

Nutritional Importance of Dragon Fruit

Ph. Chandramani Singh^{1*}, L. Basil¹, L. Somendro Singh¹, N. Johnson Singh¹, N. Soranganba¹, S. Roma Devi¹, P. Bijaya Devi², Umakanta N.³, T. Basanta Singh³, Ch. Premabati Devi³ and Ramgopal Laha³

¹ICAR-KVK, Churachandpur, Manipur

²KVK, Bishnupur, Manipur

³ICAR Research Complex for NEH Region, Manipur Centre, Imphal

*Corresponding Author: chandramaniph77@gmail.com

Abstract

Dragon fruit is a highly juicy nutritious exotic fruit with an attractive shape and colour. It is a low-calorie fruit that is high in fibre and provides a good number of vitamins, calcium, and phosphorous. Dragon fruit, owing to its nutritional and functional properties, can help in reducing the risk of chronic diseases. The fruit is processed into many value-added products; however, that has been limited to small-scale processing industries. Whereas, at present the availability of fresh fruit is very seasonal and localized but the potential for domestic and international marketing is very high.

Keywords: Dragon fruit, Nutritious, Cultivars, Chronic diseases, Value-added products

Introduction



Dragon fruit (Pitaya/ Pitahaya) is a tropical fruit native to southern Mexico, Central America, and South America, which belongs to the family Cactaceae. It is mostly grown in tropical and sub-tropical parts of the world, including Thailand,

Indonesia, Vietnam, Sri Lanka, Taiwan, Japan, Malaysia, Philippines, Mexico, Australia, Ecuador, and China. In Central America, the Dragon fruit is called "Pitaya". In Asian countries, it's called "Strawberry pear". It's also known as the Honolulu queen, whose flowers bloom only open at night. Dragon fruit is juicy and contains black tiny edible seeds, soft in texture that are similar in appearance to Kiwi seeds. The fruits are fleshy, oval-shaped with spikes, and roughly baseball size. The fruit weighs between 400g to 750g having a sweet, mildly sweet, and slightly sour taste. The colour of fruit pulp may vary from white, to red, pink, and purple. The cultivars with deep pink flesh are more flavourful. Dragon fruit contains prebiotic fibre that promotes the growth of beneficial bacteria in your gut potentially improving metabolic health.

Composition of Red Pitaya

Pitaya is a juicy nutritious colorful fruit with black tiny edible seeds. The water content of pitaya fruit is very high (84.40 %). Pitaya is a low-calorie fruit



with natural sugar, rich in pectin fibre (0.5 g/100g of edible part), niacin (0.30g/100g of edible part), Vitamin C (8mg/100g of edible part), and minerals like (Calcium-10 mg/100g of edible part), (Iron-1.30mg/100g of edible part) and (Phosphorus-26mg/100g of edible part). The dragon fruit has a low protein content of about (1.40g/100g of edible part) and the fat content is very low (0.40g/100g of edible part).

Health Benefits

1. Dragon fruit has healthy properties for gastritis, heartburn, stomach ulcers, and acidity.
2. The fruit contains captin, a natural substance that acts as a Cardiac tonic and nervous system stimulant effects, which makes it a suitable fruit for the treatment of hypertension, arrhythmias, and nervousness.
3. The fruit with white pulp may help improve blood sugar levels because it contains an anti-diabetic component.
4. Dragon fruit contains high in vitamin C and other antioxidants, which are good for the immune system.
5. The fruit contains betacyanin (purple pigment) that has anti-cancer properties and anti-premature aging of the organism.
6. The sap of the pitaya plant has skin-healing properties to treat wounds, sores, and boils.
7. Consumption of dragon fruit with Kidney stones problem should be avoided because the fruit contains oxalates.

Cultivars

Dragon fruit is predominant in two separate genera namely, '*Hylocereus*' and '*Selenicereus*'. The most commercially cultivated varieties are from the *Hylocereus* genus. The Dragon fruits are grown on climbing cacti and need wooden or cemented pillars of trellising to support the plant. Pitaya plants can produce fruits after one year of establishment. Pitaya species are mostly found in tropical and sub-tropical America, in evergreen and deciduous forests in diverse landscapes up to 1700 m above mean sea level and 500 to 2000 mm rainfall. Three cultivars are grown commercially includes, *Hylocereus undatus* (white dragon fruit), which has fruit with bright pink skin and white flesh, *Hylocereus polyrhizus* (red dragon fruit) has fruit with bright pink skin and varying hues of pink flesh, and *Selenicereus megalanthus* (yellow dragon fruit) has yellow skin and white flesh with



black seeds. Fruits from the genus *Stenocereus* look similar to dragon fruit; however, they are rounder and have a sour flavor. For fresh dragon fruit produce July to September is the peak season for most varieties; however, varieties of *Selenicereus megalanthus* produce fruit during the winter season (November to February).

Value added products

Being a non-climacteric type and to get the best quality for consumption of the dragon fruit, it should be harvested in ripe. The Dragon fruit has a good potential to be processed into many products. Different value-added items of dragon fruit are jam, jelly, juice, marmalade and preserves, sorbet, powder, energy and fruit salads, ice cream, pastries, pulp, and wine. The juice of the red cultivars are commonly used as a natural food colorant and dye. Fruit peel has the potential as an antibacterial agent and antioxidant.

Conclusion

Dragon fruit is an excellent and reasonable source of nutrition, supplementing vital nutrients to the human body such as low sugar, proteins, and carbohydrates, and rich in pectin fibre, vitamins and minerals. Pitaya should provide all essential nutrients and play a critical role in preventing chronic disease and promoting good health.

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