

Market Dynamics, Economic Constraints and Livelihood Outcomes of Gerbera Growers in Karnataka

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Abstract

In Karnataka, especially in the Malnad region, where cut flowers like gerbera, rose, and anthurium are grown for both local and international markets, floriculture has become an important part of horticulture. Despite government support in the form of subsidized planting material, training, and promotional activities, flower growers continue to face a wide range of challenges from production to marketing. The study's key limitations are price volatility (64.29%), a lack of scientific training and understanding (57.14%), irregular demand (55.71%), poor market value (52.86%), and rising production expenses (51.43%). It is based on field surveys of 70 Gerbera growers. Inadequate cold storage, undeveloped transportation infrastructure, illness and pest infestations, unskilled labor, and subpar market infrastructure are further problems. The results show that in order to improve the sustainability and profitability of cut flower production in Karnataka, policy changes, infrastructure improvements, and market regulation are desperately needed.

Keywords: Floriculture, Cut flowers, Gerbera, Karnataka, Production challenges, Market constraints, Price fluctuation

Introduction

With horticulture and floriculture rising as significant subsectors that contribute to employment, exports, and income production, agriculture remains the foundation of the Indian economy. Due to its favorable agroclimatic conditions, Karnataka has emerged as one of India's top states for the production of cut flowers, especially in the Malnad area. Due to their commercial worth in both domestic and foreign markets, flowers like gerberas, roses, and anthuriums have become more well-known. However, growing flowers in a controlled, scientific environment requires a large investment in technology, trained labor, and infrastructure. Growers still confront several production and marketing obstacles in spite of the State Horticulture Department's and the Ministry of Agriculture's attempts to organize flower exhibits, offer training programs, and subsidize planting materials. Uncertainty and decreased profitability for producers are caused by problems like high input costs, insect and disease infestations, inadequate cold storage, subpar transportation facilities, market price changes, and erratic demand.

The goal of this study is to identify and analyze the issues that producers of Gerbera in the Malnad region experience. It ranks the production and marketing barriers based on field surveys and offers suggestions for institutional and governmental changes that would support Karnataka's

floriculture industry.

Objectives of the Study:

1. To identify the major production-related problems faced by Gerbera growers in the Malnad region of Karnataka.
2. To examine the marketing challenges such as price fluctuation, demand irregularity, and lack of infrastructure in flower cultivation.

Growers of cut flowers in Karnataka, particularly those in the study areas, must cope with a number of issues from planting through harvesting and sale. Although the Ministry of Agriculture and State Horticulture Department support the flower farmers by supplying them with planting materials at discounted prices, conducting trainings, exposure tours, and flower exhibitions, the flower producers still face issues and limitations. The following major issues that the chosen growers encountered have been mentioned:

1. The high cost of pesticides and fertilizers:

Fertilizers are a crucial input that must be supplied to the soil in order to meet the soil's nutrient needs and produce the greatest number of cut flowers possible. Most important products have hefty price tags to match their value. Growers often can't improve the quality of their crops for sale because the fertilizers and insecticides they need are too expensive.

2. A rise in production costs:

When compared to conventional or open culture, the cost of production for controlled and scientific flower cultivation is enormous. Investment in labour and capital is included in the cost of manufacturing. Commercial cultivation under controlled conditions requires a good financial investment. The cost of production is further driven up by increases in the price of fertilizers and other chemicals used as insect and disease repellents. Another significant expense associated with the manufacture of cut flowers is the investment in human labour, as both production and marketing require human resources.

3. Seasonal variations in output:

Although farmers may produce cut flowers all year long due to controlled production conditions, they still have to deal with production that varies seasonally. Summer is the season when more cut flowers are produced than in winter. High domestic demand during the winter months causes production to slow down, which results in a fall in quantity produced that cannot satisfy the enormous demand. Because production changes with the seasons, stores have to import flowers at a higher cost during the winter.

4. Disease and pest infestation:

Cut flowers are susceptible to pests and diseases just like other horticultural and agricultural crops. The fungi and pests that harm roses include botrytis, root and foot rot, aphids,

and green caterpillars; for Anthurium, spider mites, thrips, bacterial blight, etc.; and for Gerbera, white fly, leaf miners, thrips, mites, root rot, crown rot, and powdery mildew.

