

# PETALS OF PROGRESS

*Unlocking Pakistan's Floriculture Sector*



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# PETALS OF PROGRESS:

## UNLOCKING PAKISTAN'S FLORICULTURE SECTOR

Profitability, losses, climate resilience, market access and enterprise opportunities

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## LIST OF ABBREVIATIONS

| Abbreviation / Term | Full Form                          |
|---------------------|------------------------------------|
| IGC                 | International Growth Centre        |
| MSME                | Micro, Small and Medium Enterprise |
| PKR                 | Pakistani Rupee                    |
| SME                 | Small and Medium Enterprise        |
| US\$                | United States Dollar               |
| Gulkand             | Rose preserve (rose petal jam)     |
| Mandi               | Wholesale market / trading yard    |
| Phool               | Flower                             |
| Tehsil              | Sub-district administrative unit   |



# EXECUTIVE SUMMARY

## CONTEXT AND PURPOSE

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Pakistan's floriculture sector holds significant potential for rural income growth, enterprise development, and agricultural diversification in Punjab. This study examines the economic performance, constraints, and opportunities of flower production in Chunian and Pattoki tehsils (Kasur District) and Depalpur tehsil (Okara District) — together forming one of the largest and most commercially active floriculture clusters in Pakistan. Primary data were collected through structured interviews with approximately 300 flower growers, traders, and processors, complemented by focus group discussions and qualitative fieldwork.

## WHAT THE STUDY FINDS

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The evidence reveals a sector that is commercially active and economically meaningful, but consistently underperforming relative to its potential. Four interconnected constraints are holding the sector back:

- **Uneven profitability;** Average returns across the sector are positive, but a significant proportion of growers operate with weak or negative margins. Performance varies sharply by flower type, farm size, and location. Tuberose and rose growers outperform gladiolus and marigold growers on a per-kanal basis, and larger farms realise substantially higher net revenues than small holdings.
- **Systematic value leakage;** Much of the sector's weakness lies not in production volume, but in value lost between harvest and final sale. Approximately 85 percent of growers sell through middlemen or contractors, limiting price realisation and reducing incentives for quality investment. Weak harvesting, sorting, packaging, transport, and storage practices erode market value before flowers reach buyers.
- **Climate stress;** Higher climate risk exposure is directly associated with weaker economic outcomes. Most farms rely on canal water and tubewells, while adoption of water-saving technologies remains limited. Growers in Chunian reported being able to irrigate only every eight days, against the agronomically preferred four-day cycle. Climate shocks compound post-harvest losses when logistics and storage systems are too weak to buffer disruptions.
- **Thin enabling conditions;** Formal credit products aligned with the approximately six-month floriculture production cycle are largely absent, forcing growers into costly informal arrangements. Training provision is geographically concentrated in Lahore, while a proposed training facility in Pattoki — the natural production hub — has not been funded. Together, these gaps constrain investment in quality, technology, and value addition.

“We have no canal water, so we use ground water. We can water our flowers after 8 days only; it would be better if we could water them every four days.” — Small sharecropping farmer, Chunian

## EARLY SIGNS OF OPPORTUNITY

Despite these constraints, the study identifies emerging pockets of enterprise activity that signal broader potential. Garland making already provides supplementary income for women and household-based labour, while helping absorb lower-grade material and reduce post-harvest waste. A small-scale gulkand (rose preserve) unit operated by a local farmer demonstrates that basic agro-processing can be established with modest capital. These examples suggest that simple value-addition activities could spread rapidly if access to finance, technical guidance, and market linkages improves. The sector is already moving, but without the support systems needed to scale.

### Core finding: a value-capture challenge, not a production challenge

- The sector's primary constraint is not lack of activity or low production- it is the failure to retain and build value along the chain
- Improving how much value is preserved from harvest to sale, and how much additional value can be created through processing and enterprise, will generate faster and broader gains than expanding area or volume alone
- The Pattoki-Kasur cluster is the natural anchor for an integrated upgrading initiative, given its production concentration, existing trading infrastructure, and density of growers

## FIVE INVESTMENT PRIORITIES

The evidence converges on five priorities for sector strengthening. These are not sequential — they are mutually reinforcing and most effective when pursued together within a cluster-based programme:

- **Cold chain and logistics;** Collective cold-storage and refrigerated transport in the Pattoki–Chunian cluster to reduce post-harvest loss and raise farm-gate price realisation.
- **Climate-smart production;** Drip irrigation, water-saving technologies, and climate-resilient variety adoption, supported by strengthened extension services in Kasur and Okara.
- **Market access and buyer linkages;** Grower-level market information systems and collective marketing arrangements to reduce dependence on middlemen and retain more value at farm level.
- **MSME and value-addition;** Enterprise development support for rose water, dried flowers, garlands, gulkand, and related processing activities, including matching grants and business development services.
- **Integrated finance and training;** Short-term seasonal credit products through formal channels, and a dedicated floriculture training centre in Pattoki to build technical capacity close to where it is needed.

## STRATEGIC PATHWAY

The strongest development pathway for Pakistan's floriculture sector is an integrated cluster-upgrading model centred on the Pattoki–Kasur zone. Stand-alone interventions — in training, credit, or logistics in isolation — are unlikely to produce durable change. Cumulative gains are achievable only where improvements in logistics, finance, market linkages, training, and value addition reinforce each other within a defined geographic cluster.

A future floriculture programme should therefore be designed not as a narrow production-support scheme, but as an integrated sector-upgrading initiative with three mutually reinforcing strategic pathways:

- **Value Retention;** Reduce the gap between farm-gate and market value through better post-harvest handling, packaging, cold storage, transport, and market coordination.
- **Value Addition;** Support MSME development in rose water, dried flowers, garlands, gulkand, and related enterprises to diversify income, absorb lower-grade material, and create rural employment.
- **Resilient Upgrading;** Combine climate-smart production, improved irrigation, tailored finance, training, and cluster-based infrastructure investment to build long-term sector resilience in designated production zones.

# PETALS OF PROGRESS

## UNLOCKING PAKISTAN'S FLORICULTURE SECTOR

Profitability, losses, climate resilience, market access and enterprise opportunities

### 1. WHY FLORICULTURE MATTERS

Floriculture is one of the most commercially promising high-value agricultural sub-sectors available to small and medium producers in Punjab. It combines significant income potential with relatively small land requirements, making it relevant for inclusive rural growth, household income diversification, and local employment generation. The sector also provides meaningful opportunities for women's participation and for labour-intensive enterprise development around handling, marketing, and processing.

Beyond fresh flowers, the sector's value-added potential is substantial. Products such as rose water, essential oils, dried flowers, ornamental plants, and garlands can absorb lower-grade material, reduce waste, and generate new rural enterprise opportunities — making floriculture relevant not only to agricultural policy but also to SME development and livelihood diversification.

The sector is not marginal in scale.

Approximately 2,500 growers and more than 1,000 wholesalers and retailers are active in the flower business in Pakistan. Punjab accounts for the largest share of national flower area at approximately 4,450 hectares, while Pakistan exported 434 tonnes of cut flowers in 2017, primarily to Germany and the United Arab Emirates. Rose and gladiolus together account for about 80 percent of total national flower production; Pakistan's floriculture exports remain modest but show emerging growth potential. Exports of fresh cut flowers have generally remained below USD 1 million annually over the past decade but increased from about USD 0.63 million in 2019 to approximately USD 1.6 million in 2023. When broader floriculture products (including plants and bulbs) are considered, total exports exceeded USD 3 million by 2024.

Despite this improvement, Pakistan's global market share remains very small, constrained by weak cold chain systems, quality inconsistencies, and limited market integration. Key export destinations include Egypt and Middle Eastern markets such as the UAE, Saudi Arabia, and Kuwait, with Dubai serving as a major trading hub. Pattoki, in District Kasur, remains a central production and supply hub, and the sector holds significant untapped export potential if supply chain and quality systems are strengthened.

