

Research on E-commerce Development Strategy of Lychee Industry in Dongguan City

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Abstract: With the rapid development of e-commerce for agricultural products in China, the lychee industry in Dongguan has also shown a vigorous growth trend. However, there are still some issues that need to be addressed and improved during its development. This paper takes the lychee industry in Dongguan as the research object, systematically analyzing the current status and challenges faced by its e-commerce development. The study finds that although Dongguan lychees have the advantages of excellent quality and distinct regional characteristics, there are still issues such as insufficient brand value exploration, poor price competitiveness, limited marketing channels, inadequate promotion through new media, and poor supply chain management in the process of e-commerce development. This paper proposes strategies to promote the e-commerce development of the lychee industry in Dongguan: strengthening the "Guanli" brand culture construction to tap into the premium potential of geographical indication products, constructing a comprehensive sales channel and expanding a diversified marketing model that integrates online and offline channels, increasing the application of new media technology to enhance the digital presentation ability of products, and optimizing the supply chain management system. Comprehensive research indicates that the lychee industry in Dongguan needs to transform and upgrade from "selling products" to "selling brands" and "selling culture", and use digitalization to empower the construction of an e-commerce ecosystem for agricultural products with regional characteristics. To some extent, this study provides theoretical guidance and practical references for the development of e-commerce for lychees and other similar agricultural products in Dongguan.

Keywords: Dongguan Lychee; E-Commerce Development; Brand Building Marketing Channels; Supply Chain Optimization

1. Introduction

China's e-commerce market for agricultural products has experienced rapid growth in recent years. According to data from the Ministry of Commerce, the online retail sales of agricultural products nationwide increased from 415.8 billion yuan in 2020 to approximately 780 billion yuan in 2025, maintaining an average annual growth rate of around 9.8%, continuously leading the way in the agricultural product circulation sector. In 2024, the online retail sales of agricultural products nationwide surpassed 610 billion yuan, and in 2025, benefiting from the increased penetration of fresh food e-commerce, the improvement of cold chain logistics, and the intensified rural revitalization policies, the growth rate rebounded to 11.5%. The proportion of e-commerce transactions for fresh fruits continues to expand. In 2025, the online sales of lychees nationwide increased by over 230% compared to 2020 during the lychee season, continuously unleashing market potential.

Dongguan, as the core production area of lychee in Lingnan, boasts a history of over 800 years of lychee cultivation. The city's lychee planting area spans approximately 82,000 mu, with an annual output consistently around 35,000 tons, and an industrial output value exceeding 600 million yuan. However, the current development of Dongguan's lychee e-commerce still faces prominent issues such as weak brand influence, rigid marketing models, and a lagging supply chain system. Against this backdrop, how to promote the digital transformation of the industry and overcome the bottlenecks in e-commerce development has become an urgent issue for the lychee industry in Dongguan.

2. Current Development Status and SWOT Analysis of Litchi Industry in Dongguan

2.1 Overview of the Lychee Industry in Dongguan

The lychee industry stands as a pillar of Dongguan's traditional agriculture, boasting prominent regional characteristics and remarkable potential for industrial development. In 2024, the lychee planting area in Dongguan reached 32,000 mu, yielding an annual output of 28,000 tons and an annual output value of 450 million yuan, marking an increase of 18.4%

compared to the 380 million yuan in 2020[1]. The main production areas of lychees in Dongguan are concentrated in towns and streets such as Dalang, Huangjiang, Zhangmutou, and Xiegang. Among them, Dalang Town accounts for 35% of the city's total planting area, making it the largest production area (as detailed in Table 1). The main varieties are Nuomici, Guigui, and Feizixiao, with Nuomici accounting for 45% of the total output, Guigui for 30%, Feizixiao for 20%, and other varieties for 5%. Nuomici is favored by the market due to its small core, thick flesh, sweetness, and crispness [2].

Table 1. Distribution and Planting Situation of Core Production Areas of Lychee in Dongguan

Production area	Planting area (10,000 mu)	Proportion	Dominant variety	Annual output (10,000 tons)
Dalang Town	1.12	35%	Glutinous rice ball, osmanthus flavor	0.98
Huangjiang Town	0.64	20%	Feizixiao, Guigui	0.56
Zhangmutou Town	0.48	15%	Glutinous rice ball, Feizixiao	0.42
Xiegang Town	0.32	10%	Guiwei, other varieties	0.28
Other regions	0.64	20%	Mixed varieties	0.56

Data source: "White Paper on the Development of the Lychee Industry" by the Dongguan Municipal Bureau of Agriculture and Rural Affairs in 2024.