5. Lack of scientific training and knowledge:

To carry out the production and marketing processes, modern farming under poly homes demands scientific knowledge and training. Due to increased competition, it is essential for both the grower and the merchant to handle flowers with scientific and technological understanding in order to preserve their quality and prolong their vase life. The growers must employ scientific knowledge in the form of soil fertility tests, timing of watering, application of the correct dosage of chemical fertilisers and pesticides, timing and method of harvesting, etc. The growers have received training from skilled and trained individuals in the form of seminars and demonstrations. These programmes, nevertheless, don't seem enough for a newly emerging industry. Lack of technical know-how, post-harvest handling training facilities, and strong support from the state government discourage some beneficiaries, leading to an increase in sick units, especially among rose and anthurium growers. Additionally, due to their insufficient understanding of commercial floriculture production, the quality of the cut flowers produced is below the norm of sale and the plant is frequently plagued by pests, diseases, and fungi.

6. Low-quality seed supply:

It is challenging to find high-quality tissue culture plants on the local market, aside from the genetically modified seeds, bulbs, or root stock that the government offers to the producers at a discounted rate. Even when they are, they are typically quite expensive, making it impossible to sell the fruit at the going rate on the local market.

7. Inadequate cold storage:

For the growers, a lack of cold storage is another issue. After being harvested, cut flowers must be stored in a cold environment for a predetermined period of time to eliminate farm heat before being packaged and transported to the market. Due to the distance between the field and the cold storage as well as the high cost associated with storing the flowers, not all producers have access to the cold storage that has been established in Bengaluru. Additionally, the state's airport and train terminal lack the cold storage that exporters require.

8. Inexperience labour:

Laborers with little to no experience of growing flowers are a problem for producers. These labourers, who primarily work for meagre wages or were formerly employed in agriculture, enter the floriculture industry not because they have experience but because they fit in with the team wherever there is a job opening. The farmers need to teach them step-by-step, starting with the basics of farming and moving on to planting, watering, pruning, harvesting, and so on.

9. Underdeveloped transportation and communication

Flowers are highly perishable, so an effective transportation system from the point of production to the market is essential to their marketing success. For moving cut flowers from the field to the domestic market, there is no refrigerated van. Cut flowers are transported by trains and buses that lack cold storage or a separate cabin for very perishable items to neighbouring states. Delivery times are frequently hampered by ineffective and poor transportation methods, which also harm the flowers and diminish their quality. A market glut and, occasionally, a lack of supply are also caused by poor communication between manufacturers and retailers.

10. Inadequate market infrastructure:

The flower industry lacks certain market infrastructure, such as a common auction center, wholesale market, grading system, standardization, proper packing facilities, store houses, refrigerated vans, etc., in contrast to other floriculture industries both inside and outside the nation. A major barrier for a product that is highly perishable in nature is the lack of marketing intelligence that can operate as a middleman between producers and retailers and explore markets for the producers. Instead, producers search their own markets for their products.

11. Minimal market value:

Local flower growers compete with one another to sell their very perishable produce quickly, especially during the summer, which forces them to set cheaper prices. Growers that do not rely on subsidies and instead purchase planting materials at market prices are typically the ones affected by low prices. Because there is no authority to control and regulate the price of cut flowers, the market price is cheap.

12. Inadequate market knowledge:

The Malnad region's horticulture department promotes numerous flower competitions and exhibits in local newspapers to draw competitors and buyers. To inform growers and other cut flower industry middlemen about the marketing environment, no news bulletin, magazine, or other type of advertising aid focused solely on floriculture has yet to be created. No farmer has placed radio or print advertisements to draw buyers, with the exception of one or two shops. Growers and retailers learn the knowledge by going to the market or by speaking with other people they know. Information obtained in this manner is unreliable because it occasionally contains errors.

13. Price fluctuation

In the Malnad region, there is no authority that may set the price of cut flowers. It is carried out by the growers themselves, but it is inconsistent and varies throughout the year. Prices for cut flowers fluctuate according to supply and changes in domestic demand. Sometimes, growers are at the mercy of retailers and customers who would sell their produce at a low price in order to get rid of it before it ripens in the field due to a lack of standardization or an unregulated price

structure.

