

## PALMS

- Palms are unbranched evergreen tree of tropical or warm region, with a crown of very long feathery or fan shaped leaves and typically having old leaf scars forming a regular pattern on the trunk.
- **Palms belongs to family Aracaceae.**
- **Family** of flowering plants belonging to monocot order. There are roughly 202 currently known genera with around 2600 species restricted to tropical and subtropical climates.
- These are mostly planted as specimen, or group planting or as avenue plantation in big palaces.
- *It is common saying that feet of palms should be in water and head should be in Fire.*
- Feathery Shaped:- Date palm, coconut palm (Main veins run out of the side of long mid rib, Leaf being divided into long and narrow segments).
- Fan shaped:- Chinese palm ( Main vein radiates outside in all directions resulting into semi circular to circular leaves).

### Description of some common Palms

Common Name	Botanical Name	Leaf Shape	Remarks	Propagation
Chinese Palm	<i>Livistonia chinensis</i>	Feathery	Pot Culture	Seeds, suckers
Bismarck Palm	<i>Bismarckia nobilis</i>	Palmate	Focal point	Seeds
Fish tail palm	<i>Caryota urens</i>	Feathery	Drooping spadices	
Royal Palm	<i>Oreodoxa regia</i> <i>Roystonea regia</i>	Pinnate	Specimen	Seeds
Bottle palm	<i>Hyophorbe legenicaulis</i>	pinnate		Seeds
Kentia palm	<i>Kentia belmoreana</i>	Feathery	Pots decoration	
Lady palm	<i>Rahis excels</i>	fan	Bush planting In pot culture	Root suckers
Good luck palm	<i>Chamodera elegans</i> <i>Nyantha bella</i>	Feathery	Pot culture	
Fan palm	<i>Washingtonia filifera</i> <i>Pritchardia filifera</i>	Fan	Pot culture	
Queen palm	<i>Arecastrum romanzoffianum</i>	Feathery		Seeds
Canary date palm	<i>Phoenix canariensis</i>	Pinnate feathery	Road side	Seeds
Foxtail palm	<i>Wodyetia bifurcate</i>	Bushy leaves	Specimen or Group planting	Seeds
Sago palm	<i>Cycas revolute</i>	pinnate	pots, specimen	Suckers
Pygmy date palm	<i>Phoenix roebelenii</i>	Light feathery, Arching pinnate		Suckers
Datepalm	<i>Phoenix dactylifera</i>	Feathery		Suckers
Butterfly palm	<i>Dyopsis leptocheilos</i>			

## CACTUS AND SUCCULENTS

Cactus and succulents are plants that have succulent stems and branches with scales or spines instead of leaves and are found specially in dry areas.

These plants turn a barren landscape to a showcase of colour.

**Origin:-**America, Family- Cactaceae, Fruit- Single seeded berry

**Succulents:-** Plants from more than 60 families and 300 genera have evolved special water storage tissues in thickened or swollen leaves, stems or roots as an adaptation to arid environment. By making the most scarce available moisture these plants can survive in habitats that are far too dry for other plants.

Caudiciform succulents store water in both roots and swollen stems and may be deciduous or long lived fleshy leaves.

Cactaceae family is divided into 3 tribes-

Tribe 1: Pereskiaee

It is primitive form and near to original forest trees. Plants are leafy bushes, look like Citrus trees and have stalked flowers in clusters resembling wild roses. Spines are present but not glochids or barbed bristles e.g. *Pereskia grandiflora* (Rose Cactus) and *Pereskia aculeata*.

Tribe 2: Opuntieae

Plants are characterized by glochids or sharp, easily detached bundles of barbed bristles in the areoles. Flowers are without petioles and tubes and are generally of wheel shape. E.g. - *Opuntia* sp.

Tribe 3: Cereae

This is largest group and characterized by ribbed, fleshy stems of continuous growth in columns and globes.