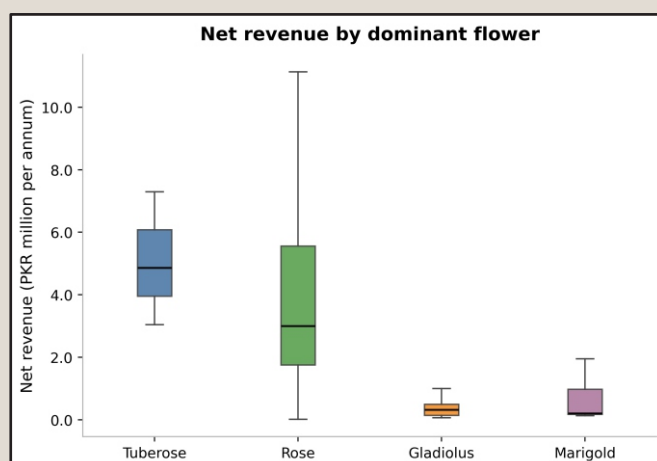


Figure 1: Net revenue by dominant flower

### 2. STUDY SCOPE AND METHODOLOGY

This study covers Chunian and Pattoki tehsils in Kasur District and Depalpur tehsil in Okara District, Punjab. These locations form one of the largest and most commercially active floriculture clusters in the province. The Pattoki-Kasur cluster at ~1,200 ha represents 11–17% of the national total, confirming its outsized strategic importance. flower area, covering approximately 1,200 hectares and producing between 10,000 and 12,000 tonnes annually.

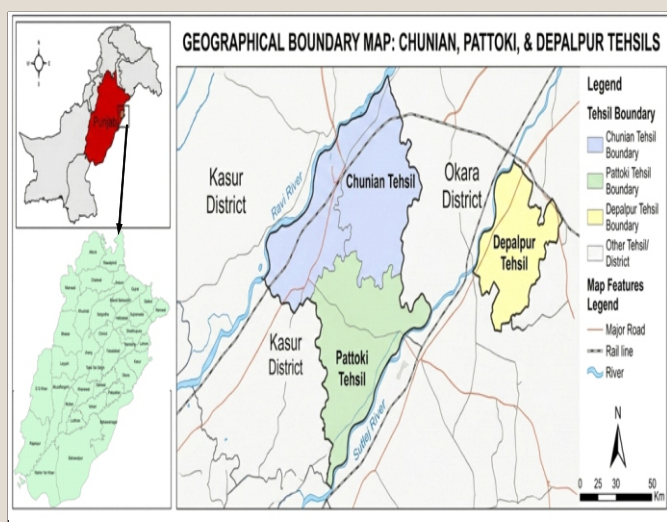


Figure 2. Geographical location of the study area.

Primary data were collected through structured interviews with approximately 300 flower growers, traders, and processors across the study area. The fieldwork covered input use, production economics, post-harvest practices, market linkages, climate exposure, and access to credit and training. Qualitative data from field interviews and focus group discussions complement the quantitative analysis.

*“Pattoki in Punjab hosts the largest phool mandi, while Lahore and Karachi remain critical nodes in the national distribution network.”*

### 3. COMMERCIAL PERFORMANCE AND UNEVEN OUTCOMES

The evidence shows positive average returns at the sector level but substantial internal variation. While profitability margins are positive on average, a meaningful proportion of producers continue to operate with weak or negative returns. Performance differences are pronounced across flower types, farm sizes, and locations, indicating that the sector cannot be assessed through a single-crop or aggregate lens.

#### Value Leakage: A Systemic Constraint

A central finding is that much of the sector's weakness lies not in production volume alone, but in systematic value leakage between farm and final sale. Flowers are highly perishable and quality-sensitive; weak harvesting, sorting, packaging, transport, and storage practices can

rapidly erode market value or cause outright loss. Most growers continue to sell through middlemen or contractors, accounting for approximately 85 percent of sales — a market structure that reduces bargaining power, weakens incentives for quality upgrading, and limits the grower's share of realised value.

