



# Based on the new form and means of marketing of Phalaenopsis flowers

Yuanyuan Wei<sup>1,a\*</sup>, Siyu Chen<sup>1,b</sup>, Lei Chen<sup>2,c</sup>, Xiaolan Ye<sup>1,d</sup>, Minghua Xu<sup>2,e</sup>, Yumeng Duan<sup>1,f</sup>

<sup>1</sup>Chengdu Ginkgo Hotel Management College, Chengdu, 611730, China

<sup>2</sup>Tianjin University of Science and Technology, Tianjin, 300457, China

<sup>a\*</sup>3084732325@qq.com, <sup>b</sup>427809385@qq.com, <sup>c</sup>3012079692@qq.com,  
<sup>d</sup>2876293716@qq.com, <sup>e</sup>9053397992@qq.com, <sup>f</sup>15928077265@163.com

**Abstract.** In the late 1990s, Phalaenopsis, an exquisite flower species, was introduced from Taiwan to mainland China. Its captivating colors, stunning appearance, and prolonged blooming period quickly won the hearts of flower enthusiasts, making it immensely popular in the market. However, the presence of the Phalaenopsis virus and the specific temperature requirements for its cultivation have posed challenges, limiting the range of available Phalaenopsis varieties and dampening consumer interest. Furthermore, the implementation of stricter environmental protection policies has presented obstacles for expanding Phalaenopsis cultivation in greenhouses. Despite these challenges, the current cultivation base spans over 30 acres and can produce approximately 5,000 flower seedlings annually. Prior to the pandemic, it had the capacity to cultivate up to 30,000 seedlings. To overcome the limitations of physical stores, the industry has embraced online marketing and sales through exclusive accounts on platforms like Little Red and Tik Tok. This shift has facilitated greater reach and customer engagement. After-sales support is now provided through social software such as WeChat, ensuring customer satisfaction and fostering loyalty. In a bid to drive innovation, the industry has introduced new artistic vertical potted plants and three-tiered trellises. These creative additions have added novelty and variety to the Phalaenopsis offerings. In terms of marketing strategies, alternative models such as the flower + café concept, wedding planning services, and innovative flower derivatives are being explored, attracting diverse consumer segments. Considering transportation difficulties, measures such as post-harvest preservation and pre-cooling treatments have been proposed to minimize transportation costs and ensure the flowers' freshness upon arrival. Despite the challenges faced, the Phalaenopsis industry in mainland China continues to evolve and adapt, leveraging technology and creativity to capture market demand and maintain its position as a sought-after flower species.

**Keywords:** Phalaenopsis, vertical potted plant, three-tier flower stand, floral derivative pattern.

# 1 Introduction

## 1.1 Background

Phalaenopsis virus, including ORSV and CyMV, is a common issue in China's phalaenopsis industry. Once infected, the plants cannot be cured, and detoxifying the stem tip after CyMV virus infection is challenging. Although the ORSV virus has a good detoxification effect on the stem tip, it is prone to reinfection after detoxification [1]. Additionally, the "new Taiwan virus" has been found in some phalaenopsis orchids, remaining undetectable in the early stages. Resolving these viruses in the short term seems unlikely, and this will significantly impact phalaenopsis exports. Phalaenopsis is sensitive to cold temperatures, which can cause diseases and halt plant growth. This has limited the variety of Phalaenopsis products available.

In response to these challenges, domestic seedling enterprises and advanced breeding areas are collaborating to conduct comprehensive tissue culture tests considering various environmental factors. Efforts focus on establishing detailed cultivation technology files for new varieties tailored to specific regional conditions and developing new equipment to expand Phalaenopsis planting capabilities [2]. In summary, the Phalaenopsis industry in China is addressing virus-related challenges and environmental sensitivities through collaborative efforts and technological advancements to enhance cultivation techniques and expand planting capabilities.

## 1.2 Domestic and international research

Phalaenopsis, with its abundant flowers and high ornamental value, has gained significant popularity among consumers in Europe and the United States. In fact, it is one of the top-selling potted flowers in Japan, second only to poinsettia, and its demand in the United States is steadily increasing. The Chinese phalaenopsis market experienced a breakthrough when, after two years of technical preparations following the signing of the 2015 "Chinese Medium Orchid Export to the United States Work Plan," 10,000 medium-sized phalaenopsis cultivated by Chen Cun Flower Enterprise in Shunde District, Guangdong Province, were officially shipped to the United States on June 21, 2017. This marked the official opening of the phalaenopsis market in the United States, where the animal and plant quarantine measures are the most stringent. The export of phalaenopsis from mainland China to South Korea was facilitated by the successful entry of Taiwan's phalaenopsis into the United States. Furthermore, the efforts of Japanese florists to expand the consumer market by lowering prices and increasing production have also contributed to the export of Chinese Phalaenopsis.