The industrialization and standardization of the lychee industry in Dongguan have been continuously accelerated. Currently, there are 28 specialized lychee cooperatives, 35 family farms, and 12 leading enterprises, forming a comprehensive industrial organization system. In 2023, the proportion of production organized by cooperatives and enterprises reached 68%, a significant increase from 52% in 2020. Entities such as Guanli Agricultural Technology Co., Ltd. and Dalang Lychee Industrial Park have become the core support for the modernization of the industry [2]. In terms of brand building, Dongguan lychee has formed a regional brand system centered around "Guanli". In 2021, it was successfully awarded the status of a national geographical indication product. In 2024, the brand value of "Dongguan Lychee" reached 280 million yuan, ranking sixth among Guangdong's local specialty fruit brands. However, compared to the brand value of 820 million yuan for Conghua lychee, there is still considerable room for improvement [3].

Currently, the digital transformation of Dongguan Litchi has achieved initial results, with e-commerce sales reaching 135 million yuan in 2024, accounting for 30% of total sales, an increase of 68.8% compared to 80 million yuan in 2020. The sales channels are divided into two major segments: traditional e-

commerce and social e-commerce. Traditional platforms such as Taobao, Tmall, JD.com, and Pinduoduo account for 60%, while emerging social e-commerce platforms such as Tiktok and Kwai account for 40% [4]. The consumer market is mainly concentrated in the Pearl River Delta and South China regions, with local consumption accounting for 25%, other cities within the province accounting for 40%, and consumption outside the province accounting for 35%. The online consumer group is mainly composed of young and middle-aged people aged 25-45, accounting for 70%. This group is highly educated, high-income, and focuses on brand and consumer experience [5].

In terms of e-commerce sales channel construction, Dongguan currently boasts 15 specialized lychee cold storage facilities with a total storage capacity of 8,000 tons. It has established cooperation with leading enterprises such as SF Express and JD Logistics, enabling 24-48 hour delivery to major cities in the Pearl River Delta and South China. In 2024, the proportion of cold chain logistics sales reached 85%, and the product loss rate was controlled below 5%, significantly outperforming the traditional transportation loss rate of 15% [6]. In the field of technological innovation, 12 enterprises and cooperatives have introduced an Internet of Things (IoT) orchard management

system to monitor soil temperature, humidity, and other parameters in real time. At the same time, they have established industry-university-research cooperation with South China Agricultural University and Zhongkai Agricultural Engineering College to provide technical support for industrial quality improvement and efficiency enhancement [7]. Through the construction and supporting of the above supply chain, the e-commerce development of the lychee industry in Dongguan has achieved relatively rapid progress.

2.2 Current Status of Brand Building and Market Recognition of Dongguan Lychee

2.2.1 Current status of brand building

The brand building of Dongguan lychee is still in its initial stage of development. The geographical indication certification trademark "Guanli" has been registered, and a brand protection mechanism has been established. In 2023, there were 15 lychee brand enterprises in the city, 30% of which obtained green food certification, and only 2 had organic food certification. The brand building focuses on high-quality varieties such as Nuomici and Guigui, but there is insufficient brand differentiation, lacking a unified visual image and exploration of cultural connotation [2].

The weak brand premium capacity is a prominent shortcoming. In 2024, the selling price of products bearing the "Guanli" trademark was only 12% higher than that of ordinary lychees, far lower than that of products from production areas such as Maoming and Huizhou. The core reason lies in the insufficient

exploration of the brand's historical and cultural heritage, failing to integrate Dongguan's thousand-year lychee planting culture and regional characteristics into brand building. Coupled with the reliance on traditional media for promotion, the exposure and influence of new media platforms are seriously inadequate [3]. Therefore, it is necessary to strengthen the construction of the "Guanli" brand in the future.

2.2.2 Current market awareness

Brand building is inseparable from market consumers' awareness of the brand. Surveys have found significant regional differences and cognitive biases in the awareness of Dongguan lychee in the market. According to the 2024 consumer survey in the Greater Bay Area, only 35% of consumers can accurately identify the Dongguan lychee brand, while the awareness of Maoming lychee is as high as 78% [5]. The local market has a high reputation, but its popularity outside the province is relatively low. Consumers only have basic awareness of "good taste and fine flesh texture", and lack sufficient understanding of variety characteristics, planting techniques, and cultural value.