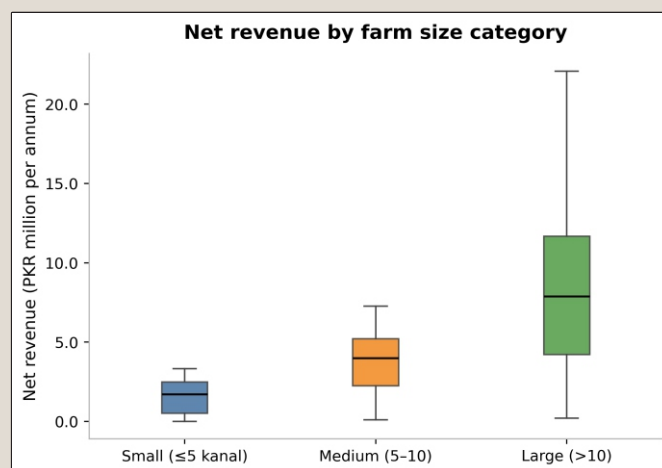


Figure 3: Net revenue by farm size

#### Key finding: Where value is being lost

- Dependence on middlemen (approx. 85% of sales) constrains price realisation
- Weak post-harvest systems erode quality before products reach markets
- Climate shocks interact with transport failures to amplify losses
- Disparities in returns across farm sizes indicate systemic rather than individual failure



Figure 4(a) : Flower handling and transportation

Total area under floriculture in Pakistan is estimated at approximately 6,880 to 10,800 hectares, depending on the source and year of estimate .while official MNFSR horticulture publications place the figure closer to 10,000–11,000 hectares



Figure 4(b) : Flower handling and transportation

*“We have no canal water, so we use ground water. We can water our flowers after 8 days only; it would be better if we could water them every four days.” — Small sharecropping farmer, Chunian*

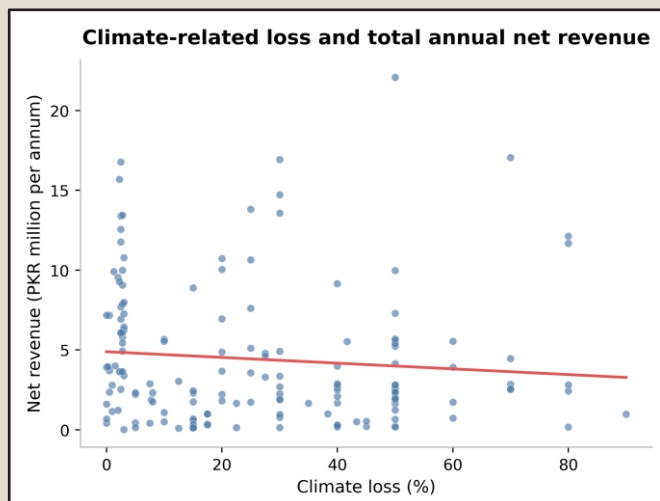


Figure 5: Climate impact on flower revenues-(Medium Farm)

## 4. CLIMATE AND MARKET RISKS

Climate stress is a binding economic constraint in floriculture because it simultaneously affects production volume, visible quality, freshness, and final market price. Analysis confirms that higher climate risk exposure is associated with weaker economic outcomes — establishing resilience as a core commercial issue rather than a peripheral environmental concern.

Field interviews reveal that most farms rely on a combination of canal water and tubewells, while adoption of water-saving technologies such as drip irrigation remains limited due to upfront cost and weak support systems. Water scarcity directly constrains irrigation frequency: growers in Chunian reported being able to irrigate only every eight days, compared with the agronomically preferred four-day cycle. This illustrates how climate vulnerability and infrastructure deficits reinforce each other.

Post-harvest losses interact with climate stress to compound economic damage. When transport, market timing, and storage are poorly coordinated — as is common in the study area — flowers lose value rapidly during and after heat or water stress events. Farm-level adaptation measures can reduce losses, but remain insufficient where wider logistics, infrastructure, and support systems are not simultaneously strengthened.

## 5. ENABLING CONDITIONS: TRAINING, FINANCE, AND ENTERPRISE SUPPORT

The report's evidence points clearly to a sector that is constrained not by lack of productive potential or entrepreneurial interest, but by the weakness of enabling conditions. Access to credit and training is low relative to the requirements of a quality-sensitive, commercially oriented sub-sector, and this constrains investment in improved handling, protected cultivation, storage, and value-added activities.

### Finance

Formal financial products tailored to small floriculture growers are largely absent. Most producers require only modest, short-term seasonal credit — aligned with the approximately six-month floriculture production cycle — yet such products remain unavailable through formal channels. Interviewees reported reliance on informal credit arrangements at higher cost, reducing profitability and limiting investment capacity.