14. Unusual demand:

As the flower industry grows, production rises, there is an excess of supply compared to demand, and customer demand becomes unpredictable as consumers seek high-quality goods with a range of colours, good textures, interior environment compatibility, extended vase lives, and delicious scents. Domestic demand for cut flowers is volatile, moving along with price fluctuations. The demand is lowest in the summer and at its highest in the winter, when most events take place. Because flowers remain in production and cannot be stopped even when demand is low, irregular demand has been a source of concern for growers and sellers. As a result, there is a significant mismatch between market supply and demand.

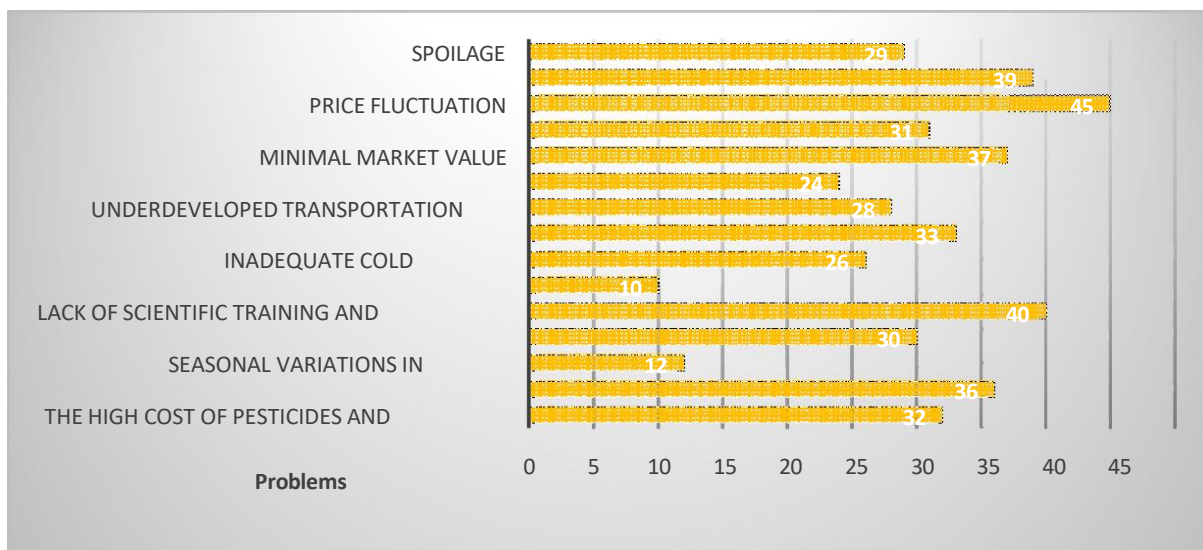
15. Spoilage:

Because they are highly perishable, cut flowers have a high rate of deterioration if they are not marketed at the appropriate time. The rate of spoilage is higher in the summer than in the winter. Retailers experience the highest rate of spoilage since they purchase in bulk from producers, which ultimately leads to a high rate of spoilage when domestic demand is low and worsens their issue.

Table: 1.1 Problems faced by Gerbera growers in production and marketing in Malnad region:

Problems	Samples (%)	Rank
The high cost of pesticides and fertilizers	32(45.71)	VII
A rise in production costs	36(51.43)	V
Seasonal variations in output	12(17.14)	XIV
Disease and pest infestation	30(42.86)	IX
Lack of scientific training and knowledge	40(57.14)	II
Low-quality seed supply	10(14.29)	XV
Inadequate cold storage	26 (37.14)	XII
Inexperience labour	33(47.14)	VI
Underdeveloped transportation and communication	28(40)	XI
Inadequate market infrastructure	24(34.29)	XIII
Minimal market value	37(52.86)	IV
Inadequate market knowledge	31(44.29)	VIII
Price fluctuation	45(64.29)	I
Unusual demand	39(55.71)	III
Spoilage	29 (41.42)	X
Total no. of respondents	70	

Source: Field survey



Graph: 1.1 Problems faced by Gerbera growers in production and marketing in Malnad region:

The major problem of Gerbera growers is found to be Price fluctuation of their produce. The price of Gerbera cut flower ranges from Rs. 5.33 to Rs.7.46 which is lowest compared to the other four selected cut flowers. All the respondents i.e., 64.29 growers

(table 1.1) have expressed their view on Price fluctuation. 52.86 low market price for their produce. Irregular demand (55.71%) and lack of cold storage (37.14%) were some other major problems confronting Gerbera growers. only 14.29% of the respondents have expressed on lack of quality seeds and 17.14% on seasonal change in production. Since seeds are imported from other parts of the country and distributed to the growers, majority of the selected growers are satisfied with its quality of production and productivity.

