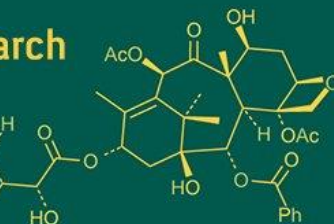
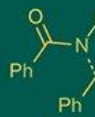


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K Subhash Chandra
Department of Agricultural
Economics, College of
Agriculture, PJTAU,
Hyderabad, Telangana, India

K Suhasini
Department of Agricultural
Economics, Senior Professor,
PJTAU, Hyderabad,
Telangana, India

Md. Ali Baba
Department of Agricultural
Economics, Assistant
Professor, PJTAU,
Hyderabad, Telangana, India

C Padma Veni
Department of Entomology,
Principal Agricultural
Information Officer,
Agricultural Information and
Communication Centre and
PJTAU Press, ARI Campus,
PJTAU, Hyderabad,
Telangana, India

Corresponding Author:
K Subhash Chandra
Department of Agricultural
Economics, College of
Agriculture, PJTAU,
Hyderabad, Telangana, India

Constraints of marigold production and marketing in Telangana: Insights from farmer perspectives

K Subhash Chandra, K Suhasini, Md. Ali Baba and C Padma Veni

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Abstract

A survey was conducted during 2024-25 in the Rangareddy and Vikarabad districts of Telangana to assess production and marketing constraints in marigold (*Tagetes* spp.) cultivation. A total of 120 farmers from twelve villages were selected through proportionate stratified random sampling, and responses were analyzed using Garrett ranking. Among production constraints, high cost of seeds was most critical (Mean Score 83.33, Rank 1), followed by unfavorable weather (72.67, Rank 2), overall high input cost (71.67, Rank 3), and pest and disease incidence (68.00, Rank 4). Marketing constraints were dominated by low harvest price (94.25, Rank 1), price fluctuations (62.01, Rank 2), and lack of storage (59.55, Rank 3). The study highlights the need for subsidized inputs, better irrigation, pest management, and market infrastructure to enhance profitability and sustainability.

Keywords: Marigold, production constraints, marketing constraints, Telangana, farmer perspectives, Garrett ranking

Introduction

Marigold (*Tagetes* spp.) is an auspicious flower and is used in temple rituals, believed to attract wealth. It is also valued for its medicinal, agricultural, and commercial applications. Traditionally, it has been used to treat ailments related to the intestines, stomach, liver, skin and eyes. In Chinese medicine, it helps reduce heat, alleviate colds, and eliminate phlegm. Agriculturally, marigolds serve as natural pest repellents, controlling aphids, whiteflies, and worms, while also attracting beneficial insects such as ladybugs, predatory insects, and butterflies. Hence, it is used as a trap crop, either amidst or as a boundary crop for commercial crops, as it serves as an alternative host for pests. Industrially, they are used as an essential for perfumes, garlands, landscaping, cut flowers, and as a source of carotenoid pigments, widely used in poultry feed to enhance the colour of egg yolk. The global demand for marigolds, for lutein and carotenoid-rich oleoresins, is growing due to applications in dietary supplements, pharmaceuticals, natural food colourants, and skincare products, reflecting their economic and cultural significance across multiple sectors (Jafar, 2010) [4].

In India, floriculture covers 382.634 thousand hectares as of 2024-25, with marigold alone accounting for 255 thousand hectares and yielding 1,754 thousand metric tons of loose flowers. Major marigold-producing states include Karnataka, Tamil Nadu, Andhra Pradesh, West Bengal, and Maharashtra. In Telangana, marigold cultivation spans 1,468 acres, yielding approximately 8,045 metric tons of flowers (Department of Horticulture, Telangana, 2024) [3]. The crop is in high demand during festivals such as Bathukamma, Dussehra, and Diwali, as well as weddings and other cultural events, offering farmers lucrative business if sowing is adjusted so that the harvesting coincides with peak market periods. However, challenges such as price fluctuations, reliance on flower imports from neighbouring states, wastage due to perishability, and limited value-added utilisation are coming in the way of its profitability. Considering its cultural, economic, and horticultural potential, marigold is a promising crop for peri-urban farmers around Hyderabad, which warrants the present study, focusing on an investigation into production and marketing constraints from the farmers' point of view (Telangana's Marigold Dilemma, 2024) [6].