Due to the low market recognition of the brand "Guanli", consumers have not formed a clear brand identity in their minds. According to e-commerce platform data in 2023, the search popularity of Dongguan lychee on e-commerce platforms was 18%. It was only higher than Zengcheng lychee and 24% lower than Maoming lychee (as shown in Table 2). These data further indicate that Dongguan lychee needs to further strengthen the construction and promotion of its online brand in order to better expand the consumer market.

Table 2. Comparison of Core Brand Indicators between Dongguan Lychee and Lychee from Major Producing Areas in Guangdong

Production area	Brand value (in billions of yuan)	Market awareness (%)	Brand premium rate (%)	Search popularity share on e-commerce platforms (%)
Dongguan lychee	2.8	35	12-15	18
Maoming lychee	9.5	78	35-40	42
Conghua lychee	8.2	65	30-35	25
Zengcheng lychee	6.8	52	25-30	15

Data source: 2024 China Agricultural Brand Value Assessment Report, Agricultural Product Consumption Survey in Greater Bay Area.

2.3 E-Commerce Development Model of Lychee Industry in Dongguan

Dongguan lychee e-commerce has formed diversified practical explorations. The Dalang Town Lychee Association, in collaboration with platforms such as Taobao and JD.com, has

adopted the "origin live broadcast + pre-sale orders" model. In the 2023 lychee sales season, the daily sales exceeded 1.5 million yuan, marking a 78% increase compared to 2022, highlighting the potential of the digital marketing market. The "Guangzhou Lychee Premium Selection" in Shijie Town has

established a full traceability system, enabling traceability from the planting base to the end table, laying a solid foundation for quality trust. In addition, "internet celebrity hosts + direct sales by farmers" has become a new growth point for e-commerce. In 2024, local internet celebrity "Lizhi Xiaomei" sold over 500,000 jin of lychees through Tiktok live streaming, generating sales of over 4 million yuan. This effectively broadened the sales channels for farmers and enhanced brand awareness among the public. Furthermore, various planting cooperatives have actively arranged community group purchases, relying on WeChat groups and mini-programs to directly connect with urban communities, reducing intermediate circulation links and lowering operating costs.

Drawing from the practice of Dongguan Lizhi E-commerce, three development models have emerged: First, the platform cooperation model, where enterprises, cooperatives, and large e-commerce platforms strategically collaborate to achieve large-scale sales relying on platform traffic, but there are issues with high platform commissions and weak brand autonomy; second, the self-built channel model, where exclusive mini-programs and self-operated malls are used to control the entire sales process; third, the integrated innovation model, which integrates traditional e-commerce, live streaming sales, community group buying, and short video marketing to form a marketing matrix. Data from 2024 shows that under the integrated innovation model, the average sales growth rate of enterprises reached 65%, far higher than the 35% of the single channel model. It can accurately match the habits of different consumer groups, achieving channel complementarity and marketing efficiency. Currently, all development models are moving towards branding, standardization, and digital transformation. Enterprises are increasingly focusing on packaging design, brand story mining, and consumer experience optimization to build market competition barriers.

2.4 SWOT Analysis of the Development of Litchi E-Commerce in Dongguan City

2.4.1 Internal strengths (S)

Firstly, the quality and germplasm advantages are prominent. Dongguan lychee is a national geographical indication product with a long history of cultivation and superior quality. In 2024, the proportion of high-quality Nuomici

and Guiwei varieties reached 85%, laying a solid foundation for natural branding [2]. Secondly, the location and logistics advantages are significant. Located in the core circle of the Pearl River Delta, Dongguan boasts a mature transportation network. In 2023, the express delivery volume reached 2.23 billion items, and the logistics cost was 15% lower than that of other production areas, providing infrastructure support for fresh food e-commerce [1]. Thirdly, the industry and e-commerce foundation is solid. Dongguan's manufacturing and e-commerce service industries are developed, providing the industrial soil for the digital transformation of agricultural products e-commerce. At the same time, the local government continues to introduce agricultural support policies, creating a favorable policy environment for the development of lychee e-commerce.

2.4.2 Internal weaknesses (W)

Firstly, the exploration of brand value lags behind, and the brand awareness and premium pricing ability are far lower than those of producing areas such as Maoming. In 2024, the average selling price was 20% lower than that of lychees from Zengcheng [3]. Secondly, the standardization level of the industrial chain is low, and there is a lack of unified quality specifications for planting, sorting, and sales, resulting in uneven product quality and affecting consumer trust. Thirdly, the cold chain logistics system is imperfect, with the loss rate of lychee e-commerce sales reaching 15% in 2023, higher than the industry average, highlighting shortcomings in freshness preservation and delivery timeliness [6]. Fourthly, there is a significant shortage of composite e-commerce talents, with insufficient reserves of professionals in new media operation, brand planning, and live marketing.

