

## GERANIUM: VALUABLE ORNAMENTAL CROP FOR ECONOMICAL IMPORTANCE

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### ABSTRACT:

Geranium (*Pelargonium spp.*) is a versatile and highly desirable ornamental crop, renowned for its vibrant flowers, attractive foliage, and adaptability to diverse environments for growth. With its wide range of species and cultivars, geranium has become an essential crop in commercial floriculture of horticultural industry, offering significant economic benefits to growers, breeders, and related businesses. This article highlights the economic importance of geranium as an ornamental crop, uses and utilization, exploring its market demand and production trends. We can examine the crop's value chain, from cultivation and marketing and sales, emphasizing its contribution to local and global economies. Our analysis underscores the potential of geranium to generate income, create employment opportunities, and stimulate rural development, making it a valuable crop for sustainable economic growth.

### Introduction

The growing need for beautiful and adaptable plants has led to a distinguished expansion in the ornamental horticulture sector in recent years. Geranium (*Pelargonium spp.*) is one of the most valuable and economically capable decorative crops. Geraniums are native to South Africa and have been grown for generations because of their beautiful flowers, eye-catching leaves, and ability to adapt to a variety of conditions. The ideal temperature for cultivation sub-tropical regions is 6°C to 24°C and it can withstand the

temperature up to 42°C in plains. The soil should be well drained and rich in organic matter and acidic in reaction with a pH 5.5 to 6.0 is suitable and an elevation ranging from 1000 - 2400 m with an annual rainfall of 100 to 150 cm is distributed throughout the year is ideal. Geranium provides farmers, breeders, and consumers with an extensive range of possibilities, as it comprises over 280 species and several hybrids. The leaves are strongly rose scented. In India it has been mostly cultivated well in temperate, subtropical and tropical climate. The number of species have

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been introduced and grown in gardens, some of which are found in the Nilgiri hills. The purpose of this article is to discuss the economic significance of geranium as an ornamental crop by looking at market demand, production patterns, and possible sources utilization. We hope to illustrate the importance of geranium as a valuable commodity for sustainable economic growth and development by showcasing the crop's value chain and its contribution to local and global economies. Geranium botanically (*Pelargonium graveolens* (L) *Hervitt.*) belongs to family Geraniaceae and it comprises of 280 species is a one of the important valuable ornamental plants which also having rich medicinal properties and having more marketing value in the floriculture industry. They can be found in both tropical and temperate regions of the world, with the eastern Mediterranean region having the highest diversity.

#### **How its distributed all-over world and in india:**

Geranium oil is primarily exported from India to Europe, North America, and the Middle East, where it is used in different industries like cosmetics, perfumes, and aromatherapy. Other major producers include China, South Africa, and Madagascar, contributing to a global market trade.

Cultivation Regions India's favourable climate allows for extensive cultivation of geraniums, with states like Tamil Nadu, Uttarakhand, and Himachal Pradesh being prominent producers and making the geraniums highly required in both domestic and international markets.

#### **Importance of cultivation:**

The main importance of cultivation of geranium in large quantity because of its utilization in the cosmetic and perfumery industries and the major components in the geranium oil are geraniol and citronellol which can blend very well with the other perfumes, as compared other essential oil the cost of geranium oil is very high.

#### **USES AND UTILIZATION: (PRODUCTION IMPORTANCE):**

**For Ornamental Uses:** Geraniums are widely used as borders, bedding plants, and container plants. Because of their attractive foliage and flowers, they are utilized in both public and private landscaping.

#### **Aromatherapy with essential oils:**

Fragrances, cosmetics, and perfumes all include geranium essential oil and the oil is utilized for its mood-enhancing and stress-relieving therapeutic qualities.

**Pigment & Dye:** Fabrics and textiles can be naturally dyed with geranium flowers. Paint and cosmetic product pigments are made from flowers.

## Insecticide and Termite

**Management:** To keep insects and vermin under control, geranium oil is used as a pesticide. In homes and gardens, the oil is used to ward off insects and vermin.

## The Food and Culinary Sector:

Desserts, beverages, and sauces can all benefit from the flavour of geranium leaves and flowers. Herbal tea is prepared from geranium leaves.

