



## Project Profile

# FLORICULTURE IN LEH

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## 1. INTRODUCTION

Floriculture involves the cultivation of flowering and ornamental plants for gardens, floral decorations, perfumes, landscaping, and the commercial cut-flower industry. With India's growing urbanization, rising disposable incomes, booming event and wedding industries, and the need for green aesthetics, floriculture has emerged as a highly profitable agribusiness.

Floriculture is emerging as a promising and highly relevant sector for Ladakh, offering significant economic, environmental, and aesthetic benefits. The region's unique agro-climatic conditions—marked by high altitude, cool temperatures, and long sunshine hours—are ideal for cultivating high-value flowers such as gladiolus, lily, marigold, chrysanthemum, and even exotic varieties like tulips and peonies. These flowers fetch premium prices in domestic and export markets due to their superior color, longer shelf life, and limited availability. Floriculture is especially important in Ladakh as it requires relatively small land areas, can be practiced under protected structures like polyhouses, and provides a viable livelihood option for women, youth, and smallholder farmers. Additionally, the demand for flowers in religious rituals, weddings, eco-tourism setups, and the hospitality sector in Leh and Kargil is steadily rising. The sector also holds environmental significance as flower cultivation can enhance biodiversity, support bee-keeping, and contribute to green landscaping in arid and fragile ecosystems. With growing interest in eco-tourism, home gardens, and boutique floristry, coupled with government support through schemes like MIDH (Mission for Integrated Development of Horticulture), floriculture in Ladakh presents a sustainable, low-carbon, and income-generating opportunity perfectly suited for the region's future.

This project proposes the establishment of a high-value floriculture farm producing cut flowers, loose flowers, ornamental plants, and nursery saplings through open-field and protected cultivation techniques.

## 2. INDUSTRY OVERVIEW

The global floriculture market is valued at approximately USD 55 billion in 2023 and is growing at a CAGR of 6%.

In India, the floriculture sector is expanding significantly, with the country being the second-largest producer of flowers after China.

Government support through subsidies, growing export opportunities, and domestic consumption (weddings, festivals, corporate decor) make floriculture one of the most promising agricultural sectors.

## 3. PRODUCTS AND THEIR APPLICATION

Floriculture in Ladakh yields a wide variety of commercially valuable products that serve both aesthetic and functional purposes across multiple sectors. The primary products include cut flowers such as gladiolus, lily, tulip, chrysanthemum, marigold, and rose, which are cultivated for sale in wholesale flower markets, retail florists, and wedding or event decoration services. These flowers are in high demand for personal gifting, religious

ceremonies, hotel décor, and official functions, particularly in urban centers like Leh, Srinagar, and Delhi. Loose flowers like marigold and chrysanthemum are also used extensively for garland making and festival decorations. In addition to cut flowers, floriculture supports the production of ornamental potted plants, popular in landscaping projects, homestays, offices, and government buildings. Dried flowers and floral crafts such as potpourri, bouquets, and handmade greeting cards represent another value-added product segment, with strong appeal to tourists and gift buyers. Furthermore, medicinal and aromatic flowers like lavender and calendula offer applications in the herbal cosmetics and wellness industries. Petals from select flowers are also used in natural dye extraction, perfumery, food garnishing, and traditional herbal teas. With its expanding range of products and their growing demand in local, regional, and export markets, floriculture offers both economic diversity and employment opportunities for Ladakh's farmers and artisans.

#### **4. DESIRED QUALIFICATIONS FOR PROMOTERS**

Promoters of a floriculture venture in Ladakh should ideally possess a formal educational background in horticulture, agriculture, floriculture, or agribusiness management, which provides foundational knowledge in crop planning, plant nutrition, disease control, and post-harvest handling. Practical experience with nursery management, greenhouse operations, and protected cultivation techniques is especially valuable, as flower farming in Ladakh often relies on polyhouse infrastructure to overcome climatic limitations and extend growing seasons. A solid understanding of flower market trends—both domestic and international—is critical, including familiarity with export standards such as grading, stem length, packaging norms, and phytosanitary compliance. In addition, knowledge of branding, e-commerce platforms, and digital marketing strategies is essential to promote the products in urban retail flower markets, wedding and event sectors, and direct-to-consumer channels. Understanding cold-chain logistics is also vital to preserve the freshness and quality of cut flowers during transport to distant markets. Above all, a genuine passion for sustainable agriculture, creativity in floral design, and the ability to connect with lifestyle trends are key traits that will drive innovation and customer engagement in the competitive floriculture industry. These qualifications will enable the promoter to build a scalable, profitable, and environmentally responsible floriculture business tailored to Ladakh's unique ecosystem.