Literature Review

Previous studies have documented production and marketing problems affecting flower growers in India. High input costs, climate vulnerability, pest and disease pressure, labour shortages, and lack of institutional support have long constrained profitability (Raut & Sarawgi, 2019; Ajaees, 2025)^[5, 2]. Marketing issues, ranging from distress selling due to perishability to absence of minimum support prices and poor infrastructure, echo across horticultural supply chains in India (Adoption Level of Marigold Cultivation, 2018)^[1].

Methodology

A proportionate stratified random sampling technique was used for selection at both the village and farmer levels for the study. Rangareddy and Vikarabad were purposefully selected since these are the major marigold-growing districts, and in recent past, there has been a significant fluctuation in marigold area. Five mandals from Rangareddy and two mandals from Vikarabad with the highest marigold area were selected. Two villages were selected from each mandal based on highest area. Hence, twelve villages were chosen for the study. In each village, a list of marigold-growing farmers was obtained; among them, 10 were selected at random, making a total of 120 farmers from 12 villages. Detailed interviews were conducted with selected marigold growers in two districts of Telangana. Responses were analysed using the Garrett ranking technique to identify, quantify, and prioritise production and marketing constraints.

Results

Production Constraints

The foremost production constraint identified was the high cost of seedlings (Mean Score 71.38, Rank 1) as it is customary to buy new seedlings grown only by purchasing hybrid seeds every year. Farmers emphasised that rising seed prices significantly increase production expenses, limiting affordability and access to quality planting material. This constraint was particularly severe for smallholders who struggle to invest in high-quality or hybrid varieties despite promising market returns (Ajaees, 2025)^[2].

The incidence of insect pests and diseases ranked second (Mean Score 63.62, Rank 2). Farmers reported frequent attacks by pests such as thrips and aphids, along with fungal diseases like powdery mildew, which severely affect crop growth and flower quality. Continuous pest pressure necessitated repeated pesticide applications, thereby increasing costs and posing health and environmental concerns.

The failure of crops due to unfavourable weather conditions was the third major constraint (Mean Score 60.18, Rank 3). Unpredictable rainfall, prolonged dry spells, and sudden temperature fluctuations resulted in reduced yields and crop failures, discouraging consistent cultivation under open-field conditions.

The drainage problem ranked fourth with a mean Score of 54.17. Poor drainage and water stagnation during heavy rains were reported to damage root systems, resulting in lower productivity, particularly in low-lying fields.

The high input cost other than seeds ranked fifth (Mean Score 51.5, Rank 5). The indiscriminate application of fertilisers and insecticides has resulted in increased expenditure on fertilisers and pesticides, causing a

significant financial burden on farmers and thereby narrowing their profit margins, discouraging sustained investment.

The high cost of labour due to scarcity was another major concern (Mean Score 36.83, Rank 6). Labour shortages during peak seasons, driven by migration and alternative employment opportunities, forced farmers to pay higher wages, further escalating production costs.

The unsuitable soils and low yields constraint (Mean Score 35.38, Rank 7) reflected the challenges faced in areas with poor soil fertility and structure, which limited plant growth and productivity despite proper management.

Lastly, the high rate of interest offered by private money lenders (Mean Score 30.96, Rank 8) emerged as a significant financial constraint. Many farmers, lacking access to institutional credit, depended on informal lenders who charged exorbitant interest rates, trapping them in cycles of debt, making them financially vulnerable.

