



Herbal Garden (Muligai Vanam)

Engelmann Prickly Pear



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Botanical Name	:	<i>Opuntia engelmannii</i> Salm-Dyck ex. Engl.
Tamil Name	:	Chapathi kalli
Sanskrit Name	:	Vidara-vishvasaraka
English Name	:	Engelmann prickly pear, Cactus apple,

Distribution and Habitat

Prickly pears are members of the *Cactaceae* or cactus family, which includes about 130 genera and 1,500 species. The plant have originated in Mexico and distributed in arid and semi arid regions of the world, such as Australia, Africa, USA, Mediterranean basin and South East Asia. It prefers hillsides, desert basins, and canyon bottoms,



growing often in juniper-oak woodlands, grasslands, and dry deserts. *Opuntia engelmannii* is a succulent branched shrub that grows up to 1.5 m tall. The pads (cladodes) are grey-green, egg-shaped in outline but with the narrower end at the base (obovate) to round, about 15-30 cm long and 12-20 cm wide. The yellow to white spines, mainly found in the top half of the cladode, are up to 6 cm long, slightly curved and very hard. The flowers are yellow, occasionally reddish, funnel-shaped, 5-8 cm in diameter and about the same in length. The plant bears purple fleshy fruits that are 3-7 cm long. The fruit is edible.

Parts used

Pad, flowers and fruit.

Chemical constituents

Flavonoids, octadecadienoic acid and hexadecanoic acid.

Uses

Opuntia engelmannii is cultivated as an ornamental plant, for use in drought tolerant gardens, container plantings, and natural landscaping projects. The fruits and pads are edible if the spiny glochids are removed or burned off. Different kinds of processed products are prepared from cactus viz., jams, juices, nectars; dried fruit, juice concentrates and syrups and liquors. Cacti have been used as live bio fencing material for protecting fields from wild animals.



Medicinal uses



Most species of prickly pears have similar effective and safe medicinal qualities. The pulp of the plant, mixed with water, has a cooling effect on the system, easing oesophageal and stomach irritations such as ulcers, acid reflux, and gastritis. The mucilage of the plant's pulp has restorative and protective qualities to the stomach lining, and applied externally to sprains, burns, and bruises will reduce swelling, discoloration and inflammation while speeding healing. The cactus also has the ability to reduce blood sugar by up to 20% in individuals with non-insulin dependent diabetes mellitus with its soluble fibre content, which also binds to cholesterol, lowering LDL. The flowers of the plant, as with most prickly pear cactus, are high in flavonoids, fortifying slow healing tissues. Infusions and other preparations of the flowers can strengthen capillaries and reduce risk for varicose veins. The

blossoms also have diuretic properties, benefitting the kidneys and urinary tract, reducing uric acid kidney stones and risk of gout-related conditions. The fruits are high in vitamin C and make delicious, brightly colored jams, wines, candy, and other sweet treats. The whole plant is high in fiber, protein, and minerals including potassium, calcium, magnesium, sodium, iron, and zinc (Paiz *et al.*, 2010; Strack *et al.*, 2003). Excessive consumption of the plant is known to cause cactus fever, which is typically self-resolving but an unpleasant experience.

Conclusion

Prickly pear traditionally has been used as a valuable health promoting food crop and also has applications in pharmaceutical industries. It has several uses and immense potential to be the food of future.