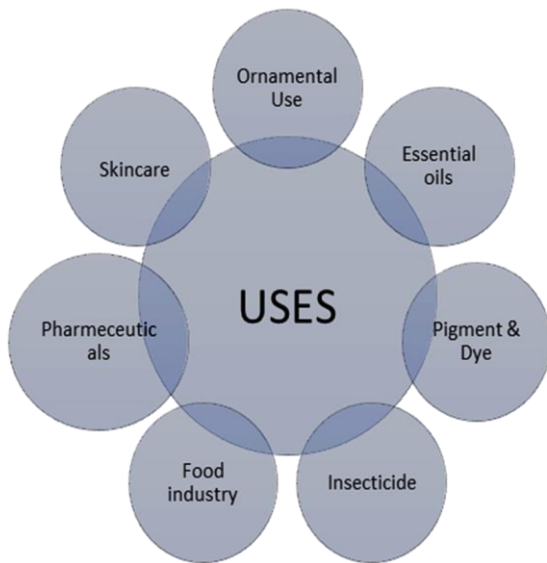


Fig: Utilization of Geranium in different of ways

Mozzies and other insects are repelled by the oil. Geranium oil is used to alleviate pain and swelling because of its anti-inflammatory qualities.

**Skincare:** Due to its antibacterial and anti-inflammatory qualities, geranium oil is utilized in skincare products. The oil's scent and skin-benefitting properties are utilized in cosmetics.

Geraniums are utilized as companion plants in order to ward against pests and draw in beneficial insects. By stabilizing the soil and preventing soil erosion, geraniums are used.

## CULTURAL IMPORTANCE:

Geraniums hold rich cultural significance across various regions. In Europe, particularly in Germany and France, they symbolize friendship and loyalty, often adorning gardens and window boxes as part of a tradition to beautify homes and public spaces. In South Africa, indigenous Pelargoniums are woven into local culture,



Geranium Plants



Geranium oil



Tablets

## Pharmaceutical and Medical

**Applications:** Cuts, wounds, and skin irritations can all be treated with geranium oil.

serving both medicinal purposes and symbolizing resilience in challenging environments, while their vibrant blooms

enhance local crafts and art. Artists and writers have long drawn inspiration from geraniums, associating them with domesticity and nostalgia, often conveying themes of tranquillity in still-life paintings. Symbolically, geraniums represent love, appreciation, and comfort, with different colours signifying various meanings red for passion, pink for friendship, and white for innocence. Their adaptability and low maintenance make them popular in gardens worldwide, where they play a role in promoting biodiversity and attracting pollinators, highlighting their ecological importance.

#### MARKET VALUE:

Geraniums, particularly *Pelargonium* species, are popular in India for their ornamental value and essential oil extraction. The trade value of geraniums has seen significant growth due to increasing demand for natural fragrances and oils in cosmetics, aromatherapy, and traditional medicine. The essential oil extracted from geranium leaves is highly valued, often priced based on quality and purity. As in the recent years, the price for high-quality geranium oil can range from ₹3,000 to ₹5,000 per kilogram, and the factors influenced by seasonal changes in yield and global market trends. The increasing trend towards organic products has also positively impacted geranium cultivation and trade. The global market for these products (Geranium

oil) is estimated to be worth USD 1.3 billion. Due to its widespread use as a flavouring component in food and beverage goods, geranium is thought to have a \$500 million industry. With about 93.5 percent of the world's production in 2022, China was by far the largest producer of geranium oil. The geranium oil market in India is expected to increase by \$1.12 thousand at a compound annual growth rate (CAGR) of 2.78% from 2023 to 2028. Market size for geranium essential oil worldwide: projected to expand at a compound annual growth rate (CAGR) of 8.5% from 2020 to 2025, reaching USD 1.4 billion. Cost per kilogram: \$50–150 USD, depending on origin and quality. The market value of Geranium can fluctuate based on factors like: variations in customer preferences, weather-related impacts on agricultural production, seasonal demand and discoveries of new uses.



**CONCLUSION:**

Geranium (*Pelargonium* spp.) emerges as a valuable ornamental crop with significant economic importance, particularly in India, where its cultivation is supported by a favourable climate and increasing market demand. The adaptability of geraniums ranging from decorative landscaping plants to essential oil sources has been made them a basis of the floriculture industry. With several species, their ornamental demand is supplemented by their applications in cosmetics, aromatherapy, and traditional medicine, where high-quality geranium oil can fetch prices between ₹3,000 to ₹5,000 per kilogram. As global trends shift toward organic and sustainable products, the geranium market is projected to grow, presenting profitable opportunities for farmers and business sectors. Furthermore, geranium cultivation adopts rural development by creating jobs and enhancing local economies. Culturally significant across various regions, geraniums not only enrich gardens but also contribute to biodiversity and ecological health. As such, they represent a promising pathway for sustainable economic growth, highlighting the need for cultivation and market development.