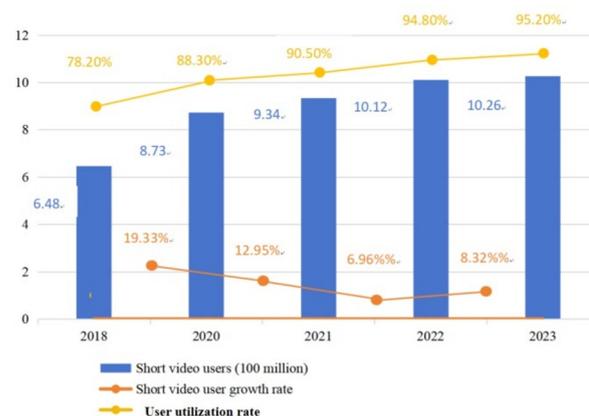


Fig.1 Short video platform user size, usage rate, and growth rate (Photo/Picture credit : Original )

### 2.2 Analysis of Douyin platform

Douyin is a short video platform launched by the Chinese company ByteDance [5]. It went live in September 2016 and quickly became famous around the world. The feature of Douyin is that users can record and edit 15-second short videos to show their talents, creativity, daily life, and other content, as well as share and communicate with other users. Users can find various content on Douyin, including music, dance, comedy, food, travel, and life tips. Douyin uses an intelligent recommendation algorithm to present the most suitable content to users based on their viewing records and interests. Douyin also provides various special effects, filters, soundtracks, and other functions, allowing users to quickly edit and beautify their videos.

Douyin has become an extremely influential and popular social media platform with hundreds of millions of users worldwide. Douyin's position in the short video industry is significant. In 2023, the latest number of daily active users on Douyin's official website exceeded 1 billion, making Douyin the platform with the most extensive user base in short videos. With an active penetration rate of 88.9%, Douyin demonstrates its leadership in the short video industry. In addition, Douyin's e-commerce is developing rapidly, and its GMV may reach 2.7 trillion yuan in 2023. Douyin e-commerce's online retail market share may reach 17.6%.

As one of the most popular short video platforms in China, Douyin has a vast user base. It provides a solid user base for the rise of Douyin e-commerce. Douyin has a broad user base, and users of all ages use Douyin for entertainment and consumption. It allows Douyin e-commerce to attract users and achieve sales growth quickly. Through short videos and live streaming, the shopping experience is infused with social and entertainment elements, breaking the boring shopping methods of traditional e-commerce. On the Douyin e-commerce platform, users can learn product details through short videos and communicate with sellers in real

time through the live interactive function. This entertaining shopping experience attracts the attention and participation of many users.

### **3 Advantages of Douyin for empowering agriculture**

The Douyin platform attracts more buyers of agricultural products by providing farmers with an e-commerce platform, live broadcast rooms for e-commerce, and precisely targeting short video content and live broadcasts related to "agriculture, rural areas, and farmers," enabling direct connections between farmers and consumers. Through the support of the Douyin platform, farmers can have more sales channels for agricultural products. At the same time, it also increases farmers' income. Audience users on Douyin will continue to pay attention to and participate in content about agricultural products that interest them. Users will like, comment, share their favorite videos, and join the live broadcast room for agricultural products. Provide positive feedback and support to content creators related to agriculture, rural areas, and farmers. Positive feedback motivates content creators to create more high-quality content that meets audience needs and strengthens loyalty. The post-90s generation has become the leading consumer of agricultural specialty products. Meanwhile, the post-00s and post-60s generations have become potential consumers, and their purchase volume has increased by more than 150% year-on-year [6].

On April 20, 2023, Douyin launched the e-commerce "Firefly Project-Sowing Season" plan. The "Firefly Project" incentivizes e-commerce creators to fulfill social responsibilities. Through a points exchange system, creators are motivated to promote universal knowledge, rural development, and culture by offering books, agricultural products, and intangible cultural heritage products at reduced commissions. Inherited. Eastern Selection. Among them, Dongfang Selection is a high-quality creator of agricultural product content on Douyin and is one of the execution subjects of the "Firefly Project" [7]. The company is positioned to be a live broadcast platform focused on selecting high-quality products for customers. It is an excellent product and technology company that continues to provide "Oriental Selection" self-operated agricultural products as its core products. They create, promote, and sell various high-quality agricultural products through differentiated strategies. Customers love its interesting, informative, and connotative live broadcast style and its healthy, delicious, and cost-effective product selection. Oriental Selection solves the problem of unsalable agricultural products in many places. It actively cooperates with local governments and enterprises nationwide to jointly explore more forms and benefit more links in the agricultural industry chain.

