

Exploring the Trends in Indian Floriculture Exports: Review of the Volume and Value Dynamics of the Key International Importers in the Industry

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Abstract

India has emerged as a significant player in the global floriculture trade, leveraging its diverse agro-climatic conditions and skilled labour. This research paper provides a comprehensive analysis of the countries importing Indian flowers, examining trends in both quantity and monetary value from 2015 to 2025. Utilizing data primarily from the Agricultural and Processed Food Products Export Development Authority (APEDA) and the Ministry of Commerce & Industry, alongside market trend projections, the study identifies key importing nations, their historical growth patterns, and the underlying factors driving demand. Findings indicate a consistent growth trajectory for Indian floriculture exports, albeit with market-specific fluctuations. The United States, Netherlands, United Arab Emirates, and the United Kingdom are identified as consistently dominant markets, each serving distinct roles in the global supply chain. The paper throws light on emerging trajectories, opportunities and impediments for instance logistics and plant protection criteria, and provides key recommendations for augmenting the export competency of India in the international floriculture market.

Keywords: Indian floriculture, flower exports, quantity, value, importing countries, trade analysis, market trends

1. Introduction

The floriculture domain in a global perspective is a vibrant and fast progressing segment, categorized by its value-addition attribute and substantial inputs to agrarian economies. Estimated at more than USD 50 billion internationally, it comprehends the farming and trade of cut flowers, potted plants, decorative plants, and flower seeds. The prolific biodiversity, diverse agro-climatic precincts, and accessibility of competent and cheap workforce, gives an organic viable advantage for India in this segment. In the recent decades, floriculture has evolved from a conventional, domestic vocation to an economically feasible export-centric industrial activity in India, engendering significant foreign exchange and job opportunities,

predominantly for rural population. Notwithstanding this scope, a comprehensive evaluation of the floriculture export destinations, particularly the dynamics of the extent and worth, remains less examined in academic literature. Gathering relevant information on the import of Indian flowers, its quantity and value, is essential for devising strategies for market development, policy formulation, and sharpening the competitive edge of Indian exporters.

2. Objectives

This paper intends to fill the gap by performing a detailed evaluation of the nations importing Indian flowers from 2015 to 2024. The study clearly focuses on:

- Identifying the major importing nations of Indian flowers based on both quantity (volume) and amount (value).
- Analysing the historical trends in exports to these key countries.
- Identifying the future export trends on the basis of past performance and market cues.
- Deliberating the major prospects and impediments of the floriculture exports in India.

3. Literature Review

Research on the Indian floriculture sector has largely focused on production technologies, supply chain management, and general export performance. The floriculture industry of India has been distinguished as industry with substantial growth prospects. Several studies divulged its transition from conventional farming culture to state-of-the-art, export-centric practices. The Agricultural and Processed Food Products Export Development Authority (APEDA) a statutory body established by the Government of India under the Agricultural and Processed Food Products Export Development Authority Act organises several programmes for fostering floriculture exports. It predominantly concentrates on infrastructure development such as cold storage, reefer vans, air cargo facilities and market expansion activities. There are a lot of studies emphasizing the intrinsic merits of Indian floriculture, such as its diversity, cheap labour and geological propinquity to several high-demand markets. Barriers like lack of cold chain logistics, severe phytosanitary prerequisites in importing countries, extreme international competition, and reliance on conventional markets have also been identified as challenges to explore maximum export potential.

Even though overall export statistics are accessible from government sources, a specific analysis of importing countries, examining their import trends by both quantity and value over a defined period, is rare. Existing literature often presents aggregate data or focuses on specific flower varieties, rather than a holistic view of country-wise import dynamics across the sector. This paper seeks to provide this focused, temporal analysis, offering insights into market evolution and the strategic positioning of Indian floriculture in the global market.

4. Methodology

This research employs a quantitative descriptive and analytical approach.

4.1. Data Sources: The primary data for this analysis is sourced from the Agricultural and Processed Food Products Export Development Authority (APEDA), an agency under the Ministry of Commerce & Industry, Government of India. APEDA maintains comprehensive records of India's agricultural and processed food exports, including floriculture products. Additional insights are drawn from the Ministry

of Commerce & Industry's export-import data bank, FAOSTAT, and relevant industry reports and market analyses by organizations like the International Trade Centre (ITC) and various trade promotion bodies.

4.2. Data Collection and Period: Historical data for the period 2015-2024 was collected for total floriculture exports from India, disaggregated by importing country, quantity (e.g., in metric tons or units as available), and Free on Board (FOB) value (in USD). For the period 2024-2025, projections are made based on Compound Annual Growth Rate (CAGR) derived from the historical data, coupled with qualitative assessments of current global economic conditions, trade agreements, and specific market demand trends (e.g., post-pandemic recovery, evolving consumer preferences). It is acknowledged that projections inherently carry a degree of uncertainty.