Table 1: Production Constraints Ranked by Garrett Mean Score

Sl. No.	Constraints	Mean Score	Rank
1	High cost of seedlings	71.38	1
2	Incidence of insect pests and diseases	63.62	2
3	Failure of the crop due to unfavourable weather conditions	60.18	3
4	Drainage problem	54.17	4
5	High input cost other than seed	51.5	5
6	high cost of labour due to scarcity	36.83	6
7	Unsuitable soils/low yields	35.38	7
8	High rate of interest offered by the Pvt. money lenders	30.96	8

Marketing Constraints

Marigold farmers encountered several marketing challenges that significantly impacted profitability and sustainability. The foremost constraint was the perishability of produce (Mean Score 69.45, Rank I). Due to the highly perishable nature of marigold flowers, farmers were compelled to sell their harvest immediately after collection, often at lower prices. The lack of adequate post-harvest handling and cold storage infrastructure further intensified distress sales, leading to considerable economic losses (Ajaees, 2025)^[2].

The uncertain marketing conditions resulting in low price of farm produce ranked second (Mean Score 62.69, Rank II). Farmers reported frequent fluctuations in market demand and price, making it difficult to predict income and plan cultivation. The absence of organized markets and price stabilization mechanisms further exposed them to middlemen exploitation.

The absence of price guarantee emerged as the third major issue (Mean Score 48.19, Rank III). Without assured or minimum support prices, farmers faced high price volatility, particularly during peak harvest seasons when supply exceeded demand.

The lack of storage facility (Mean Score 47.6, Rank IV) was another critical problem. Farmers lacked access to proper storage infrastructure, forcing them to sell produce immediately, regardless of prevailing market rates. This constraint was closely linked with post-harvest losses and reduced bargaining power.

The high transportation cost ranked fifth (Mean Score 45.01, Rank V). Transportation charges were especially burdensome for small-scale farmers located far from major

flower markets. Poor road connectivity and lack of collective marketing further added to logistics expenses. The lack of marketing information (Mean Score 41.33, Rank VI) hindered farmers' ability to make informed decisions regarding timing of sales, price trends, and potential buyers. Most relied on local traders for price signals, often resulting in lower returns.

Finally, the lack of awareness about market linkages (Mean Score 37.73, Rank VII) was a key institutional constraint. Many farmers were unaware of direct marketing channels, contract farming options, or cooperative marketing systems that could enhance price realization and reduce dependency on intermediaries.

Table 2: Marketing Constraints Ranked by Garrett Mean Score

Sl. No.	Constraints	Mean Score	Rank
1	Perishability	69.45	I
2	Uncertain marketing conditions resulting in low price of farm produce	62.69	II
3	No Price Guarantee	48.19	III
4	Lack of storage facility	47.6	IV
5	High transportation cost	45.01	V
6	Lack of marketing information.	41.33	VI
7	Lack of awareness about market linkages	37.73	VII

Discussion

Interviews with farmers revealed their complex reality: high upfront costs, weather uncertainties, regular pest attacks, and labour shortages collaborated to limit marigold profitability (Ajaees, 2025) ^[2]. Many smallholders felt discouraged by escalating expenses, unsure if future seasons would justify the investment.

Marketing, meanwhile, was dominated by anxiety over unstable prices and distress selling. The lack of cold storage and MSP left farmers vulnerable to market whims. Transportation bottlenecks and limited institutional support undermined income security and confidence (Adoption Level of Marigold Cultivation, 2018) ^[1].

Farmers repeatedly asked for government action: subsidized inputs, wider access to pest management, better irrigation and drainage, and stronger market information systems. There was a consensus that only coordinated support and infrastructure would make marigold a truly sustainable and rewarding crop.

Conclusion

Marigold growers in Telangana face multiple, interconnected challenges. Input cost pressures, climate risk, pests and diseases, and/labour scarcity threaten production, while volatile prices and weak market infrastructure impede profitable sales. These challenges can only be overcome by combining farmer-centric support, infrastructure development, capacity building and innovative policy, ultimately empowering cultivators with market and production information, which drives the region's floral economy.

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