2.4.3 External opportunities (O)

Rural revitalization and digital agriculture policies continue to be supported. The No. 1 central document of 2024 explicitly supports the high-quality development of agricultural product e-commerce, and supporting policies at all levels have been implemented. Consumption upgrading drives the growth of demand for high-quality fresh produce, with over 70% of consumers willing to pay a premium for landmark high-quality lychees [5]. The fresh produce e-commerce industry is developing rapidly, with the market size reaching 736.79 billion yuan in 2024, a year-on-year increase of

14.67% (as shown in Figure 1). New models such as live streaming and community group buying continue to rise [4,8].

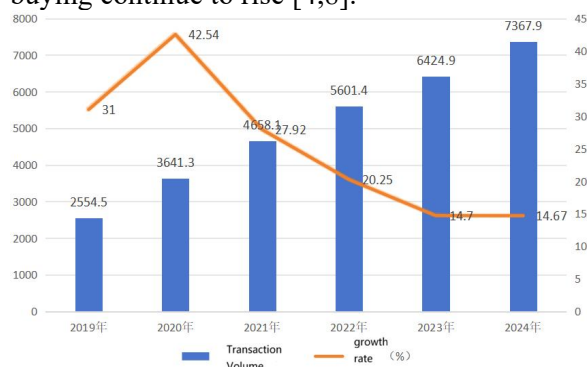


Figure 1. Data Chart of Transaction Scale and Growth Rate of the Fresh Food E-Commerce Industry from 2019 to 2024

2.4.4 External threats (T)

In Guangdong Province, there is fierce competition among lychee brands from Zengcheng, Conghua, and Maoming, while lychees from Hainan and Fujian continue to capture the national market. Homogenization competition within the province has triggered a price war. The lychee industry is significantly affected by extreme weather, with typhoons and droughts easily causing significant production losses. For example, in 2022, Guangdong's lychee production decreased by 30% due to meteorological disasters, leading to insufficient stability in market supply [9]. The operating costs of e-commerce platforms have risen, with the commission rate for agricultural product categories increasing to 8%-12% in 2024, putting increased pressure on small and medium-sized business entities. Food safety supervision is becoming increasingly strict, reducing the tolerance for brand errors. Low-priced lychees imported from Southeast Asia are impacting the domestic market, further intensifying industry competition.

3. Analysis of the Problems and Causes in the Development of Lychee E-Commerce in Dongguan

3.1 Insufficient Exploration of Product Brand Value

3.1.1 Ambiguous brand positioning

Dongguan's lychee brand lacks differentiated positioning and has low market recognition. China's annual lychee production is about 2.8 million tons, with Guangdong accounting for over 65% and Dongguan producing about

85,000 tons. However, the brand recognition rate is only 22.3%, far lower than Maoming's 48.7% and Zengcheng's 35.2% [3]. E-commerce platform merchants have confusing product promotion and serious homogenization of selling points, failing to form a clear value proposition. In contrast, Hainan's Feizixiao focuses on the high-end positioning of "imperial concubine quality" with a premium of 40%-60%, while Dongguan's lychees are caught in a low-price competition, making it difficult to achieve brand value enhancement.

3.1.2 Insufficient exploration of cultural connotation

Dongguan lychee has a thousand-year cultivation history since the Tang Dynasty, but the brand has failed to transform historical context and regional culture into market competitiveness. Surveys show that the brand premium rate of Dongguan lychee is 12%, significantly lower than that of other regions in the province, as shown in Figure 2. The e-commerce page and marketing copy lack cultural elements, and there is a lack of brand stories and emotional resonance. Data shows that e-commerce click-through rates for agricultural products with cultural connotations are 35% higher than those for ordinary products, and conversion rates are 27% higher. Cultural shortcomings directly restrict dissemination and sales.