4.3. Data Analysis: The collected data was analysed using:

- **Descriptive Statistics:** To understand overall trends in total exports (quantity and value), growth rates, and market share of individual importing countries.
- **Time-Series Analysis:** To identify patterns and growth trajectories for each major importing country over the specified period.
- **Comparative Analysis:** To compare the performance of different importing nations and identify top-tier markets.
- **CAGR Calculation:** To quantify the average annual growth rate over the period for both quantity and value.
- **Qualitative Assessment:** To interpret quantitative findings in the context of global trade dynamics, market access issues, logistics, and specific demand factors.

5. Results and Analysis (2015-2025)

5.1. Volume Production of Floriculture

Table 1: Production of flowers in India (in metric tons)

Year	Production
2014-2015	1744.37
2016-2017	2183.91 (25.22% increase)
2021-2022	2813.46 (5.59% increase)
2022-2023	3096.79 (10.06% increase)
2023-2024	3231.01 (4.34% decrease)

5.2. Overall Trends in Indian Floriculture Exports: From 2015 to 2023, India's floriculture exports demonstrated a consistent upward trend in both quantity and value, barring minor fluctuations primarily due to global economic downturns or specific supply chain disruptions (e.g., the initial phase of the COVID-19 pandemic). The value of exports generally grew at a higher rate than the quantity, indicating a shift towards higher-value products, improved quality, or better price realization in international markets.

Export of flowers from India (in USD million)

Table 2: Export of flowers from India (in USD million)

Year	Export
2017-2018	\$82.05
2022-2023	\$95.00
2023-2024	\$103.47

- **Quantity:** The volume of Indian flower exports saw a CAGR of approximately 5-7% during the 2015-2023 period. While specific annual figures varied, the overall trajectory was positive.
- **Value:** Export value exhibited a more robust CAGR, often in the range of 8-10%, reflecting premium pricing for certain varieties, better market access, and a focus on cut flowers and value-added products.

Based on these trends and continued government support, the projected growth for 2024-2025 is expected to maintain this positive momentum, with potential for accelerated growth if new trade agreements or market diversification efforts bear fruit.

5.3. Major Importing Nations: Quantity and Value Dynamics

Analysis reveals a consistent set of top importing nations, though their relative positions and growth rates have varied.

5.3.1. United States (US): The United States has consistently been one of the largest and most valuable markets for Indian floriculture.

- **Quantity & Value:** The US typically imports a significant volume of Indian flowers, but its strength lies particularly in value. It often accounts for 15-20% of India's total floriculture export value. Demand is driven by the large Indian diaspora, diverse consumer preferences, and the country's robust economy. Specific high-value cut flowers, traditional Indian flowers (e.g., marigolds, roses, jasmine), and sometimes flower seeds find strong markets.
- **Trends (2015-2023):** Exports to the US showed steady growth, with a notable surge post-pandemic (2021-2023) as global supply chains recovered and disposable incomes rose. This market prioritizes quality and consistency.
- **Projections (2024-2025):** Continued strong growth is anticipated, particularly for specialized and ethically sourced flowers, given the increasing consumer awareness in the US regarding sustainable practices.

5.3.2. Netherlands: The Netherlands, often referred to as the "flower capital of the world," serves a dual role: it is both a direct consumer and, more significantly, a major re-exporter of flowers globally, primarily through its advanced auction system and logistics infrastructure.

- **Quantity & Value:** While the quantity imported by the Netherlands is substantial, the value per unit might appear lower compared to direct consumption markets like the US, as a significant portion is re-exported. It often accounts for 10-15% of India's total export value.

- **Trends (2015-2023):** Imports by the Netherlands have shown fluctuating but generally strong growth, reflecting its role as a global trading hub. Indian flowers, especially certain cut varieties, enter the European market via the Netherlands.
- **Projections (2024-2025):** Growth is expected to continue, driven by the Netherlands' strategic position and its ability to distribute flowers efficiently across Europe and beyond. India's ability to supply competitive varieties and volumes is key.

5.3.3. United Arab Emirates (UAE) The UAE stands out due to its geographical proximity, strong trade ties, and a significant expatriate population, including a large Indian diaspora.

- **Quantity & Value:** The UAE consistently ranks among the top importers in both quantity and value, often ranging from 10-12% of total exports. Its demand is high for daily fresh flowers for traditional uses, events, and hotel industries, as well as for re-export to other GCC (Gulf Cooperation Council) countries.
- **Trends (2015-2023):** This market has demonstrated consistent, stable growth, less susceptible to global economic shocks due to local demand and regional trade.
- **Projections (2024-2025):** Given ongoing infrastructure development, tourism growth, and cultural significance of flowers in the region, the UAE market is projected to remain a stable and growing destination for Indian floriculture.

5.3.4. United Kingdom (UK) The UK is another significant European market for Indian flowers, driven by a large South Asian diaspora and a general demand for diverse floral products.

- **Quantity & Value:** The UK typically accounts for 8-10% of India's floriculture export value. Demand is primarily for cut flowers and traditional varieties.
- **Trends (2015-2023):** While showing positive growth, particularly in recent years, exports to the UK have at times been influenced by Brexit-related trade complexities and phytosanitary regulations.
- **Projections (2024-2025):** Stable growth is anticipated, but Indian exporters need to remain vigilant regarding evolving post-Brexit trade requirements and competition from other flower-producing nations.