This tribe is further divided in 8 subtribes:

- 1 . Cereane
2. Hylocereanae
3. Echinocereanae
4. Echinocactaenae
5. Cactaenae
6. Coryphanthanae
- 7 . Epiphyelanae
8. Rhipsalidanae

### **Climate:**

These are adaptable to wide range of climatic conditions. The extremes of temperature i.e. above 35°C and exposure to direct scorching sun results into yellowing and finally rotting. The plant also have a resting period. During this period cacti need little care and watering at longer intervals. Active growth starts again during spring season and continues till autumn.

### **Soil:**

Cacti thrive well in porous and rich calcareous soil. Therefore ,for making a pot mixture care should be taken to include all necessary gradients which are beneficial for their growth. The general ideal pot mixture for cacti consists of 2 parts garden soil: 1Part soil: 1 Part leaf mould: 1/2 Part charcoal. Small amount of bone meal or basic slag should also be added. Plants become succulents and susceptible to rotting by excessive addition of chemical fertilizer and thus, frequent application should be avoided. Undecomposed organic matter causes rotting of roots.

### **Propagation:**

Cacti can be multiplied sexually or asexually. Seeds are collected from ripened fruit and are sown from March to September in pots, Seed pans or boxes. The mixture for sowing the seeds, consists of 1 part garden soil : 1 part sand : 1 part leaf mould. Seeds are sown and gently covered with sand and then with glass plate. Seeds germinate but seedling grow slowly and it take long time to make a specimen plant from seeds.

### **Watering:**

Cacti and succulents are not liberal watering. Judicious application of water is required for successful growing. In winter months, i. e. during rest period watering is done to be very sparingly. Little frequent watering is done to be during summer months when cacti grow. Every time the soil is to be drenched completely so that water comes out to the drain hole and overwatering should be avoided.

### Description of Important Cacti

Common Name	Botanical Name	Flower/Stem Colour	Remarks
Lemon vine	<i>Pereskia aculeate</i>	Creamish	Leaves are waxy and green and elliptic.
Rose Cactus	<i>Pereskia grandiflora</i>	Rose colour	Possess lemon like scent.
Nagfani	<i>Opuntia sp.</i>	Pink, Red, Yellow	Used for fencing
Rat's tail Cactus	<i>Aprocactus flagelliformis</i>	Tubular	Hanging basket
Bishop's cap	<i>Astrophotum myriostigma</i>	Yellow	Small pots
Sea Archin	<i>Astrophotum asterias</i>		8 spineless ribs, grayish green epidermis
Old man Cactus	<i>Cephalocereus senilis</i>		Ribs are closely attached.
Night blooming cacti	<i>Cereus hexagonus</i>	Blue-Green , Grey	Nocturnal habit of flowering
Barrel or Hedge Hog	<i>Echinopsis bridgesii</i>	White, Rose	Evening opening of flowers
Chin cactus	<i>Gymnocalycium denudatum</i>		Cleft below tubercle giving chin look
Cob cacti	<i>Lobivia chrysantha</i>	Red and Yellow	Ribs divided into tubercles
Bird's Nest Cacti	<i>Mammillaria candida</i>	Cream/pale yellow	Stems are covered with silky hairs

### Description of Important Succulents

Name	Family	Remarks
<i>Agave filifera</i>	Amaryllidaceae	<i>A.americana</i> is known as Century Plant.
<i>Aloe vera</i>	Liliaceae	It is stem less and leaves are rosette type.
<i>Aptenia cordifolia</i>	Aizoaceae	Suited for hanging basket, Rockery, Window gardens. Plants are Prostrate type and stems are covered with glistening papillae.
<i>Cotyledon orbiculata</i>	Crassulaceae	Leaves are grey waxy. Summer Yellowish-Red colored flowering.
<i>Euhorbia splendens</i> (Mother In law's tongue)	Euphorbiaceae	Flowers are called cyathia. Which are scarlet coloured.
<i>Yucca gloriosa</i> (Spannish dagger)	Liliaceae	Xerophytic plant. Thick stemmed dense rosette of sword shaped leaves which flat, grey-green glaucous and rough.
<i>Lithops bella</i> (Flowring Stones)	Aizoaceae	Similarity to surroundings gravels, stones or pebbles.