## 1.3 Project Introduction

In addition to novel product forms, the industry is embracing innovative marketing techniques to engage consumers. One such approach is the fusion of flowers with café experiences, creating a delightful ambiance where customers can enjoy the beauty of Phalaenopsis while savoring their favorite beverages. This creative integration not only

attracts customers but also promotes the concept of slow living and relaxation. To optimize logistics and ensure the freshness of *Phalaenopsis*, post-harvest treatments are being implemented. These treatments include specialized preservation methods to extend the shelf life of the flowers, allowing for longer transportation times without compromising quality. Furthermore, improved transportation methods, such as advanced packaging solutions and efficient cold-chain logistics, are being adopted to minimize damage during transit and ensure timely delivery to markets. These comprehensive measures aim to address the existing challenges in the *Phalaenopsis* market, providing consumers with a wider range of options and fostering sustainable development in the floral industry. By incorporating innovative product forms, creative marketing strategies, and improved logistics, the industry endeavors to meet the evolving demands of consumers while promoting the growth and prosperity of the *Phalaenopsis* market in China.

## 2 Method

### 2.1 New forms of products

In comparison to Taiwan, the mainland *Phalaenopsis* exports suffer from a lack of strategic planning, often resulting in spontaneous initiatives and consequently, weaker international market competitiveness. To address this issue, the proposal includes the introduction of three new product forms: vertical potted plants, three-tiered flower stands, and flower baskets. These additions aim to enhance the visual appeal and artistic nature of *Phalaenopsis* products.

The proposed vertical green wall three-dimensional flowerpot, depicted in Figure 1, exemplifies the captivating visual allure of these new product forms. From a technical standpoint, the vertical green wall three-dimensional flowerpot offers precise scientific plant management control, facilitating automated fertilization and irrigation. This not only conserves time and effort but also promotes robust and healthy plant growth. Constructed using high-quality solid wood frames and boards, this innovative design presents a striking three-dimensional and aesthetically pleasing appearance, thereby adding a touch of sophistication to the *Phalaenopsis* product line.



**Fig. 1.** Vertical potted plants



**Fig. 2.** Three-tiered trellis

This is shown in Figure 2, The three-tier flower stand boasts a visually striking and artistic three-dimensional appearance. Crafted from a premium solid wood frame and high-quality board, it exudes both durability and aesthetic appeal. This combination results in a compelling sense of three-dimensionality and beauty, enhancing the overall visual impact of the structure[3].

In modern floral arrangement design, color and shape have emerged as pivotal factors. Designers adeptly combine flowers of diverse colors and shapes to craft bouquets with distinctive styles. For example, some bouquets feature monochromatic or gradient designs, blending similar colors together to evoke a sense of softness and cleanliness. Conversely, other bouquets employ striking contrasting colors to heighten visual impact and excitement.

Flower basket for sale in an innovative form: hanging flower basket is a design scheme that fixes plants and flowers in the flower basket and then hangs them in the air, so that the flowers can grow naturally. Suitable for use indoors or in a room, the hanging flower basket can adjust the indoor environment and create a comfortable atmosphere.

## **2.2 Innovative sales**

The Flowers + Cafe Model combines the concept of a coffee area within a florist, allowing customers to indulge in delicious coffee while shopping for flowers. This innovative model offers several advantages. Firstly, it provides customers with a pleasant and leisurely environment, encouraging them to spend more time in the store. This increased dwell time can lead to higher sales as customers are more likely to explore and make additional purchases. Moreover, the combination of flowers and cafes creates a unique and memorable shopping experience, enhancing customer satisfaction and fostering customer loyalty.

The Creative Flower Derivatives Model revolves around the idea of using flowers

as a basis for creative design products. By incorporating flowers into artistic and innovative designs, ornamental flowers take on a new form of expression. This model allows for the exploration of diverse applications and adaptations of flowers in various creative industries. From floral-inspired artwork and home decor to fashion accessories and even culinary creations, this model encourages the expansion of the floral industry beyond traditional flower arrangements. The Creative Flower Derivatives Model not only adds value to the floral market but also attracts a wider range of customers who appreciate the uniqueness and versatility of these creative flower derivatives.

