

Rose is a beautiful, fragrant, and profitable flower

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Abstract

Roses, renowned as symbols of love, friendship, and peace, hold a significant position in floriculture worldwide. Revered as the "King of Flowers" in India and the "Queen of Flowers" in Europe, their historical importance in India dates back to the distillation practices mentioned in ancient Ayurvedic texts. The rising demand for roses in cut-flower markets has amplified their cultivation, alongside a thriving export industry for byproducts like rose oil, water, and Gulkand. Successful rose cultivation relies on optimal conditions, including sandy loam soil, temperate climates, and structured planting and irrigation practices. Seasonal pruning, precise fertilization, and pest management further enhance yields. Diverse rose varieties, from Hybrid Tea to Miniatures, are tailored for specific climatic and aesthetic needs. With their profound cultural and economic value, roses remain irreplaceable in conveying emotions and sustaining livelihoods in the global floral industry. This comprehensive guide highlights technical insights for effective rose cultivation and management.

Introduction

Rose is an important flower in the world of flowers. The rose is a symbol of love, friendship, and peace. Gardens are considered as incomplete without roses. Rose is known as "King of Flowers" in India and "Queen of Flowers" in European countries (Garland, 2005). In India, the cultivation of roses is developed with the distillation of roses as mentioned by Charaka in Ayurveda around 100 AD. Rose has been grown in India since ancient times, but the demand for rose has skyrocketed in two decades. Rose is enlisted as top ranked in cut flower (Leuset al., 2018). The byproducts of roses are rose oil, rose water, perfume Gulkand, and other products and having exporet value and exported to many countries. Due to popularity of cut flowers, rose cultivation is gained importance and more focus is emphazed to grow. Details of important technical information for successful rose cultivation are provided below:

- Red rose indicates courage and respect.
- White rose stands for innocence, purity and humility.
- Orange rose symbolizes passion and desire.

- Pink rose for perfect happiness, grace and sweetness.
- All light colour roses for friendship.
- Wild roses for simplicity.

So, we can say no other gifts replaces roses in conveying love in the society.

Land and Climate

Sandy loam soil with a high organic matter content and pH 6 to 8. Rose flower yields are higher in temperate climates, but they can also be grown successfully in subtropical climates. At the time of flowering, temperature 15-20°C and relative humidity 60% are required (Ozturk and Bastas, 2022). The best time for planting of roses is sunny, open and protected by hedge, fence or building against strong winds.

Layout

Rose is beautiful flower; hence, it should be displayed in an attractive manner. The beds can be made of formal design (square, rectangular, circular, U shaped or L shaped) or informal designs keeping the style of layout of the garden in view.

Farm Preparation

Make circular pits of size 2 feet in diameter and 2 feet in depth at a distance of 2-3 feet apart one month before planting the saplings. Keep one foot of soil aside from the top of the pit while digging, in which 5 kg. Fill the pits with rotten cow dung manure mixed with water. For the cultivation of cut flowers of roses, planting plants close by gives more yield. For this, the distance of the plant should be kept one foot and the distance of the row should be two feet.

Planting Season

Roses can be planted in most parts of India from September to March, but the best time is from late September to mid-November; in hilly areas, it can also be planted in February-March (Harp et al., 2019).

Rose Varieties

Table-1 displays the improved rose varieties.

Classes of Rose	Colour	Varieties
Hybrid Tea (Flower blooms on long canes, larger in size and good keeping qualities)	White	Jawahar, Flamingo, Virgo, Pusa Sonia, Poomina, Priyatama, Apollo, Golden Giant, Golden Master Piece
	Pink	President, Confidence, Picture, Radhakrishnan, Mrinalini, Mridula, Dr. B. P. Pal
	Dark Crimson	Happiness, Avon, Challs, Malarin, Crimson Glory
	Orange	Supar star, Montezuma, Fragrant cloud
	Blue Colour Blend	Tata Century, Bluemoon, Bluedilite, Nilambari
Floribundas (flowers produce in cluster and medium size)	White	Kiss of Fire, American Heritage, Double Delight, Tahiti
	Yellow	Ice berg, Summer snow, Himangini, Margret Merril
	Pink	All gold, Sonaro, Sunflare, Gold bunny
	Blue Colour Blend	King author, Queen elizabeth, Junior miss, Belinda
Polyantha (Plants small, flowers small in size but in large clusters)	Red	Neel nilambar
	Pink	Banjaran, Charisma, Madhura, Parfait
	Yellow	
Miniature (plant small leaves, small flowers)	Red	Anjama, Reshmi
	Pink	Swati
	Yellow	Dark Beauty
Climbers (Long arching canes and need support to keep upright)	Red	Cupecake, Rosemarin
	Pink	Delhi Scarlet, Yellow doll
	Orange	Sun Blaze, Starina, Centennial
Climbers (Long arching canes and need support to keep upright)	White	Delhi white pearl, Prosperity, Lamarque
	Pink	Snow girl, Salmon pink

Manure and Fertilizer

Take 5 kg after pruning in September and October. 20-30 g Gower's gully rotten manure Nitrogen, phosphorus, and potash at a rate of 20g per square metre. Enter the interest rate. Stay in the spring. Only add 10 g of nitrogen and 10 g of potash per plant in January to get good flowers. In the last week of November, flowers contain 0.3% zinc sulphate, 0.3% magnesium sulphate, and 0.3% manganese. In addition, spray during the month of February (Mathivanan, 2013).

Irrigation

Irrigation is critical to the successful production of roses. Roses should be irrigated with respect to condition of the land and temperature. In general, irrigation should be done every 5 days in the summer and every 10 days in the winter. Irrigation is required following the application of manure to the plants. During the rainy season, proper drainage of the rose planted area (Rahul et al., 2021).

Plant Preparation

From mid-September to mid-November, plant 10-15 cm cuttings of Rosa indica varieties Odorant, Noniana, or Multiflora in the beds for root plant preparation. In January & February, the practice of budding in root plant is take place by taking eye from high-quality plants. In addition to this, budding can also be done during the month of March in the area having low temperature in January and February. Indigenous plants of rose can be prepare through cutting method.

A fungicide (Blitox or Bavistin) should be applied to the cut. Root cutting and water shoots should be cut below the plants on a regular basis. Miniature, polyantha, and creeper roses do not require pruning. In these, only dry twigs should be cut (Mukhopadhyay, 1987; Pal et al., 2014; Shivani et al., 2022).

Flower Picking and Packing

When the black has reached its full colour, cut the flowers with a long stick and a sharp knife or secateur, then place them in a bucket or tub of water. Harvesting should be completed as soon as possible after 7 a.m. Wrap 20-20 flower stems in newspaper to make a 100 cm tall, 50 cm wide, and 612 cm m. Send it to the market wrapped in a thick necktie.

Major Insect pest and Diseases

- **Rose scale:** A brown coating forms on the main stem, causing the stem to dry out.
- Spray a 0.2% solution of Metasystx.
- **Aphids:** Small green insects that feed on the sap of leaves and flowers.
- Spray 0.1% Dimethoate (Rogor) or Metacystox.
- **Die-back:** The plant turns black from above, begins to dry out, and eventually dies.
- Cut the affected area and apply a 0.2% Bavistin paste.
- **Black spot:** Circular black spots with fringed margins appear on both side of leaves. Premature leaf dry up and drop is noticed.
- Spray 0.2% Captan or Ferbam.
- **Powdery mildew:** White powdery appearance on the upper surface of the leaves.
- Spray 0.1% carathane or 0.2% sulfax.
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