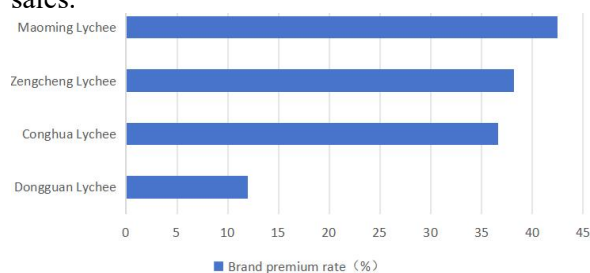


Figure 2. Comparison of Brand Premium Rates in Major Lychee Producing Areas in Guangdong

Data source: price monitoring data from agricultural product e-commerce platforms in 2024

3.2 The product Price Advantage Is Not Strong

3.2.1 The pricing mechanism is unreasonable

Dongguan lychees generally adopt traditional cost-plus pricing, without flexibly adjusting prices based on market demand, consumer psychology, and competitive product trends. In 2023, the average price of lychees on e-commerce platforms in Guangdong was 15.8

yuan/jin, while that in Dongguan was only 12.6 yuan/jin, indicating that the value of the local specialty product has not been realized. Lychee prices fluctuate dramatically seasonally. In 2024, the selling price was 25 yuan/jin at the beginning of the season, but dropped to 8 yuan/jin during the peak production period, with a fluctuation range of over 60%. Due to the lack of scientific price prediction and dynamic regulation mechanisms, it is difficult to guarantee the stability of farmers' income and e-commerce pricing.

3.2.2 Insufficient cost control capability

The production process is primarily characterized by small-scale and dispersed farming, with an average household operation size of only 3.2 mu, significantly lower than the average of 5-8 mu in Hainan and Fujian. This prevents the formation of advantages in large-scale agricultural material procurement and mechanized operations, resulting in a production cost per jin that is 1.5-2 yuan higher. The cost of packaging and logistics is relatively high, with e-commerce packaging costs accounting for 15%-20% of the selling price, exceeding the industry average of 10-12%. Excessive packaging is a common phenomenon. The depth of cooperation in the cold chain is insufficient, leading to slow delivery times and high loss rates. In 2023, the e-commerce delivery loss rate was 8.5%, surpassing the industry average of 5%, further squeezing profit margins.

3.3 Insufficiently Diverse Marketing Channels

3.3.1 Single channel structure

The sales of lychees in Dongguan rely heavily on traditional wholesale and a handful of comprehensive e-commerce platforms. In 2024, over 70% of sales went through traditional wholesale channels, while e-commerce sales accounted for only 25%. Among e-commerce platforms, Taobao and Tmall accounted for a significant proportion of sales. The centralization of channels has weakened the market's ability to resist risks. Fluctuations in platform policies and adjustments in traffic can impact industry sales. Traditional "merchandisers" have a fixed mindset, and business entities have a weak willingness to actively explore new channels. There is insufficient collaboration between upstream and downstream industries in the supply chain,

making it difficult to form a unified channel expansion strategy.

3.3.2 Emerging channel applications lag behind Live streaming e-commerce, social e-commerce, and community group buying have become the main driving forces for the growth of fresh food e-commerce, but Dongguan lychee lags far behind in its layout. According to a 2024 survey, only 15% of business entities have attempted to sell products through live streaming, and less than 10% have participated in social e-commerce and community group buying. The influence of Dongguan lychee on short video platforms such as Tiktok and Kwai is far less than that of lychee production areas in Guangxi and Hainan, missing out on young consumer groups and incremental markets [3]. Business entities lack professional capabilities in new media marketing, and the seasonal nature of lychee production and sales makes it difficult to support long-term stable content operations on new media. Coupled with insufficient professionalization in brand visual packaging and content creation, this restricts the effectiveness of emerging channels.

3.4 Insufficient Promotion of New Media Content

3.4.1 Weak content creation ability

Dongguan Lizhi New Media lacks professionalism and innovation in content creation. In 2023, only 23% of Lizhi cooperatives had independent content creation capabilities, while the proportion of professional content teams in Zengcheng and Conghua reached 45% [1]. Most content remains at the basic product display level, with severe homogenization and a lack of storytelling, failing to explore deeper content such as planting techniques and cultural heritage. According to Tiktok platform data in 2024, the average playback of content related to Dongguan lychee was 126,000 times, far lower than that of similar agricultural products (358,000 times), highlighting a significant shortcoming in communication influence.

3.4.2 Lack of user interaction and community operation

The user operation ability of Dongguan Lizhi's new media account is weak. In 2024, the average interaction rate on WeChat and Tiktok platforms was only 2.1%, far lower than the industry average of 6.8%. The response rate to business content comments was less than 30%,

lower than the industry average of 65%. There is a lack of innovative forms such as topic planning, user co-creation, and lottery interactions. The user engagement rate on Xiaohongshu platform is only 45% of the industry average, with low fan loyalty and repurchase rate, making it difficult to achieve word-of-mouth viral spread through the community.

