

## Lecture V : Commercial cultivation of rose

### INTRODUCTION

Rose is one of the 'Natures Beautiful Creations', hence, it is universally acclaimed as the 'Queen of flowers' called by a 'Sappho' a poetess about more than 2500 years ago. Rose is considered as National flower of England. In India, it was referred in old Sanskrit literature as Tarnipushpa, Atimanjula, Simantika, etc. It is the largest traded flowers in the world, worth 1.5 billion dollars globally. The Holland alone 500 million dollars and is growing 7-8% annually.

Rose belongs to the family Rosaceae and all species of this flower with minor exceptions belongs to the genus *Rosa*. The genus contains about 120 species and is grouped under four subgenera, namely, *Eurosa*, *Platyrhodon*, *Hesperhodos* and *Hulthemia*. The basic chromosome number in roses is 7. Several important species of Asian origin are diploid ( $2n=14$ ), whereas modern roses are tetraploid ( $2n=28$ ). Rose is native from temperate regions of the northern hemisphere

Class	Parentage	Characters	Varieties
Hybrid Tea	Hybrid Perpetual × Tea roses	Bearing large, highly centered flower and long stems.	Pusa Garima, Pusa Gaurav, Pusa Priya, Pusa Pitamber, Pusa Ajay, Pusa Arun.
Floribunda	Hybrid Tea × Polyantha	Clusters of large flowers, perpetual flowering habit.	Chitchor, Shabnam Sadabahar, Pusa Barahmasi, Pusa Virangna.
Hybrid Perpetual	<i>R. gallica</i> , <i>R. centifolia</i> and <i>R. chinensis</i>	Very hardy, flowers more than a season.	Frau Karle Druschki, General Jacqueminot, Paul Neyron.
Tea roses	<i>R. chinensis</i> × <i>R. gigantea</i>	Distinct aroma of tea leaves, free flowering.	Anna Olivier, Lady Hillingdon and Mme Falcot.
Grandiflora	Hybrid Tea × Floribunda	Clusters of relatively large flowers.	Bucaneer, June Bride.
Polyantha	<i>R. multiflora</i> , <i>R. wichuraiana</i> and <i>R. indica major</i>	Flower clusters for several months.	Cécile Brünner, The Fairy, Red Fairy, Pink Fairy.
China rose	<i>R. chinensis</i>	Bears red to nearly white flowers in small clusters.	Comtesse du Cayla, Cramoisi Superieur, Gruss-an-Teplitz.

Damask rose	<i>R. gallica</i> × <i>R. moschata</i> (Summer damask) and <i>R. gallica</i> × <i>R. phoenicia</i> (Autumn damask)	Enormous clusters of very fragrant, pale pink to red, double petalled flowers.	Noorjahan, Rani Sahiba, Himroj, Jwala, Hebe's Lip, Madame Hardy, Celsiana.
Bourbon rose	China rose × Damask rose	Large scented flowers have wide and silky petals.	Bourbon Queen, Mme Pierre Oger, Rose Edouard.
Cabbage rose	<i>Rosa centifolia</i>	Bear large, globular, solitary, very fragrant pink flowers.	De Meaux, Chapeau de Napoleon.
Moss rose	Bud sport of <i>R. centifolia</i>	Little bristles found on seed pod and sepals, sweetly scented.	Celina, Nuits de Young, Old Pink Moss, Laneii.
French rose	<i>Rosa gallica</i>	Fragrant flowers and having medicinal properties.	Belle de Crecy, Gloire de France, Rosa Mundi, Tuscany.
Albas roses	<i>R. corymbifera</i> × <i>R. gallica</i>	Very hardy, bear white or pinkish flowers with fragrance.	Queen of Denmark, Celestial, Great Maidens Blush.
Musk roses	<i>R. moschata</i>	Having musky fragrance, good shrub roses.	Eva, Vanity, Felicia, Moonlight, Prosperity.
Noisette roses	China rose × Musk rose	Compact habit, flower in clusters, constant double.	Lamarque, Marechal Niel, Eva.
Rugosa	<i>R. rugosa</i>	Highly thorny nature, make good hedges, bear large red or white flowers.	Frau Dagmar Hartopp, Pink Grootendorst, Scabrosa.
Miniature	Dwarf mutations of some Old Garden Roses-gallicas and centifolias.	Known as baby roses with small leaves and flowers. Hardy and ideal for pots.	Baby Gold Star, Cinderella, Peon, Pixie, Chipper, Cricri.

## SOIL AND CLIMATE

It is generally suitable for higher elevation (1500 m and above). It can also be grown in the plains under ideal condition of fertile loamy soils with salt-free irrigation water. The ideal climate for rose growing should have temperature with a minimum of 15°C and maximum of 28°C. Light is important factor which decides the growth. The growth is slowed by day length, i.e. > 12 hours and heavy overcast, cloudy/mist conditions. High relative humidity exposes the

plant to serious fungal diseases. In tropics the ideal temperature is 25°C – 30°C on sunny day and on cloudy day 18°C – 20°C. The optimum temperature should be 15°C – 18°C. These temperatures are extremely difficult to find and it's therefore to compromise.

### **PROPAGATION**

**Cuttings:** Matured current season shoots are selected and the cuttings are made. The cut ends are dipped in root inducing hormone like IBA at 2000 ppm and planted in beds. The cuttings root in 3 to 4 weeks.

**Budding:** The most commonly preferred type of rose plant material world over is the use of budded plants. Dormant eyes on a scion of chosen variety are budded either by T or inverted T or I method of budding on a root stock. *R. multiflora* is more suitable for southern parts of India. Under north India condition and tropical regions are mostly budded on *R. indica* var. *odorata* or *R. manetti*.

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