

Date palm

a nutritious fruit for the arid and semi-arid

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Basic profile of crop	
Scientific name:	<i>Phoenix dactylifera</i> L.
Family:	Palmae
Origin:	Persia
Chromosome number:	2n=36

Introduction

Date palm is one of the oldest domesticated fruit crop known to mankind. Its cultivation dates back to 6000 BC along the Tigris and the Euphrates rivers in Iraq. In India, date palm introduction was mediated through soldiers of Alexander in the 4th century BC in the Indus valley. During the regime of Akbar, dates were grown in India. Rajasthan was the first state, where the introduction of dates took place by the then ruler Ganga Singh at Bikaner. According to FAO statistics data, in 2011, India stands at first position with respect to import of Dates. The major date palm belt in India spreads around

Ganaganagar, Bikaner, Jodhpur, Jaisalmer, Barmer and Sikar districts of Rajasthan and Kutch area of Gujarat.

Date palm is well adapted to prolonged hot dry summer and moderate winter. It requires rain free period at the time of fruit ripening, which takes place usually during July-august. The date palm has very typical habits. It can grow well in sand, but not arenaceous. Though, it is not an aquatic plant, it has air spaces in its root and able to grow well near closest soil water level. It grows well in saline conditions, but it is not a true halophyte. It is not a true xerophyte, but the plant thrives well

in harsh desertic conditions. The temperature of 25°C and 40°C is required at the time of flowering. One Arabian saying for date palm “The feet in running water and head in the fire”, it is well known regarding its climatic adaptability.

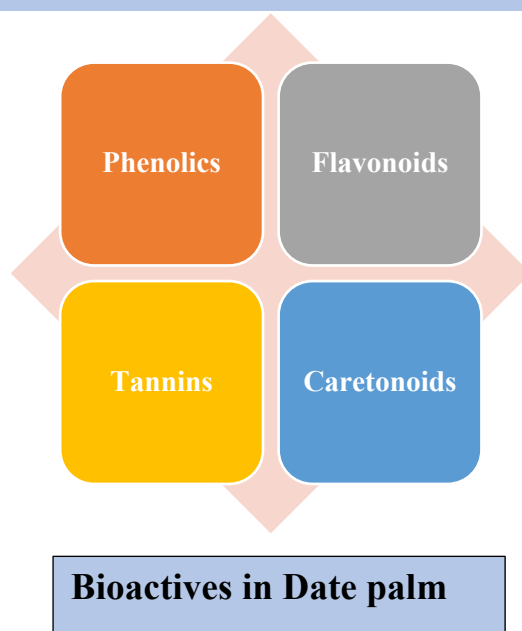
Date palm is mainly propagated by off shoots. An ideal offshoot having weight of 8-10 kg is required for establishing commercial plantation. It is a monocotyledonous plant, with single trunk.

Dethorning is an essential practice in date palm to facilitate easy pollination, thinning of bunches, spraying and harvesting of fruits. Papaya, phalsa, citrus and pomegranate plants can be taken as inter crops in date palm orchard. It is a dioecious tree with male and female flowers borne on separate trees. As pollination through insect, wind or any natural means is negligible in date palm, artificial pollination is required for ensuring good fruit set.

Uses

- Date palm fruits are eaten as fresh (raw dates), dried form (Chhuhara) and soft dates (pind khajoor).
- Date pulp contains moisture (20%), sugar (60-65%), fibre (2.5%), protein (2%) and less than 2 % fat.
- Mineral matter like iron, potassium, calcium sulphur etc. and pectic substances are also present in the fruit pulp.
- Vitamin A, B AND B₂ are found in it.
- The fresh fruits supply about 3550 calories per kg and helps to meet dietary requirement of desert people.
- Different value-added products are also manufactured from date palm like sugar, starch, vinegar, juice, toffies, wine, chutney, jam, and pickles.
- Dates are having high sugar to acid ratio and gives a good energy and mineral supplement. It is also regarded as self-preserved fruit.
- It has excellent skin integrity, low moisture content, minimum acidity and natural pleasant taste.
- Date palm paste is often used as a filler matter in bakery industry.
- The leaves are made into baskets, brooms, ropes, building material, fuel and paper.
- The trees are valuable as cover crops for ground storey crops in hot arid regions.
- The plantation is helpful in sand dune stabilization and maintenance of sustainability in the desertic ecosphere.

Health benefits of dates



The health promoting effect of date palm is mainly due to its vitamins and minerals content. In addition, it contains certain bioactive compounds like phenolics, flavonoids, carotenoids, tannins etc. which possess antioxidant activity. So these bioactives protect our body from external damage due to free radicals at cellular level. Some other health aspects of date palm are discussed under following points.

- ✓ Being high in fibre, it helps to control blood sugar level and prevents constipation.
- ✓ Due to its low glycemic index value, it can be consumed by diabetic patients.
- ✓ Dates contain several flavonoid compounds, phenolic acids, carotenoids, which help to
- ✓ fight against deadly chronic diseases including cardiovascular diseases, cancer, diabetes *etc.*
- ✓ It is a rich source of antioxidants, hence slows down the aging process and boosts the metabolism of human body.
- ✓ Eating dates also helps to improve memory of children.
- ✓ During pregnancy, dates are generally recommended in diet plan to maintain the iron and blood level in the body.
- ✓ It prevents inflammation in the body and also helps to cure Alzheimer's disease.
- ✓ It promotes bone health.
- ✓ It acts as an excellent natural sweetener.

Conclusion

The date palm fruits have been recognized for their highly nutritive and calorific food values. The area of date production in the Arabian Peninsula and the Middle East has been constantly expanding during the past few decades and is expected to continue to increase. While in India, the crop has remain under-utilized. The date palm is among the very few plants, that can thrive in arid environments and it can provide

enormous resources for marginalized tribes and local populations. Hence, the Government should take necessary steps to create awareness about this crop among farmers. If quality planting material is sufficiently supplied to the growers, then it can be leading as a commercial crop in our country. The arid and semi-arid tracts can be well utilized by planting of such valuable crop.

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