## Training and Advisory Services

Training provision is uneven and geographically concentrated. A dedicated floriculture training centre at Bagh-e-Jinnah in Lahore has operated for several years, while plans to establish a comparable facility in Pattoki — the logical hub given its production concentration — have not been funded. The absence of localised advisory support limits the uptake of improved production techniques, quality management practices, and climate-smart adaptation measures.

## Value Addition: Early Evidence

Some value-addition activity is already emerging at the local level. Garland making provides supplementary income, particularly for women and household-based labour, while helping absorb lower-grade flower material and reduce post-harvest waste. A small-scale gulkand (rose preserve) unit operated by a local farmer demonstrates that basic processing can be established with relatively modest capital and technical requirements. These examples suggest that simple processing and packaging activities could spread more widely if access to finance, technical guidance, and market linkages improves.

*“Garland making represents a modest but practical first step up the value chain— it provides supplementary income, particularly for household-based labour and women, and helps reduce post-harvest losses.”*

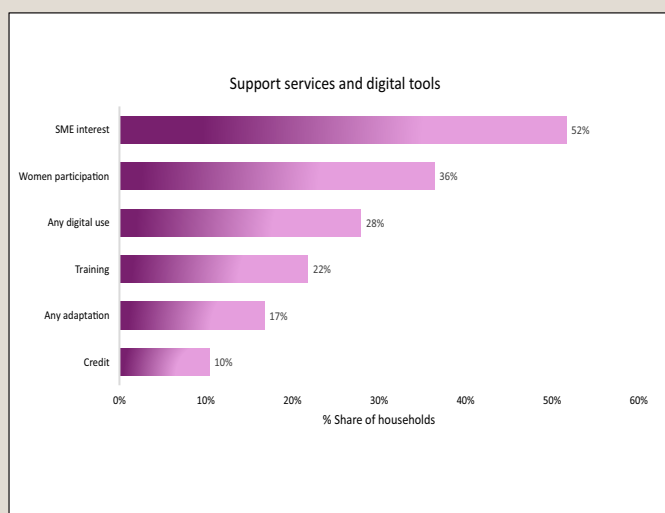


Figure 6: Demand for MSME, training, and credit

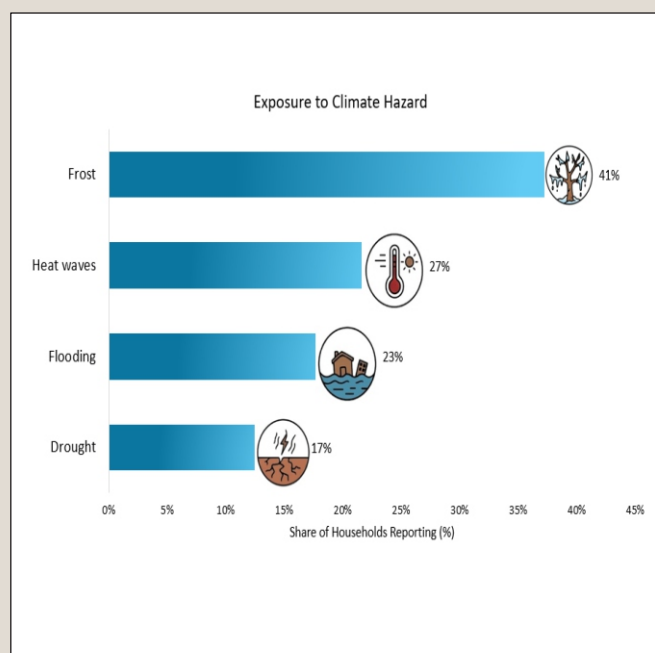


Figure 7: Climate hazards — Exposure to climate shocks (% of households reporting)

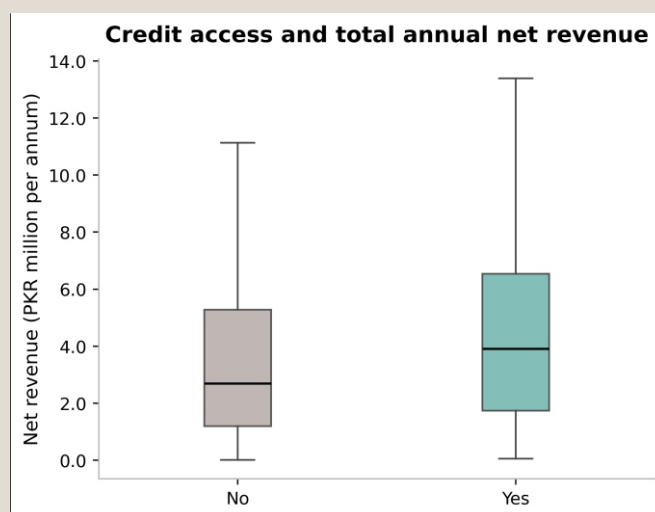


Figure 8: Impact of credit access on farm net revenue (Medium Farm)