3.5 Poor Supply Chain Management and High Logistics Costs

3.5.1 Logistics and distribution efficiency is relatively low

Litchi is a high-perishability fresh produce category, with an optimal delivery window of only 24 hours. However, the average logistics duration from the picking of litchi in Dongguan to the end-user is 48-72 hours [6]. During peak sales seasons, logistics and distribution capabilities can only meet 60%-65% of daily demand, leading to significant backlogs and delivery delays. The layout of logistics nodes is unreasonable, sorting efficiency is low, delivery routes are not optimized, and there is a lack of a unified logistics information platform. Information is fragmented across various links, resulting in substantial increases in time and circulation costs.

3.5.2 Imperfect cold chain logistics system

The cold chain circulation rate of agricultural products in Guangdong Province is only 23%, far below the level of over 95% in developed countries, and the cold chain coverage rate of lychees in Dongguan is less than 15% [6]. There is a significant gap in cold storage capacity. In 2023, the cold storage capacity of agricultural products in Dongguan was 85,000 tons, which is difficult to match the preservation needs of an annual production of 30,000 tons of lychees. The supply of cold chain transportation vehicles and professional logistics enterprises is insufficient, and the temperature control standards throughout the entire process are not uniform. Cold chain disruptions result in 20%-25% of lychees failing to meet e-commerce sales standards, directly affecting product quality and brand reputation. Due to the imperfection of the cold chain logistics system, the loss rate of lychees in Dongguan is relatively high. As shown in Figure 3, the loss rate in both traditional logistics and cold chain logistics systems is higher than the industry average.

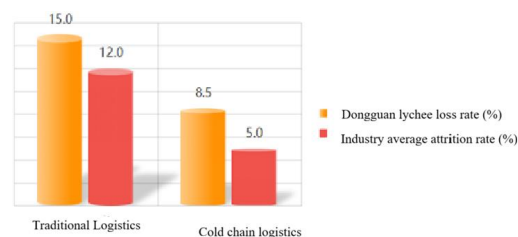


Figure 3. Comparison of Dongguan Litchi Logistics' Loss Rate with the Industry Average

Data source: 2024 China Fresh Agricultural Products Logistics Development Report

4. Countermeasures and Suggestions for Promoting the Development of E-Commerce in the Lychee Industry in Dongguan

4.1 Exploit the "Guanli" Cultural IP and Promote the Development of Industrial Branding

Relying on Dongguan's 800-year history of lychee cultivation and the Lingnan regional cultural heritage, we construct a cultural symbol of "Millennium Lychee Fragrance, Lingnan Boutique", integrating traditional agricultural charm with modern intelligent manufacturing advantages to create an exclusive brand story [10-11]. We improve the brand's visual identity system, unifying the LOGO, packaging style, and color system, incorporating elements such as Lingnan culture and Dongguan geographical symbols, and adopting environmentally friendly and innovative packaging design to enhance social dissemination.

Strengthen the digital dissemination of cultural IP, produce brand documentaries and short video series, and integrate lychee historical legends and planting culture into live streaming and short video marketing. Data shows that the playback volume and conversion rate of short videos featuring agricultural products with cultural stories have significantly increased, and high-quality content can be continuously outputted through Tiktok and WeChat video accounts [4]. Build a lychee culture and tourism integration format offline, develop picking gardens, agricultural sightseeing parks, and lychee cultural and creative products, hold lychee cultural festivals and tasting exchange meetings, and construct an "online brand communication + offline experiential consumption" ecosystem to enhance brand added value and consumer loyalty. Improve the brand certification and traceability system,

continuously apply for geographical indication enhancement, organic food certification, and agricultural cultural heritage recognition, establish a full-process quality control and traceability system, provide a solid quality endorsement for the "Guanli" brand, and narrow the brand value gap with lychees from Maoming and Conghua.

4.2 Activate Landmark Value and Establish a Differentiated Pricing System

As a national geographical indication product, Dongguan lychee currently enjoys a brand premium of around 15%, which is significantly lower than the industry average of 30%-50%. This indicates a huge potential for value enhancement. Based on product quality, packaging specifications, and service levels, we establish a three-tier differentiated pricing strategy: high-end deluxe gift boxes, highlighting landmark cultural attributes, command a premium of 50%-80%, targeting the gift and high-end consumer markets; mid-range products emphasize fresh cold chain quality, with a premium of 20%-30%; and mass-market products maintain a reasonable premium of 10%-15%, balancing inclusivity and brand value.