In addition, farmers can obtain higher profits by operating their accounts, cooperating with the government, and cooperating with content creators. Farmers can directly connect with consumers through the platform, reducing intermediate links and costs and

obtaining higher returns. In addition, e-commerce platforms can also provide farmers with more accurate market information, helping them make more informed planting decisions and further increase profits. Traditional agricultural product sales channels are often limited by time, location, and sales volume. However, e-commerce platforms can break these restrictions and allow agricultural products to be sold to all parts of the country and overseas markets. According to the "Douyin 2021 New Farmers Report", in the past year, the total income of rural video creators on Douyin increased 15 times year-on-year. This expands the sales channels for agricultural products and increases farmers' income.

The live-streaming function of the Douyin platform provides brands and merchants with a platform for live-streaming sales. In the live broadcast with goods, the anchor can display and recommend products to the audience and provide purchase links, and the audience can purchase the goods directly during the live broadcast. This model organically combines content and shopping, improving users' shopping experience and purchase convenience. According to the Douyin e-commerce report on assisting farmers and rural development, in 2023, 4.73 billion units of agricultural products will leave the village and enter the city through Douyin e-commerce, with an average of 13 million packages sold nationwide daily. There are over 24,000 agricultural commodity merchants with annual sales exceeding one million. Since 2021, the number of live broadcasts related to "agriculture, rural areas, and farmers" on Douyin has continued to grow. The number of views of related live broadcasts has increased by 113% year-on-year, and consumers' enthusiasm for attention continues to rise.

Many content creators of agricultural products develop local brands through the Douyin platform, allowing more consumers to understand and recognize hometown specialties. At the same time, the Douyin platform focused on creating "mountain products on the headlines," "rural guardian program," and "rural talent program." According to the "Douyin 2022 Harvest Data Report", Douyin will add 430 million rural-related short videos in 2022, and the playback volume of rural-themed short videos will increase by 77%. With the support of platform projects and plans, video content related to "agriculture, rural areas, and farmers" is quite large. For example, the official flagship store of XiaoTian GuNiang in Fujian makes mushroom soup bags from Fujian mushrooms and sells more than 600,000 bags daily. They have also perfected planting and acquisition, drying and processing, sorting and packaging, sales and delivery. The supply chain system has created casual employment for more than 300 people.

### **4 Current Problems and solutions**

Short video platforms provide new opportunities for the implementation of rural revitalization strategies. Short video platforms have become an important tool to promote rural revitalization, increase farmers' income, and promote agricultural development. By carefully creating a development pattern of short videos that help

agriculture, Douyin has injected vigorous vitality into constructing new rural areas to achieve prosperity in the rural economy and solve rural issues. However, while empowering agriculture, short video platforms also face challenges.

The Douyin platform has brought new opportunities for communicating "agriculture, rural areas, and farmers." In the past two years, creators of "agriculture, rural areas, and farmers" short videos have flocked to the Douyin platform. After barbaric growth, content production became large-scale, eventually leading to the simultaneous development of video content. Qualitativeness has become the most significant constraint in developing short video communication on agriculture. Judging from the current development status of rural short videos, except for a few leading IPs that have established a foothold, many creators have released works that have tired the audience. The problems of homogeneity and superficiality in rural short videos are becoming increasingly severe, reducing its competitive advantage [8].

The government and enterprises can build an agricultural Multi-Channel Network (MCN) to empower new agriculture with new traffic [9]. Agricultural product e-commerce must first solve the problem of "what to sell" and create a standardized supply system for agricultural products [10]. Small farmers based on household production quotas must meet the requirements for developing agricultural product e-commerce, and agricultural product e-commerce must take the road of scale and industrialization. Capital is a critical force in leveraging the development of agricultural and rural economies and various social undertakings. Agencies require a considerable capital investment to build an MCN in agriculture. However, county-level governments are challenging to provide and must attract the power of social capital. Moreover, agricultural MCN institutions have more robust brand-building capabilities. They understand user psychology better and can use high-tech supply chains to deliver agricultural products and meet the consumption preferences of the urban middle class. Also, agricultural MCN organizations can solve "one problem" through "one IP" and "two scenarios" to create agricultural product accounts [11].