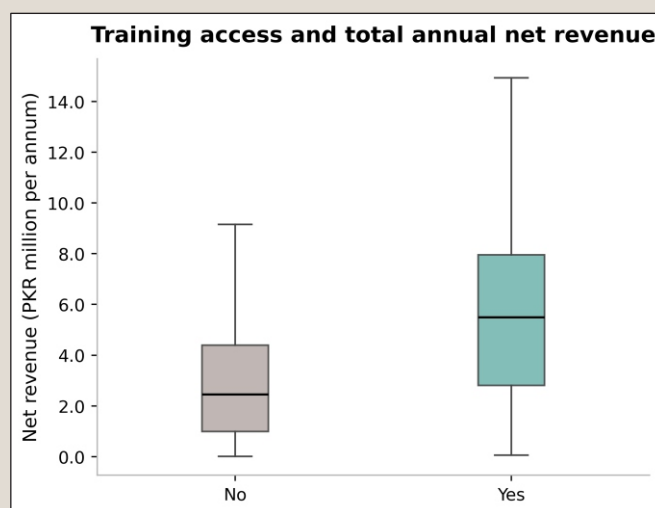


Figure 9: Impact of training access on farm net revenue (Medium Farm)

## 6. INVESTMENT PRIORITIES AND RECOMMENDATIONS

The evidence converges on five priority areas for sector strengthening. These priorities follow directly from the study's core findings: uneven profitability, post-harvest value leakage, climate exposure, weak enabling systems, and underdeveloped enterprise pathways. A narrow production-support approach will have limited and short-lived impact unless it is linked to broader upgrading of markets, infrastructure, and enterprise systems.

| Priority Area                  | Key Actions                                                                                                                                     |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Cold Chain & Logistics         | Invest in collective cold-storage facilities and refrigerated transport in Pattoki–Chunian cluster; strengthen market-timing coordination       |
| Climate-Smart Production       | Promote drip irrigation and water-saving technologies; expand climate-resilient variety adoption; strengthen extension reach in Okara and Kasur |
| Market Access & Buyer Linkages | Develop grower-level market information systems; support collective marketing arrangements to reduce middlemen dependency below 85%             |
| MSME & Value-Addition          | Support enterprise development in rose water, dried flowers, garlands, and gulkand; provide matching grants and business development services   |
| Integrated Finance & Training  | Design short-term seasonal credit products (approx. 6-month cycle) through formal channels; establish a floriculture training centre in Pattoki |

## 7. FUTURE OPPORTUNITIES AND PATHWAYS

Pakistan's floriculture sector has genuine commercial promise, and the Pattoki–Kasur cluster is well-positioned as a development anchor. Current performance is held back not by a lack of activity, but by weak value capture, thin enabling systems, and insufficient investment in the systems that connect production to markets.

The most promising development pathway is an integrated sector-upgrading model — one that combines cluster-based infrastructure investment, enterprise incubation, practical and accessible finance, and sustained support for quality preservation. Stand-alone interventions in any single area (training only, credit only, or logistics only) are unlikely to produce durable transformation. The strongest cumulative gains are achievable where improvements in logistics, training, finance, market linkages, and value addition reinforce each other within a defined geographic cluster.

### Strategic Pathways

- Minimise value losses through improved packaging, better storage, coordinated transport, and stronger market information systems.
- Promote SMEs engaged in rose water, dried flowers, garlands, and related processing to utilise lower-grade outputs and generate rural employment.
- Integrate climate-smart production, efficient irrigation, tailored financing, capacity building, and cluster-based infrastructure investment within designated production zones.

# PETALS OF PROGRESS

*Unlocking Pakistan's Floriculture Sector*



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