Utilize big data to accurately analyze and assess market conditions, establish a price forecasting and dynamic adjustment mechanism, and stabilize significant price fluctuations during the listing cycle. Through industry alliances, unify quality standards, pricing rules, and marketing plans to eliminate internal cut-throat competition driven by low prices. Industry data shows that industry alliances can increase the premium of iconic products by 10%-15% [3]. Optimize production and logistics cost control, promote the integration and contiguous development of small-scale planting, achieve cost reduction in agricultural resources and mechanized operations on a large scale; standardize packaging standards, eliminate excessive packaging, deepen strategic cooperation with cold chain logistics enterprises, reduce losses and circulation costs, and support price advantages.

Relying on live streaming e-commerce and experiential marketing, we educate consumers, disseminating knowledge about the value and identification of geographical indication products. Through forms such as origin tours and expert tastings, we aim to enhance

consumers' acceptance of high-end pricing and brand recognition.

4.3 Arrange Global Channels to Achieve Diversification of Marketing Modes

Currently, the online channels for Dongguan's lychee industry have begun to diversify. According to data, it accounts for a large proportion on traditional e-commerce and Tiktok platforms, with the two types of channels accounting for 75% of total sales, while other channels account for 25% (as shown in Figure 4). With the diversification of people's consumption lifestyles, Dongguan lychee should build a comprehensive channel system encompassing "traditional e-commerce + social e-commerce + live streaming sales + community group buying + offline new retail + cross-border e-commerce" to meet the needs of different consumer levels. We should deeply cultivate the construction of brand flagship stores on Taobao, Tmall, and JD.com, actively participate in platform-specific fresh food events, and leverage Pinduoduo's advantage in lower-tier markets to tap into consumer groups in third- and fourth-tier cities. We should focus on social e-commerce platforms such as Tiktok, Kwai, and WeChat mini-programs, leveraging content social fission to achieve precise reach.

Vigorously develop live streaming in production areas, cultivate local lychee live streaming teams, invite food experts and agricultural experts to join live streaming rooms, regularly carry out live picking broadcasts and themed special product promotion; promote community group purchase pre-sale models, collaborate with platforms such as Meituan Youxuan and Xingsheng Youxuan, centralize distribution to reduce logistics costs, and smooth out production and sales inventory pressure. Promote new retail that integrates online and offline, set up special areas for Guanli in large supermarkets and chain fruit stores, and achieve a closed-loop consumption experience that combines offline experience and online ordering.

Expand customized group purchasing and cross-border e-commerce channels for enterprises, and launch customized packaging services for government and corporate benefits as well as business gifts. Leverage the geographical advantages of the Greater Bay Area, and tap into the Chinese markets in Southeast Asia through platforms like Tmall

Global and JD Worldwide, thereby broadening export sales channels. Unify brand image and service standards across all channels, establish a standardized system for product quality and after-sales customer service, and achieve synergistic effects across multiple channels.

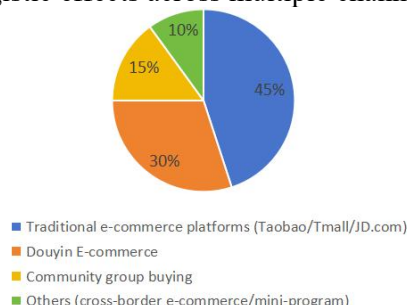


Figure 4. Pie Chart of the Proportion of Online Sales Channels for Lychees in Dongguan in 2025

Data source: Dongguan Municipal Bureau of Agriculture and Rural Affairs, "Empowering the 'Hundred, Thousand, and Million Project'! Dongguan Holds Special Training for Lychee Brokers and Lychee E-commerce" (June 3, 2025), and pub.timedg.com, "Led by 'Bingli'! Dongguan Shines Its Golden Signboard of 'High-end Lychee Exported from Dongguan' through Tiktok E-commerce" (June 30, 2025).