#### **5. BUSINESS OUTLOOK AND TRENDS**

The business outlook for floriculture in India—particularly in emerging regions like Ladakh—is highly positive, driven by shifting consumer preferences, technological advancement, and market diversification. Domestically, there is a rising demand for fresh flowers due to the growing scale of weddings, religious festivals, social events, and corporate functions. Marigolds, roses, and chrysanthemums are especially sought-after for garlands, stage decorations, and rituals, while premium cut flowers like carnations, gerberas, lilies, and orchids are increasingly used in formal bouquets and gifting. On the global front, India's export potential for floriculture

is steadily growing, particularly for long-stemmed roses and other greenhouse-grown flowers, which meet international standards when produced under controlled conditions. This has increased the adoption of protected cultivation techniques such as polyhouses and net houses, even in colder regions like Ladakh, where climate-controlled infrastructure allows extended growing seasons and quality enhancement.

The surge in online flower delivery services—driven by platforms like Ferns N Petals, BloomsVilla, and independent florists—has created new opportunities for direct-to-consumer sales, subscription models, and customized floral packaging. Premiumization is another key trend, with growing market interest in organic, exotic, and designer floral varieties that command higher margins. Consumers today are willing to pay more for certified, eco-friendly, and aesthetically packaged flowers. Beyond fresh flowers, value-added segments like dried flower crafts, potpourri, floral decor items, and essential oils from aromatic flowers such as lavender and rose are gaining popularity in urban lifestyle and wellness markets. Moreover, floral tourism, such as tulip gardens, lavender fields, and flower festivals, is emerging as a niche that not only boosts flower sales but also promotes rural tourism and community engagement. Collectively, these trends underscore the strong and multifaceted growth potential of floriculture as a sustainable, high-value agribusiness in Ladakh and beyond.

## **6. MARKET POTENTIAL AND MARKETING ISSUES**

### **Market Potential**

- Huge wedding and religious event consumption.
- Growing urban demand for landscaping and home décor flowers.
- Expanding flower exports to Europe, Japan, and the UAE.
- Government incentives are boosting protected farming and exports.

### **Marketing Issues**

- Highly perishable nature requiring fast logistics.
- Seasonal price crashes due to oversupply.
- Quality standards are critical for exports.
- Dependence on intermediaries lowers farmer margins.

There is a need for investment in branding and cold chain to maximize profits.

## **7. VARIETIES OF FLOWERS PLANNED**

### **Cut Flowers:**

Roses, Gerberas, Carnations, Chrysanthemums, Lilium (Lilies).

### **Loose Flowers:**

Marigold, Jasmine, Tuberose (Rajnigandha).



**Ornamental Plants:**

Hibiscus, Bougainvillea, Petunias, Zinnias.

**Exotic Flowers (Advanced Phase):**

Orchids, Anthuriums, Gladiolus.

## **8. RAW MATERIAL REQUIRED**

Floriculture requires a combination of plant material, organic inputs, and basic infrastructure to ensure healthy flower cultivation and post-harvest handling. The most essential raw material is high-quality planting material such as certified flower seeds, bulbs, corms, or saplings of varieties like marigold, gladiolus, rose, lily, chrysanthemum, and tulip. These must be selected based on Ladakh's agro-climatic suitability and market demand. Growing media such as a well-balanced mix of soil, compost, sand, coco peat, and vermicompost is required to ensure proper root development and aeration. Other inputs include organic fertilizers, bio-pesticides, micronutrients, and natural growth promoters to enhance plant health in an eco-friendly manner. For protected cultivation, polyhouse or shade net structures are required, along with irrigation systems like drip or sprinkler sets. Humidity controllers, temperature monitors, and simple greenhouse ventilation equipment may also be needed in Ladakh's cold and dry environment. For post-harvest processing, items like floral shears, packaging materials (kraft paper, floral nets, plastic sleeves), cold storage boxes, and preservatives (like floral foam or solutions) are necessary to preserve freshness and appeal. In the case of value-added products, raw materials like essential oil extraction units, glass bottles, craft material, and dyes may also be needed.

### **a. MANUFACTURING (CULTIVATION & POST-HARVEST) PROCESS**

The floriculture process begins with preparing land or containers, depending on whether open field or protected cultivation is adopted. The soil is enriched with compost or organic manure, and the selected planting material (such as seeds, bulbs, or cuttings) is sown or transplanted during the ideal seasonal window. Regular irrigation, pruning, weeding, and pest/disease monitoring are conducted throughout the crop cycle. For polyhouse-based cultivation, controlled conditions of temperature, humidity, and ventilation are maintained to encourage uniform flowering and better yield, particularly for exotic flowers like lilies or roses. As the plants mature, flowering begins within 45 to 90 days, depending on the variety. Flowers are harvested early in the morning or evening to retain moisture and freshness, and immediately graded based on size, stem length, color, and bloom quality.