5.3.5. Other Significant Importers Other notable importing countries include Germany, Japan, Australia, Singapore, and various Middle Eastern countries. These markets, while individually smaller than the top four, collectively contribute significantly to India's export portfolio and represent diversification opportunities. Japan, in particular, values high-quality, niche varieties, while Germany is a strong market for cut flowers.

5.4. Key Factors Influencing Export Dynamics

Several factors govern the quantity and value of Indian flower exports:

- **Logistics and Cold Chain Infrastructure:** The perishable nature of flowers necessitates efficient cold chain management from farm to airport to destination. Improvements in air cargo capacity and specialized handling facilities have been crucial.
- **Phytosanitary and Quality Standards:** Importing countries, especially in Europe and North America, have stringent requirements regarding pest-free products, residue levels, and quality. Meeting these standards directly impacts market access and price realization.
- **Global Market Prices and Competition:** India faces stiff competition from established players like Ecuador, Kenya, Colombia, and the Netherlands. Global market prices for specific flower varieties dictate profitability.
- **Trade Agreements and Tariffs:** Favourable trade agreements can significantly boost exports by reducing tariffs and non-tariff barriers.
- **Currency Fluctuations:** The strength of the Indian Rupee against major currencies impacts the competitiveness of Indian exports.
- **Consumer Preferences and Trends:** Evolving global tastes, demand for sustainable and organic flowers, and the rise of e-commerce platforms influence volume and value.

6. Discussion

- The analysis from 2015 to 2023 clearly indicates that Indian floriculture exports have matured, demonstrating a consistent upward trajectory. The emphasis on value growth exceeding quantity growth suggests a strategic shift towards higher-quality produce and catering to niche, high-value segments of the global market. The dominance of the US, Netherlands, UAE, and UK underscores the importance of established trade routes, diaspora connections, and global trading hubs for India's floriculture sector.
- The Netherlands' role as a re-export hub highlights the complex nature of global flower trade. While direct consumption in the US and UAE drives specific demand for traditional or ceremonial flowers, the Dutch market allows Indian produce to penetrate broader European and potentially other global markets after sorting, grading, and re-packaging. This emphasizes the need for India to not only focus on direct consumer markets but also understand and leverage global distribution networks.
- Challenges persist, particularly concerning logistical bottlenecks, maintaining stringent quality standards, and adapting to fluctuating global market demands. The ability to innovate in terms of new varieties, sustainable cultivation practices, and direct-to-consumer models (e.g., through e-commerce) will be critical for sustaining the projected growth towards 2025 and beyond. Furthermore, geopolitical stability and effective bilateral trade relations will continue to shape the accessibility and profitability of these key markets.

7. Recommendations

To further augment India's floriculture export potential, the following recommendations are put forth:

- **Strengthening Cold Chain Logistics:** Invest further in integrated cold chain infrastructure, including refrigerated transport, pre-cooling facilities, and modern pack-houses, especially at major production clusters and airports.
- **Compliance and Certifications:** Intensify efforts to assist exporters in obtaining international certifications (e.g., Global GAP, Fairtrade) and adhering to stringent phytosanitary standards, opening doors to high-value markets.
- **Market Diversification:** While nurturing established markets, actively explore new emerging markets in Eastern Europe, East Asia, and Africa to reduce over-reliance on a few destinations.
- **Value Addition and Product Diversification:** Promote the export of value-added products like dry flowers, floral extracts, essential oils, and specialized traditional Indian flowers with unique demand.
- **Branding and Promotion:** Undertake concerted branding and promotional campaigns to highlight the unique selling propositions of Indian flowers (e.g., freshness, variety, cultural significance).
- **Research and Development:** Invest in R&D for developing new, disease-resistant, and long-lasting flower varieties suitable for export, as well as improved post-harvest technologies.
- **Skill Development:** Train farmers and exporters in modern cultivation techniques, post-harvest management, and international marketing strategies.

8. Limitations and Future Research

This study relies on publicly available aggregate data, and specific breakdowns by individual flower types (e.g., roses vs. carnations) for each country across the entire period were not always uniformly available, limiting the granularity of variety-specific analysis. Furthermore, the projections for 2024-2025 are based on historical trends and current market understanding, and actual figures may vary due to unforeseen global events (e.g., economic recessions, geopolitical shifts, or climate change impacts). Future research could delve deeper into the specific flower varieties demanded by each major importing country, analyse the impact of Free Trade Agreements on floriculture exports, conduct a comparative analysis of Indian floriculture with major global competitors, or explore the potential of e-commerce and direct-to-consumer models in expanding India's export footprint.

9. Conclusion

Indian floriculture exports have shown remarkable resilience and growth between 2015 and 2023, with projections indicating continued positive performance through 2025. The United States, Netherlands, United Arab Emirates, and the United Kingdom remain pivotal importing nations, each contributing uniquely to the quantity and value of India's floricultural trade. While factors such as logistics, quality control, and global competition present ongoing challenges, India's inherent strengths—including diverse

agro-climates, skilled labour, and strategic geographical location—position it favourably for future expansion.

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