

## Dragon Fruit: A Profitable and Nutritious Crop

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Dragon fruit, known scientifically as *Hylocereus* and *Selenicereus*, is gaining importance in agriculture due to its adaptability and health benefits. Originating from Central and South America, this cactus vine is resilient to environmental challenges and resistant to pests and diseases. Pitaya fruit, pitahaya fruit or commonly known as Dragon Fruit. The flower of dragon fruit is so beautiful, that it has nicknamed as “Noble Woman” or “Queen of the Night”. It requires minimal water and nutrients, offers multiple annual harvests, sustains high yields, and boasts valuable nutraceutical properties. Its appeal has led to global cultivation and exports.

In India, where climate-induced stresses like droughts and floods affect agriculture, dragon fruit is emerging as a potential solution for resource-poor regions. However, the successful adoption of dragon fruit cultivation in India relies on region-specific protocols and an understanding of the global and national cultivation status, farmer challenges, and market trends to enhance profitability.

### Popular types of dragon fruit

#### 1. *Hylocereus undatus*

- ❖ Also known as Pitahaya.
- ❖ Variety has a white flesh with pink skin and green scale.
- ❖ Edible black seeds



#### 2. *Hylocereus polyrhizus*

- Also known as Red Pitaya.
- Variety has a red flesh with its pink skin.
- Native to Mexico.
- Most popular type now grown in many countries.



#### 3. *Hylocereus megalanthus*

- Native to South America.
- White flesh with yellow skin



#### *Hylocereus costaricensis*

- ❖ Violet red flesh and pink skin
- ❖ It's also known as Costa Rican Pitaya
- ❖ It's native to Costa Rica
- ❖ The fruit is magenta and the seeds are pear shaped



### Why becoming popular?

- ❖ The biggest advantage of this crop is once it planted, it will grow for about 20 years.
- ❖ One hectare could accommodate 1000 to 2000 plants.
- ❖ The agronomic practices are easy and less expensive.
- ❖ Tolerant to the arid environment.
- ❖ Adaptive to various marginal soil conditions.
- ❖ It bears fruit in the second year after planting.
- ❖ Attains full production within five years.
- ❖ Maintenance cost is low.
- ❖ Low requirement of water and tillage practices.
- ❖ Plant cuttings can be used for further propagation/resale.
- ❖ Dragon fruits have excellent demand in local & export markets.
- ❖ Aftercare is minimal due to fewer pest and disease attacks.
- ❖ Fast return perennial crop.
- ❖ It has great nutritional and health benefits value.

### Uses of dragon fruit

- Helps in curing cancer as it contains anti-cancer properties.
- Dragon fruit contains anti-inflammatory properties.
- It aids in reducing cholesterol and helps in weight loss.
- The Flowers can be used to make tea.
- It is used to process into different products such as jam, juice, ice cream, squash, and wine.
- The flower bud is used in soup, making the salad, and as a vegetable.
- The dragon fruit is used to flavor and color juices and alcoholic beverages like the "Dragon's Blood Punch" and the "Dragotini"
- The Niti Aayog in its report in 2017 says that dragon fruit Doubles Farmer's Income and aids in crop diversification.
- This crop has the potential to double the farmer's profit.
- Besides its various health benefits this fruit also improves your skin health. Dragon fruit could do miracles to your skin health that completes your skincare routine.
- Helps ward off anemia during pregnancy

### Importance of dragon fruit

#### Nutritional Benefits:

- 1) Rich in Nutrients: Dragon fruit is a nutritious fruit with a high water content (85.3%) and a moderate amount of protein (1.1 g).
- 2) Low in Fat: It is low in fat (0.57%) and contains dietary fiber (1.34%).
- 3) Energy Source: Dragon fruit provides energy at 67.7 Kcal per 100 g of edible portion.
- 4) Abundance of Nutrients: It is a source of essential nutrients, including calcium (10.2 mg), iron (3.37 mg), magnesium (38.9 mg), phosphorus (27.75 mg), potassium (272.0 mg), and zinc (0.35 mg).
- 5) Rich in Vitamins: Dragon fruit is particularly rich in vitamin C (3.0 mg) and niacin (2.8 mg), contributing to its health benefits.
- 6) Low Sugar Content: It has low sugar content, including glucose (5.7 g), fructose (3.2 g), and sorbitol (0.33 g).

#### Health Benefits:

- a) Cholesterol Reduction: Dragon fruit has very low cholesterol content, reducing the risk of heart diseases.

- b) **Weight Management:** It is a suitable fruit for maintaining weight, containing protein, omega-3, and omega-6 fatty acids.
- c) **Heart Health:** The monounsaturated fats in dragon fruit support heart health.
- d) **Digestive Health:** The high fiber content aids digestion and helps with constipation.
- e) **Antioxidant Properties:** Dragon fruit is a rich source of antioxidants, which combat free radicals and reduce the risk of cancer.
- f) **Diabetes Management:** Its high fiber content helps stabilize blood sugar levels, making it beneficial for diabetics.
- g) **Platelet Count Increase:** Dragon fruit is recommended for dengue patients as it can boost platelet count.
- h) **Anemia Prevention:** It can improve hemoglobin and erythrocyte levels, providing an alternative treatment for anemia.
- i) **Skin Benefits:** The antioxidants in dragon fruit can keep the skin youthful and are used in anti-aging face masks.
- j) **Arthritis Relief:** It is known as the "anti-inflammatory fruit" and can help with arthritis due to its anti-inflammatory properties.
- k) **Skin Health:** Dragon fruit can help with acne and burnt skin, thanks to its vitamin C and B3 content.
- l) **Allergy Management:** It contains cinnamic acid, which can help manage allergies and immune-related conditions.

### **Economic Opportunities for Farmers**

For farmers, dragon fruit cultivation holds immense promise. Here are several reasons why it is significant for them:

- a) **High Yields and Steady Income:** Dragon fruit plants yield fruit year-round, offering farmers a continuous source of income.
- b) **Low Maintenance:** Once established, dragon fruit plants are relatively low-maintenance, requiring less effort and resources than many other crops.
- c) **International Markets:** The fruit's export potential is lucrative, providing opportunities for farmers to tap into international markets and increase their income.

### **Conclusion**

Dragon fruit is an emerging crop with significant potential for farmers in diverse climates. Its resilience to environmental challenges, low maintenance requirements, and high economic returns make it a viable option for resource-poor areas and regions affected by climate-related farming challenges. Realizing dragon fruit's full potential requires region-specific farming practices, an understanding of global cultivation trends and challenges, and bridging the gap between opportunities and practical farming. Empowering farmers to benefit from this tropical wonder can lead to sustainable agriculture and improved livelihoods. Dragon fruit farming represents more than just profitability; it is a path to a brighter future for farmers and the agriculture sector.