Meanwhile, they can improve the quality of farmers' live broadcasts. "An IP" refers to the need to have a distinctive personality. For example, a simple farmer who has ambitious ideals wants to start a business, as well as a farmer who wants to change his hometown and lead his hometown to become rich. The "two scenes" refer to agriculture's life and ecological scenes, such as product production, picking, and processing scenes, followed by product scenes showing no pesticides, pollution, or adulteration during planting. Furthermore, "A problem" refers to the issue of consumer trust. Unlike other categories, when creating IP for the "Three Rural Areas" category, there is no need to design various scripts and short stories to embed the product. It is more about showing farmers' life scenes to gain consumers' trust.

## 5 Conclusion

In the rural revitalization policy context, short video platforms such as Douyin have brought new development opportunities to the "agriculture, rural areas, and farmers" by providing live broadcast channels for people related to agriculture, rural areas, and farmers and accurately pushing short videos of agricultural products. This article studies this phenomenon by taking a case study of the Douyin platform as an example. The study found that with the dual recognition of the market and policies, short video platforms have become a "new agricultural tool" for rural revitalization. Short video platforms provide opportunities for agricultural products to build brand images. By publishing high-quality content and promoting brand image, agricultural products can create a unique brand image, enhance visibility and reputation, and successfully empower agricultural products.

However, short video platforms also need development difficulties in empowering agricultural products, such as uneven content quality and reduced competitive advantages. To this end, the government and enterprises should actively build agricultural MCN institutions, improve the quality of short video content, improve farmers' ability to bring goods and encourage the expansion of their value. Agricultural MCN organizations can establish an Internet celebrity matrix through contracting and incubation mechanisms and build diversified income models through sales commissions, commercial promotions, and fan rewards to provide new ideas for developing "Internet + Agriculture." Future research can start by analyzing how to establish agricultural MCN institutions, specifically by exploring how to build MCN institutions and establish a standardized supply system for agricultural products. These agricultural MCN institutions can establish contracting and incubation mechanisms to build diversified income models and provide new ideas for developing "Internet + Agriculture." These efforts will help promote agricultural modernization, enhance the market competitiveness of agricultural products, and contribute to the successful implementation of the rural revitalization strategy.

## References

1. Shopify, 37 Important TikTok Statistics Cross-Border Brands Need to Know, (2024) <https://zhuanlan.zhihu.com/p/681146495>
2. R.M.Wu, J.Cai, Smart Agriculture Guide, **3**(21), 188-191+196 (2023).
3. Xinhua News Agency, Opinions of the Central Committee of the Communist Party of China and the State Council on Comprehensively Promoting Key Works of Rural, (2022)
4. W.Y.Han, Yuncheng Daily, (002),11-12 (2023).
5. R.Y.li, Z.W.Li, Media Forum, **6**(23), 33-35 (2023)
6. China Economics Times, Douyin e-commerce data to help farmers: Over 24,000 agricultural goods merchants have annual sales exceeding one million

- yuan,(2023-9-23) <https://baijiahao.baidu.com/s?id=1777797014417433383&wfr=spider&for=pc>
7. T.T.Wang, C.X.Cheng, X.Wei, T.J.Yang, X.T.Peng, Z.Y.Zhang, *Contemporary Rural Finance*, 12, 52-55 (2023).
  8. W.X.Guo, X.J.Deng, Y.S.Qiu, *Smart Agriculture Guide*, 2(11), 35- 39 (2022).
  9. Wenzhou Sannong, Sannong Cihai-MCN Organization. (2022-7-22) [https://mp.weixin.qq.com/s/AKIOer-U\\_PT5dY5YoQ3\\_ZA](https://mp.weixin.qq.com/s/AKIOer-U_PT5dY5YoQ3_ZA).
  10. Sina.com.,The country's first agricultural MCN officially settled in Xinjin, creating an agricultural sowing base for 10,000 people and opening up the "last mile" of agricultural development. <http://sc.sina.com.cn/city/2020-05-22/city-iirczymk3044841.shtml>
  11. Q.L.Zhang, "Social media empowerment and live broadcast to assist farmers," Southwest University, (2022).