Findings

1. Price fluctuation was identified as the most severe constraint, reported by 64.29% of growers. Lack of a regulated market system leads to inconsistent and unstable flower prices.
2. Lack of scientific training and knowledge (57.14%) limits growers' ability to adopt modern practices in pest management, fertilizer use, post-harvest handling, and marketing.
3. Irregular demand (55.71%) and low market value (52.86%) further reduce profitability, particularly during off-seasons and in the absence of demand forecasting.
4. High production costs (51.43%) due to rising prices of fertilizers, pesticides, labour, and infrastructure investments create financial strain.
5. Inexperienced labour (47.14%) poses challenges in technical activities such as pruning, harvesting, and post-harvest care, affecting flower quality.

6. Inadequate market knowledge (44.29%) prevents farmers from accessing real-time price information, leading to dependency on middlemen.
7. Disease and pest infestations (42.86%) remain a persistent issue, with crops like Gerbera, Anthurium, and Rose highly susceptible to fungal and insect attacks.
8. Inadequate cold storage (37.14%) and underdeveloped transport facilities (40%) result in post-harvest losses and quality deterioration during marketing.
9. Spoilage (41.42%) was reported as a major concern, particularly in summer months when demand falls but production continues.
10. Issues like low-quality seeds (14.29%) and seasonal variation in output (17.14%) were considered minor, as most growers are satisfied with the quality of imported planting materials provided by the government.

Suggestions

To overcome the challenges and improve the economic viability of flower cultivation, the following measures are recommended:

1. Market and Price Stabilization

- Establish regulated flower markets and auction centres in key floriculture zones.
- Introduce a minimum support price (MSP) mechanism or floor price policy for flowers to protect growers from distress sales.
- Develop contract farming models linking growers with exporters, event managers, and retail chains to ensure stable demand and pricing.

2. Infrastructure Development

- Expand cold storage facilities and refrigerated transport systems at production hubs, airports, and railway stations.
- Improve rural road connectivity for timely transport of highly perishable flowers.
- Create flower processing and value-addition units (dry flowers, essential oils, floral decorations) to reduce wastage.

3. Training and Capacity Building

- Organize regular hands-on training for farmers on scientific cultivation, integrated pest management (IPM), post-harvest handling, and marketing.
- Introduce vocational training programmes to develop a pool of skilled labour specialized in floriculture.
- Strengthen horticulture extension services by deploying trained officers at the local level.

4. Access to Quality Inputs

- Ensure timely supply of high-quality seeds, bulbs, and tissue culture plants at affordable rates through government and certified private agencies.
- Provide subsidized fertilizers, pesticides, and bio-control agents to reduce input costs.

5. Market Intelligence and Promotion

- Develop a digital platform or mobile app providing real-time information on flower prices, demand forecasts, and buyer contacts.
- Promote publicity campaigns, flower exhibitions, and international trade fairs to expand domestic and export markets.
- Encourage formation of farmer producer organizations (FPOs) or cooperatives to enhance bargaining power and collective marketing.

6. Policy Support

- Introduce crop insurance schemes for floriculture to cover risks of pest attacks, spoilage, and price crashes.
- Provide low-interest loans and subsidies for polyhouse construction, cold storage, and refrigerated transport.
- Encourage public-private partnerships (PPPs) in floriculture infrastructure development and marketing.

Conclusion

Despite Karnataka's floriculture's increasing potential, especially in the Malnad region, cut flower growers still face a number of challenges that impede sustainable production and selling, according to the study. Price volatility was the most urgent issue among the main ones, followed by a lack of scientific understanding, erratic demand, low market value, and growing manufacturing costs. The difficulties are made worse by limitations including insufficient cold storage, subpar transportation, the prevalence of pests and diseases, and inexperienced labor.

Comprehensive actions are needed to address these issues, such as the creation of well-organized flower markets, auction houses, cold storage facilities, and effective transportation networks. Growers can adjust to shifting market conditions by bolstering farmer training through ongoing capacity-building initiatives, guaranteeing access to high-quality planting material, and creating trustworthy market information systems. Furthermore, increasing farmer income and guaranteeing the sector's long-term viability will require state support for price stabilization and floriculture export promotion.

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