



## RED RUSH: DELICIOUS STRAWBERRY VARIETIES RULING INDIAN FARM

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### INTRODUCTION

Strawberries are a temperate fruit rich in vitamin C, minerals, antioxidants, and ellagic acid. They thrive in cool climates for the best growth and fruiting. Although strawberries can grow in tropical and subtropical areas, commercial farming is mostly found in regions with the right climate and soil. Around the world, strawberries are popular in Europe, the USA, Canada, and South America because of their flavour, colour, and aroma.

In India, strawberry farming mainly takes place in cooler areas like Nainital and Dehradun, Mahabaleshwar and Panchgani (Maharashtra), the Kashmir Valley, Bengaluru, Kalimpong, Ooty (Tamil Nadu), and Idukki (Kerala). The Mahabaleshwar-Panchgani region alone accounts for about 85% of India's total production. It is known as the "Strawberry Capital of India" due to its cool climate, red laterite soil, and good irrigation facilities. The Mahabaleshwar strawberry received a GI tag in 2010. In Himachal Pradesh, districts like Solan, Shimla, Mandi, Kullu, and Kangra also support strawberry farming because of their high-altitude, cool conditions. In West Bengal, strawberries are grown in winter under rainfed conditions. In Punjab, Haryana, and Delhi, they are cultivated with irrigation and protective structures.

India's diverse climates require different types of strawberries. Farmers use improved and imported varieties for better disease resistance, larger fruit size, longer shelf life, and adaptability. Popular varieties include Chandler, Sweet Charlie, Camarosa, Seascape, Selva, Winter Dawn, Nabila, and Rania. Other varieties include Tioga, Torrey, Belrubis, Fern, Pajaro, Blackmore, Senga Sengana, Katrain Sweet, Ofra, Florida 90, and Pusa Early Dwarf.

Choosing the right variety based on temperature, chilling needs, and photoperiod is important. June-bearing varieties are best for temperate climates and need chilling. Ever-bearing or day-neutral types adapt to a wider range of conditions and produce fruit repeatedly. Short-day varieties fit subtropical regions, while long-day varieties need longer daylight for flowering.

### Varieties grown in India

#### Chandler

A popular and well-known variety of strawberry introduced from USA used as both commercial and home garden growing strawberry with large, firm and attractive red with smooth texture. It is found to be good for fresh consumption and has high desert quality. It's favourite among the Indian farmers due to its short-day requirement and high yielding. It thrives in both temperate and subtropical

climate and highly preferred in Mahabaleshwar and North India due its adaptability and taste. Fruit size of 15-18g, TSS of 10-12° brix, acidity 0.85% and vitamin C (55mg/100g of edible portion) found. It has long flowering period of 97 days and produce high number of fruits per plant. Variety is tolerant to viral diseases and resistance to physical damage caused by rain.



### Sweet Charlie

Deep, oval berries with bright red colour, ideal for home garden due its fantastic sweetness and captivating aroma in which plants produce high quality fruits which is introduced from Florida. It is a short day and early maturing variety which performs well in sub-tropical and mild winters. Fruit has a distinctively sweet flavour and is large in size (15-17 g). Its popular in Mahabaleshwar region, representing large share of production. Resistant to anthracnose disease.



Sweet Charlie

### Winter Dawn

This variety is used in both open fields and polyhouse systems as its tolerant to high temperature. It gives consistent produce and good quality fruits throughout the strawberry season, especially in sub-tropical regions. Berries are sweet, juicy and flavourful. Suitable in Mahabaleshwar, Southern India and parts of North East.



### Camarosa

Introduced from California, this variety is popular in India for their productivity, long shelf life and large, firm, glossy red appearance. Since due its durability, it's suitable for transportation to urban markets. The fruits have slightly tart taste, making it ideal for dessert and preserves. Popular in Maharashtra, Tamil Nadu and cooler plains.



Camarosa

### Selva

Day neural variety with capacity to produce off season fruits making it favourable for commercial cultivation. The fruits are medium sized, conical shaped with bright red

appearance and thick flesh with outstanding flavour and aroma making it perfect for desserts. Considered as a ray of hope in sub-tropical zones of India.

### Tioga

Early maturity variety developed from the Cross between Fresno and Torrey with enormous size berries with hard peel. It has short harvest season and its fruit size decreases with advancement of season. Fruit contain 7% TSS, 0.7% acidity and making it ideal for manufacture for desserts, jam and jellies. They are tolerant to viruses

### Torrey

Sister seedling of Tioga which produce numerous runners. Fruits are large in size, red coloured with medium in flesh and firmness. Contains 0.67% acid and 6% sugar indicating both sweet and sour taste. Best for processing but also consumed fresh.



### Belrubi

Originated in France from a cross between Pocahontas and Redcoat. Fruits are conical to wedge shaped in nature with big size. Have sweet tart flavour due to 0.98% acidity and 6% sugar. Available in the month of beginning of February to end of March. Adapted to soils with high pH but susceptible to mildew and *Botrytis* Fruit rot.



### Fern

Early, day neutral variety developed in California. The plants are vigorous with erect growing habits. Fruits are large, conical to wedge shaped with bright red appearance. Sweet flavour found and suitable for fresh market and processing.



### Blackmore

Sour berry type which is ideal for making jams and jellies. It yields abundant no. of runners. The fruits are tastier and firm. Its popular for its good yield which normally produce 22-25 fruits per plant.