### 2.3 Logistics upgrades

After being harvested, flowers retain a significant amount of heat, leading to respiration and transpiration. Therefore, it is essential to pre-cool the flowers before subjecting them to low-temperature treatment. Currently, vacuum pre-cooling is the most widely used and effective technology for pre-cooling flowers, significantly reducing the time compared to conventional cold storage pre-cooling. With vacuum pre-cooling, it only takes approximately 30 minutes to lower the initial pre-cooling temperature from 20°C to 4°C, whereas traditional cold storage pre-cooling requires about 10 hours for the same process. This streamlined approach greatly enhances the efficiency of refrigerated transportation[4]. In order to avoid loss, existing in the logistics system, the four side corners of the packaging box are pasted with paper corner protection, the adjusting block with a notch is installed on the side of the box, and the vertical partition and the horizontal layered partition are installed on the adjustment block. As a result, paper corner protectors were installed at four side corners of the box to improve the support force of the multi-layer stacking of the box[5]. for fresh cut flowers, cold chain special barrel loading can be used instead of traditional dry storage transportation. For potted flowers, put them directly on the trolley and push them into the transport trolley.

### 2.4 Marketing strategy

The existing flower purchase channels are mainly online drainage and live sales, and through self-media publicity, the establishment of accounts on Tik Tok and Little Red[6], and continuous operation, attracting a group of loyal fans of Phalaenopsis orchid. With the vigorous development of the live broadcast economy, many individuals, organizations, and enterprises have been activated in the way of "live broadcast e-commerce", bringing a new model of digital entrepreneurship[7], explaining the maintenance knowledge and growth environment of Phalaenopsis through the live broadcast platform, and under the long-term operation, it has also attracted a large number of fans to introduce it to the WeChat group for transactions, so as to achieve accurate customer acquisition, direct transactions on WeChat, and direct delivery through offline logistics[8]. This is shown in Figure 3:

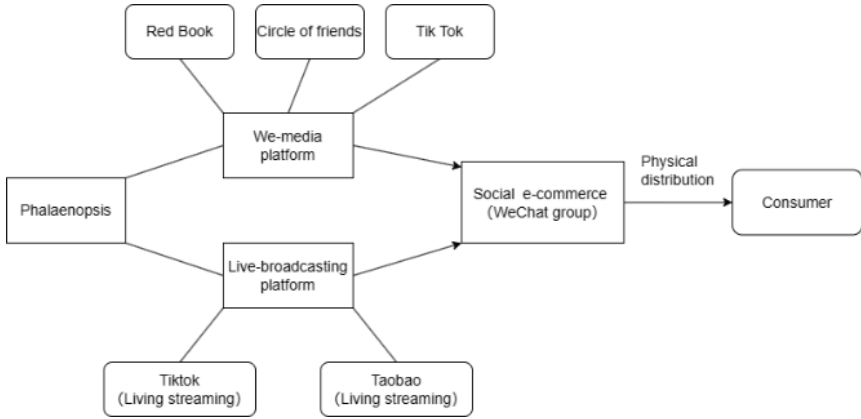


Fig. 3. Online sales channels

Draw on the practical experience of flower e-commerce platforms to carry out comprehensive marketing models such as sensory marketing, cultural marketing and precision marketing based on customer experience; Propose industrial upgrading to lay the foundation for experience; Experience to create an "online + offline" platform[9] Figure 4 illustrates the significant role of social e-commerce in promoting Phalaenopsis, particularly through self-media platforms like Little Red and TikTok. These platforms have effectively captured the interest of Phalaenopsis enthusiasts, encouraging them to follow self-media accounts and participate in WeChat groups for transactions. Moreover, exclusive group buying offers on TikTok incentivize enthusiasts to visit physical stores for offline purchases. By integrating online and offline sales channels, the reach of customers expands, establishing a private domain traffic pool. This strategy not only helps achieve a dominant market position but also fosters sustained growth. Moreover, there is a potentially broad market for green consumption, and consumers' green preference is the main factor affecting the market demand for green products. Manufacturers and retailers can improve the level of green technology innovation and expand the market demand for products in "online + offline" channels [10].

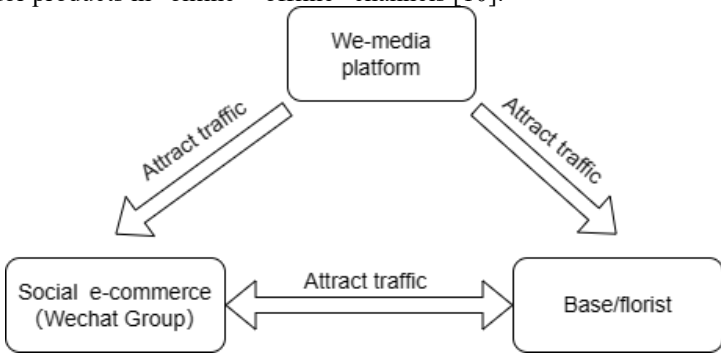


Fig. 4. Online sales channels

### 3 Achievement display

The actual cultivation base has more than 30 acres, and at most 30,000 flower seedlings were cultivated before the epidemic. Entrepreneurship leads to employment. The cultivation base provides labor and employment positions for the surrounding residents, and the base has 5 long-term employees and 8 short-term employees. The actual income of the base is shown in Figure 5:

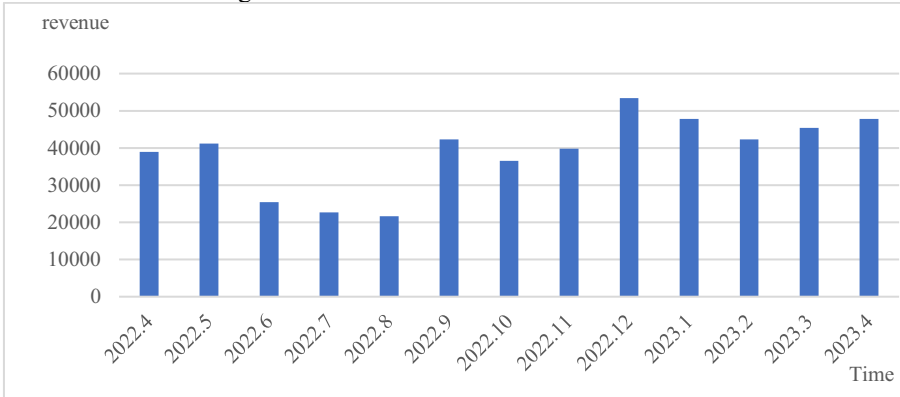


Fig. 5. Actual income

Long-term employees can get an annual income of about 40,000 yuan. As of 2022, it has reached cooperation with more than a dozen companies to provide phalaenopsis orchids.

### 4 Conclusion

This paper proposes new product forms of vertical potted plants and three-layer flower stands, as well as marketing innovation of flower + café and creative flower derivatives mode You can establish your own private domain traffic pool, create information barriers in the industry, achieve a monopoly position on Phalaenopsis single products, and continuously expand the traffic pool.

Draw on the practical experience of flower e-commerce platforms to carry out comprehensive marketing models such as sensory marketing, cultural marketing and precision marketing based on customer experience; Propose industrial upgrading to lay the foundation for experience; Experience to create an "online + offline" platform. I believe that through offline and online publicity, more people will understand Phalaenopsis and continue to expand the popularity of Phalaenopsis and our store, so that more people can trust us and choose us.

In order to solve the problems existing in the logistics system, the four side corners of the packaging box are pasted with paper corner protection, the adjusting block with a notch is installed on the side of the box, and the vertical partition and the horizontal layered partition are installed on the adjustment block. As a result, paper corner

protectors were installed at four side corners of the box to improve the support force of the multi-layer stacking of the box.

## References

1. Chang C A. Phalaenopsis Viruses and Their Detection Techniques[M]. 2017.
2. Ding Lan, Guo Yan, Dong Gang, et al. Investigation and detoxification of domestic Phalaenopsis seedlings carrying Jianlan mosaic virus and odontic orchid ring spot virus[J]. Northern Horticulture, 2012 (2): 137-140
3. Kumazaki Kudo. Potted Phalaenopsis orchid aggregate:JP20190004644U[P].JP3225207U [2023-11-15].
4. Singh, Alka, Kumar, Jitendra, Kumar, Pushp Endra. Effect of Pulsing, Modified Atmosphere Storage at Low Temperature and Vase Solution on Flower Quality and Vase Life of Gladiolus Cut Spikes[J]. 2007.
5. Song Aihua. Creative remodeling design of flower transport boxes [J]. Packaging engineering,2020, 41(7): 5.DOI: CNKI: SUN: BZGC.0.2020-07-022.
6. Liu Shiqi. Research on the development trend of e-commerce marketing: A case study of "instant gratification" platforms such as TIK TOK and Redbook [J]. Market Weekly, 2019(5): 3.DOI: CNKI: SUN: SCZK.0.2019-05-027.
7. Su Yufeng, Zhou Xiang. Research on the co-creation mechanism of digital opportunities in the context of "live e-commerce": a qualitative study from the perspective of digital affordance [J]. Nankai Management Review, 2023, 26(1):106-117.
8. Qing-Yun A N. The Current Situation Report of WeChat Sales from the View of the Vocational Student[J]. Yinshan Academic Journal (Natural Science Edition), 2018.
9. Zhang Bei, Liu Kaiming. Research on customer experience and marketing model of flower e-commerce platform in the new e-commerce era [J]. World Agriculture, 2020(1): 7.DOI:10.13856/j.cn11-1097/s.2020.01.001.
10. Mu Z, Zheng Y, Sun H. Cooperative Green Technology Innovation of an E-Commerce Sales Channel in a Two-Stage Supply Chain[J]. Sustainability, 2021, 13. DOI: 10.3390/su13137499.

**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.