4.4 Empower New Media Applications and Establish a Digital Marketing System

In line with the development trend of new media marketing for agricultural products, we will increase our content layout in short videos, live broadcasts, and social media. We will establish a professional content creation team to create the "Guangli Legend" and "Lychee Garden Story" series of short video IPs, integrating content such as the picking process, taste experience, and cultural popularization, to enhance the completion rate and dissemination power of the content [4]. We will regularly operate WeChat official account, video account, and Xiaohongshu account, carry out interactive activities such as topic discussions, user collection, and community lotteries, to improve the account interaction rate and fan loyalty. We will establish a new media talent cultivation mechanism, with the government collaborating with e-commerce platforms to regularly conduct special training on live broadcast operation, short video creation, and account operation, to cultivate local operation talents and lychee brokers. We will introduce professional new media operation institutions to leverage mature

operational experience to optimize content planning and advertising placement; build a user portrait database, analyze consumer preferences through big data, implement personalized content push and precision marketing, and enhance the input-output ratio of marketing. We will establish a new media marketing effect evaluation system, with viewership, interaction rate, conversion rate, and repurchase rate as core indicators, dynamically optimize content forms and promotion strategies, and form a sustainable new media marketing operation model.

4.5 Optimize the Supply Chain and Promote the Model of Direct Shipment from the Production Area + Cloud Warehouse in the Sales Area

Strengthen the construction and promotion of the new supply chain model of "origin direct shipment + destination cloud warehouse", replacing the traditional multi-level distribution system. According to the current pilot data of this model, its circulation links can be reduced by 3-4, and the overall improvement effect is relatively obvious, as shown in Table 3. Build standardized origin distribution centers in major producing areas such as Dalang and Huangjiang, equipped with intelligent sorting, pre-cooling, preservation, and packaging equipment, to achieve standardized processing of 50-100 tons of lychees per day. Arrange pre-positioned cloud warehouses in core first- and second-tier cities in the Yangtze River Delta, Beijing-Tianjin-Hebei, and the Greater Bay Area, relying on big data to accurately predict consumer demand, and achieve nearby warehousing and rapid delivery.

Deepen strategic cooperation with SF Express, JD Logistics, and Cainiao Network in cold chain logistics, and establish a nationwide cold chain distribution network: bulk orders are shipped directly from the production area, reaching core cities within 24-48 hours; sporadic orders are delivered within the same city within 3-6 hours from the sales area's cloud warehouse, significantly reducing delivery time. Establish a digital management information system for the supply chain, utilize the Internet of Things to achieve temperature control and traceability throughout the entire process of planting, harvesting, warehousing, and transportation, and rely on big data to optimize inventory scheduling and delivery route

planning, thereby enhancing the precision of supply chain operations.

Table 3. Comparative Analysis of the "Direct Shipment from Origin + Cloud Warehouse at Destination" Model and Traditional Model for Dongguan Lychee

Direct shipment from the production area + cloud warehouse at the sales area			
Comparison dimension	Traditional multi-level distribution model	Model	Improvement effect
Circulation links	5-7	2-3	reduce 3-4 links
Delivery time	3-5 days	0.5-2 days	reduced by 60%-80%
Attrition rate	25%-30%	8%-12%	decrease of 13-18 percentage points
Circulation cost	accounts for 40%-50% of the selling price	20%-30% of the selling price	Circulation cost accounts for
Freshness retention	General	Excellent	Significantly improved
Quality standardization	Low	High	Significantly improved

Data sources: "China Fresh Food E-commerce Industry Development Report 2024", "Guangdong Province Agricultural Products E-commerce Development Report 2024", and "Dongguan Lychee Cold Chain Logistics Monitoring Report 2024"

The government has increased special funding for cold chain infrastructure, supporting new business models through tax incentives, land allocation, and subsidies. It has established unified industry standards for lychee packaging, warehousing, and cold chain transportation, strengthened technological collaboration with universities and research institutes, and improved the supporting service system of the supply chain. As a result, circulation costs have decreased by 20%-25%, and net profit margins have increased by over 30%.

5. Summary

With the rapid development of China's fresh food e-commerce, an increasing number of local specialty agricultural products are beginning to vie for the Internet market. Dongguan, as the core production area of Lingnan lychees, started online sales in 2014 and has since established a relatively mature diversified sales model, as well as a relatively well-developed logistics system. However, in its development process, there are still issues such as insufficient brand value exploration, poor price competitiveness, limited marketing channels, inadequate promotion through new media, and poor supply chain management. To address the aforementioned problems, it is proposed to strengthen the exploration and construction of brand culture to enhance price competitiveness; to build a diversified marketing channel matrix to meet the needs of different consumer levels, with particular attention paid to the construction of new media channels; and finally, to improve the construction of the logistics supply chain system and cultivate corresponding talents. In

the future, we will continue to deeply track and study the development trends of Dongguan's lychee industry e-commerce, and conduct further research in conjunction with the macro policy guidance of consumers and local governments.

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