Post-harvest, the flowers are cleaned, sorted, and trimmed before being wrapped in eco-friendly floral sleeves or bundled into market-ready packs. Delicate varieties are stored in cool, shaded rooms or cold chambers until dispatch. Select blooms are dried in shade or solar dryers for value-added products and used for potpourri, garlands, or pressed flower crafts. In the case of essential oil production, fresh petals (like rose or lavender)

are steam-distilled to extract aromatic compounds, which are bottled, labeled, and stored for sale. Final products are marketed through local florists, traders, weddings/events planners, direct retail outlets, or online platforms.

## — FLORICULTURE CULTIVATION & HARVEST PROCESS FLOW —

### **Land/Bed Preparation**

- ✓ Soil plowing, leveling, and organic enrichment
- ✓ Raised beds or container setup, depending on the variety



### **Selection of Seeds, Bulbs, or Cuttings**

- ✓ Choose region-appropriate flower varieties (e.g., gladiolus, tulip, marigold)
- ✓ Use certified, high-germination planting material



### **Sowing or Transplanting**

- ✓ Direct sowing or nursery transplantation in prepared beds/polyhouse trays
- ✓ Maintain optimal spacing and depth for uniform growth



### **Irrigation & Organic Fertilization**

- ✓ Use drip or sprinkler irrigation for water efficiency
- ✓ Apply compost/vermicompost, natural growth promoters



### **Pest & Disease Management**

- ✓ Monitor regularly for aphids, mildew, and fungal infections
- ✓ Apply neem oil, bio-pesticides, or eco-friendly treatments



### **Flowering Phase**

- ✓ Flower buds develop and bloom under monitored light and temperature
- ✓ Remove damaged or early blooms to promote uniform quality



### **Harvesting at the Right Bloom Stage**

- ✓ Harvest during early morning or evening for freshness
- ✓ Use sharp tools and gentle handling to avoid stem damage



### **Grading & Sorting**

- ✓ Grade flowers by stem length, bloom size, and color quality
- ✓ Bundle accordingly for wholesale, retail, or export



### **Cleaning & Trimming**

- ✓ Remove leaves below the water line
- ✓ Trim stems to even length, remove wilted petals



### **Packaging & Cold Storage**

- ✓ Wrap in floral sleeves, boxes, or eco-paper
- ✓ Store in cool, dark rooms or cold chains until dispatch

## **9. STEP-BY-STEP CULTIVATION PROCESS**

1. Land preparation and soil enrichment.
2. Nursery raising and procurement of planting material.
3. Field or polyhouse transplanting.
4. Drip irrigation and fertigation setup.
5. Pest and disease management (IPM practices).
6. Harvesting based on flower maturity and quality.
7. Post-harvest handling: Sorting, grading, pre-cooling.
8. Packaging and transportation to market hubs or export centers.

## **10. SERVICE OFFERINGS**

- Production and sale of fresh-cut flowers.
- Loose flower supply for religious and festive markets.
- Sale of potted ornamental plants for landscaping.
- Nursery operations: Seedlings and saplings for retail.
- Floral decoration services for events (optional).
- Agri-tourism (flower farm tours and workshops).

## 11.TARGET CUSTOMER SEGMENTS

- Wholesale flower markets (mandis).
- Retail florists and flower boutiques.
- Wedding and event planners.
- Hotels, resorts, shopping malls, corporate offices.
- Exporters of cut flowers.
- E-commerce flower delivery platforms.

## 12. LOCATION POTENTIAL

- **Cooler Climate Regions:**  
Himachal Pradesh, Uttarakhand, Ladakh, for Roses, Carnations.
- **Tropical Regions:**  
Karnataka, Tamil Nadu, Gujarat, and West Bengal for Marigold, Jasmine, and Tuberose.
- **Protected Cultivation Regions:**  
Throughout India, Polyhouse/Shade Net structures are used for year-round production.
- **Site Requirements:**  
Well-drained loamy soil, availability of irrigation water, and proximity to major market hubs.