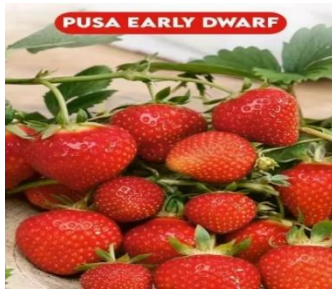
### Pajaro

Its seedling of Cal 63.7-101 x Sequoia, an improved, commercial cultivar popular in several states for its yield and quality. Late maturing variety successful under summer conditions. Fruits are large in size, symmetrical and attractively red which is found to be resistant to fruit rot, wilt and leaf scorch but

susceptible to physical damage by rain. Contains 0.97% acid and 5.5% sugar, ideal for processing. Grown in areas of Maharashtra, Himachal Pradesh and Punjab.

### **Pusa early dwarf**

Glory of North Indian plains that has large and wedge-shaped fruit. It is dwarf plant variety and it starts bearing flowers in first week of February.



### **Ofra**

Cross between Parker and breeding line 111. Early maturing variety with presence of low leaf count and high Vitamin C concentration(88mg/100g), and highest sugar content of 7.37 %. Fruits are larger, longer than board, red and glossy with pulp found to be moderately firm and orange red of medium sweetness and sour. Grown in areas needing early market supplies. It's the sweetest variety among Indian cultivar and nutritious.

### **Nabila**

Newer variety that's gaining popularity for their attractive appearance and good shelf life. They are noted for commercial cultivation because of their excellent yield and market appeal.

### **Seascape**

Variety developed through day neutral selection. Recognised for its disease resistance and adaptability, seascape strawberries produce medium sized, pleasant sweet tart

berries throughout the season, making them great for fresh market and processing.

### **Rania**

Well known for its shelf life and yield. Adopted by the commercial farmers in Maharashtra, Punjab and West Bengal.

### **Florida 90**

One of the old and standard variety natives to warmer parts of USA, is now successfully grown in India. The plants are found to be bulkier and fruits are large sized, providing heavy yields for prolonged period of time.

### **Senga Sengana**

Seedling selection from the cross between Markee and Sieger, introduced in India during 1980. Fruits are red with firm pulp and good freezing quality. Produce healthy plants with runners beginning to produce during August. It does well under hilly zones of India.

### **Katrain Sweet**

Variety distinguished by its high sugar content and sweet taste. Ideal for fresh consumption and dessert uses. Its popular in Himachal Pradesh.

### **Sweet sensation**

Also known as Florida127 or Sensation, has sweet flavour and high aroma. The berries are large with conic to broad in shape, attractive appearance with medium to bright red and glossy. It has a strong shelf life, hence good for fresh market.

### **Mahabaleshwar strawberry**

It's known for its sweetness, juiciness and aroma. Common type grown include Sweet Charlie, Camarosa, Winter Dawn, Nabila and Sweet sensation.

The harvesting season is found to be from October-November to April-May with quality berries available from December to February.



### Key New and Emerging Varieties for Commercial Use in India

New strawberry varieties from Italian breeder Nova Siri Genetics with partnership with two Indian companies "Mahaberry Private Limited" representing and managing varieties in central and North India whereas "8 berries farm and Nursery private Limited" covering South India, are being introduced for commercial cultivation to improve yield, flavour and disease resistance.

#### NSG 203 - Marimbella

Short day variety that allows early harvest where they start producing fruits as early as 60 days after planting. The berries are medium to large in size, featuring bright red colour and has sweet flavour profile with sugar level ranging from 8 to 11° Brix. Adapted to open field conditions and has high tolerance to soil pathogens giving excellent performance of high yielding variety. Mostly suited in Central and North India.



#### NSG 465- Rossetta

Early season variety that offers high productivity and quality fruits. Produces attractive, bright red, glossy skin of large size with an elongated conical shape. It has long shelf life and very firm flesh, making it highly resistant to handling and long-distance transport.



#### Melissa

The strawberry is a perfect combination of a premium with reddish orange fruit with exceptionally sweet taste, maintaining high sugar level of 8 to 11 degrees brix. Its cultivation is mainly focused in South India, particularly in Mahabaleshwar and Ooty.



### Conclusion

Strawberry growing in India has changed from a small hill crop into a valuable, climate-smart farming business. India has various agro-climatic zones that allow it to grow a wide range of short-day, day-neutral, and heat-tolerant varieties. This makes strawberries suitable for both hills and plains, as well as for protected environments.

Popular varieties like Chandler, Sweet Charlie, Camarosa, and Winter Dawn continue to lead the market because of their yield, taste, and acceptance, while local varieties such as Katrain Sweet and Pusa Early Dwarf support specific farming practices.

New varieties like Marimbella, Rossetta, and Melissa represent a shift toward quicker maturity, better sweetness, disease resistance, and longer shelf life. This shift strengthens domestic markets and future export opportunities. Regions like Mahabaleshwar and Panchgani, recognized for their geographical identity, remain central to strawberry production in India.

In conclusion, choosing varieties that fit the local climate, meet market demand, and suit production systems is crucial for making a profit. With better genetics, protected cultivation, and growing consumer interest, strawberries are set to remain a key crop that helps diversify income for Indian farmers.