

## DROGON FRUIT FARMING

Vivek Tiwari<sup>1</sup> and Radheshyam Ramkrishna Dhole<sup>2\*</sup>

### Abstract: -

*Dragon fruit farming has emerged as a highly profitable and sustainable horticultural enterprise in tropical and subtropical regions. Known scientifically as *Hylocereus* spp., dragon fruit is a cactus fruit valued for its attractive appearance, nutritional benefits, and high market demand. In recent years, dragon fruit cultivation has expanded rapidly in countries like Vietnam, Thailand, Israel, and India. The crop is drought-tolerant, requires relatively low water, and adapts well to different soil types, making it suitable for marginal and semi-arid lands. In India, dragon fruit farming is promoted under horticulture development schemes to enhance farmers' income and diversify cropping systems. This article discusses the importance, cultivation practices, economic potential, challenges, and future prospects of dragon fruit farming in detail.*

**Key Words:** *Dragon Fruit, Pitaya, Hylocereus, Cactus Fruit, High-Value Crop, Sustainable Agriculture, Protected Cultivation, Horticulture. Export Potential, Nutritional Benefits etc.*

### INTRODUCTION:

Dragon fruit, also known as pitaya or strawberry pear, belongs to the cactus family Cactaceae. It is native to Central and South America but is now widely cultivated in Southeast Asia and other tropical regions. The fruit is known for its vibrant pink or yellow skin and white or red pulp with tiny black seeds. In India, dragon fruit cultivation has

gained popularity due to increasing consumer awareness about health benefits and rising demand in urban markets. States such as Maharashtra, Gujarat, Karnataka, Andhra Pradesh, Tamil Nadu, and West Bengal have adopted dragon fruit farming on a commercial scale.

### CLIMATE AND SOIL REQUIREMENT

*Vivek Tiwari<sup>1</sup> and Radheshyam Ramkrishna Dhole<sup>2\*</sup>*

*<sup>1</sup>M.sc fruit science,*

*<sup>2</sup>Assistant Professor, Department of Entomology,*

*Narayan Institute of Agricultural Sciences, Gopal Narayan Singh University, Jamuhar,  
Sasaram, Rohtas-821305*

Dragon fruit grows best in tropical and subtropical climates with temperatures ranging between 20°C to 35°C. It requires moderate rainfall (600–1300 mm annually) and can tolerate dry conditions due to its cactus nature. Well-drained sandy loam soil with a pH range of 5.5–7.5 is ideal for cultivation. Waterlogging should be avoided as it can cause root rot. The plant can also grow in marginal soils where traditional crops may fail.

### **VARIETIES**

Varieties of Dragon Fruit

There are mainly three types of dragon fruit:

- ☞ Red skin with white pulp
- ☞ Red skin with red pulp
- ☞ Yellow skin with white pulp

Among these, red pulp varieties are highly preferred in the market due to their sweetness and higher antioxidant content.

### **PROPAGATION AND PLANTING**

Dragon fruit is commonly propagated through stem cuttings. Healthy cuttings of 20–30 cm length are planted after drying for 2–3 days. Tissue culture techniques are also used for large-scale commercial production. Plants are spaced at about 2 x 2 meters, and concrete or cement poles are used for support because dragon fruit is a climbing cactus. Around 400–500 plants can be accommodated per acre.

### **FLOWERING AND FRUITING**

Dragon fruit plants begin flowering within one year of planting. The flowers are

large, white, and bloom at night, hence often called “Queen of the Night.” Pollination may occur naturally through insects and bats, but manual pollination increases fruit set and yield. Fruits are ready for harvest 30–50 days after flowering. A well-managed orchard can produce 10–15 tons per hectare annually.

### **CONCLUSION**

Dragon fruit farming is a promising horticultural venture with high profitability and sustainability. The crop’s adaptability to different climates, low water requirement, and long productive life make it suitable for Indian conditions. With increasing health awareness and rising demand, dragon fruit has strong domestic and export potential. Government support, technological advancements, and improved marketing systems can further enhance the growth of this sector. Encouraging farmers to adopt dragon fruit cultivation can contribute significantly to income enhancement and agricultural diversification.

### **REFERENCE**

1. Indian Council of Agricultural Research – Research Publications on Fruit Crops.
2. National Horticulture Board – Horticulture Statistics and Reports.
3. Morton, J.F. (1987). Fruits of Warm Climates.
4. Bose, T.K., Mitra, S.K., & Sanyal, D. (2015). Fruits: Tropical and Subtropical. Naya Udyog Publishers.



5. Government of India. Mission for Integrated Development of Horticulture (MIDH) Guidelines.