## 13. MANPOWER REQUIREMENTS (It may vary as per requirement)

Position	Number of Staff	Monthly Salary (₹)	Annual Cost (₹)
Farm Supervisor	1	25,000	3,00,000
Flower Cultivation Workers	3	10,000	3,60,000
Packaging and Sorting Workers	1	12,000	1,44,000
Marketing and Sales Executive	1	20,000	2,40,000
Administrative Assistant	1	15,000	1,80,000
<b>Total</b>	<b>9 Staff</b>		<b>12,24,000</b>



## 14. IMPLEMENTATION SCHEDULE

Activity	Timeline
Land Preparation and Setup	Month 1
Procurement of Planting Material	Month 2
Polyhouse/Shade Net Construction	Month 1–2
Nursery Raising and Field Transplanting	Month 2–3
First Harvest and Sales Launch	Months 4–5
Expansion to Processing/Exports	After 1st Year

## 15. COST OF PROJECT

Particulars	Estimated Cost (₹ Lakhs)
Land Development and Soil Enrichment	3.00
Planting Material (Seeds, Saplings)	2.00
Polyhouse/Shade Net Structure (1,000 sq m)	8.00
Drip Irrigation System	2.00
Farm Equipment and Tools	1.50
Packing and Cold Storage Setup	3.00
Marketing and Branding	1.00
Licensing and Certifications	0.50
Working Capital for the Initial 6 Months	4.00
<b>Total Estimated Project Cost</b>	<b>25.00 Lakhs</b>

## 16. MEANS OF FINANCE

Source	Amount (₹ Lakhs)	Percentage (%)
Promoters' Equity Investment	10.00	40%
Bank Term Loan	15.00	60%
<b>Total</b>	<b>25.00</b>	<b>100%</b>

## 17. REVENUE STREAMS

- Sale of fresh-cut flowers to florists and wholesalers.

- Loose flower sales during religious festivals.
- Sale of potted plants to landscaping projects.
- Seedlings and nursery sales.
- Flower tourism and photography events.

## 18. PROFITABILITY CALCULATION

Particulars	Year 1 (₹ Lakhs)	Year 2 (₹ Lakhs)	Year 3 (₹ Lakhs)
Revenue	30.00	45.00	65.00
Operating Expenses	20.00	26.00	35.00
EBITDA	10.00	19.00	30.00
Interest on Loan	2.00	1.80	1.50
Depreciation	2.00	1.80	1.50
Profit Before Tax (PBT)	6.00	15.40	27.00
Income Tax (@25%)	1.50	3.85	6.75
Net Profit After Tax (PAT)	4.50	11.55	20.25

## 19. BREAK-EVEN ANALYSIS

Particulars	Value
Annual Fixed Costs	₹17.64 Lakhs
Average Revenue per Flower Stem	₹8–₹15
Minimum Annual Production Required	~4–5 lakh stems
Break-Even Revenue Needed	₹25.00–₹27.00 Lakhs

## 20. MARKETING STRATEGY

- Regular supply contracts with mandis and wholesalers.
- Direct sales to hotels, event organizers, and retailers.
- Online marketing via Instagram, Facebook, and a branded website.
- Participation in flower exhibitions and fairs.
- Farm tourism promotion for extra income during blooming seasons.

## 21. RISK FACTORS

- Weather extremes are damaging open-field flowers.
- Crop losses due to pests, diseases, or logistics delays.
- Sudden market price drops during oversupply seasons.
- Challenges in maintaining export quality standards.

**Risk Mitigation:**

Protected cultivation, cold-chain management, contract farming, and branding differentiation.

## **22. ENVIRONMENTAL BENEFITS**

- Greening of barren lands and urban landscapes.
- Promotion of organic flower farming for safe religious use.
- Floriculture contributes positively to aesthetics, mental health, and biodiversity.

## **23. FUTURE OPPORTUNITIES**

- High-end export market for exotic flowers.
- Essential oil and organic cosmetics production.
- Development of floriculture-based rural tourism.
- Cold chain-linked export hubs in major cities.

## **24. GOVERNMENT APPROVALS REQUIRED**

- FSSAI License (if processing floral extracts, oils).
- GST Registration for flower sales.
- MSME/Udyam Registration to avail of government subsidies.
- MIDH/NHB Subsidy Approvals for polyhouses and protected cultivation.
- Export Registration (for selling to international markets).

## **25. TRAINING CENTRES AND COURSES**

- Indian Agricultural Research Institute (IARI), New Delhi
- Indian Institute of Horticultural Research (IIHR), Bengaluru
- Krishi Vigyan Kendras (KVKs) in respective districts
- State Horticulture Missions and NHB Training Programs

**Key Training Topics:**

Floriculture cultivation techniques, post-harvest management, protected cultivation methods, and export documentation.

The Swayam portal (link: <https://swayam.gov.in/>) can also be accessed for enhanced learning on business commerce, accounting, production, marketing, and areas of entrepreneurship.

Entrepreneurship programs that help run businesses successfully are also available from institutes like the Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

## **Disclaimer**

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