

Sapota (Chiku) Cultivation

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INTRODUCTION

Sapota (*Achras zapota*), belongs to family Sapotaceae, is commonly known as Chiku. It was originated from Mexico and widely grown in India and tropical countries of South America. In India, it is commonly grown for its fruits while in South-East Mexico, Guatemala and other countries. It is commercially grown for the production of chicle which is a gum like substance obtained from latex and is mainly used for making chewing gums. In India, major chiku producing states are Gujrat, Maharashtra, Karnataka, Tamilnadu, Andhra Pradesh and Kerela.



Varieties

In different states of India, different varieties of chiku are cultivated as shown in the table-

State	Varieties
Andhra Pradesh	Cricket ball, Kalipatti, Calcutta round
Bihar	Baramasi
Gujrat	Kalipatti, Pilipatti
Karnataka	Cricket ball, Kalipatti, DHS-1, DHS-2
Maharashtra	Kalipatti, Dhola Diwani, Cricket ball
Orissa	Kalipatti
Tamilnadu	Pala, Cricket ball, Guthi, PKM-1
Uttar Pradesh	Baramasi
West Bengal	Baharu, Gandhevi Barada

Soil

Deep alluvium, sandy loam, and well-drained medium black soil having pH 6-8 is ideal for sapota farming. Shallow clay soils with high calcium is not suitable for sapota farming.

Climate

It is a tropical fruit. It is grown in warm and humid climate. The region of altitude of 1000 m is suitable while the optimum temperature is 10-38 degree C and annual rainfall between 1250 to 2500 mm is suitable for sapota cultivation.

Field preparation

The field is ploughed 2-3 times and then levelled. Undulating land is divided into terraces and levelling is done. Tall and thick growing trees are established on the windward side or on all sides of the orchard. The plants for windbreak may be planted at a distance of 1.5-1.8 m in a row.

Planting material

Sapota is commercially propagated by vegetative methods such as air layering or gootee layering, grafting and budding.

Season

Planting of sapota can be done in any season. Grafts are usually planted at the beginning of the rainy season. In areas where heavy rainfall is present the crop can be planted as late as September.

Spacing

The land should be plowed at 30-45 cm depth and levelled. Usually planting is done at a distance of 10m x 10 m. A spacing of 6 m x 6m is maintained until the canopies meet. Subsequently, alternate trees are removed to reduce the plant's population.

Pit digging for sapota plantation

Pits of 30 cm are opened during summer and exposed to sunlight for 2-3 weeks. While opening the pits, the topsoil and subsoil are to be heaped separately. Each pit is filled with topsoil and subsoil is mixed with well decomposed farmyard manure.

Sapota planting method

The graft is planted in the hole in such a way that the graft union remains just above the soil

surface. The grafts are staked immediately after planting to protect from strong winds.

Irrigation

Drip irrigation is recommended. Irrigation is provided at an interval of 30 days in winter and 15 days in summer.

Fertilizers

For sapota cultivation, higher amount of nutrients are needed because the tree remains always in state of growth and fruiting. Generally 1 kg superphosphate and 500 g sulphate of potash is mixed with soil. Lindane powder @100g/pit is used to control termites.

Diseases**1. Moth (Leaf Webber)**

The symptoms are dark brown colored patches are formed on leaves which ultimately leads to withering and drying of tree branches.

Control: carbaryl@600 gm or chlorpyrifos@200 ml or quinalphos@300 ml in 150 ltr of water is sprayed at the interval of 20 days.

2. Bud worm

These are moth caterpillars which destroy the vegetative buds by feeding.

Control: spraying of quinalphos@300 ml or fame 20 ml in 150 lts of water per acre is done.

3. Hairy caterpillar

These destroy the plant by feeding on new shoots and twigs.

Control: spraying of quinalphos@300 ml in 150 lts of water per acre is done.

4. Leaf spot

Deep purplish brown color which are white from the center and are round in shape are seen. Long spots are observed on the stem of fruits and petals.

Control: spraying of copper oxychloride@400 gm per acre is required.

5. Heart rot

It is a fungal infection which causes decay of wood at the center of the trunk and branches.

Control: spraying of Carbendazim@400 gm in 150 ltr of water per acre is required.

6. Anthracnose

On stem and branches, deep sunken wounds of canker are seen and on leaves, brown color stains are seen.

Control: spraying of copper oxychloride or M-45@400 gm per 150 lts water is done.

Harvesting

Harvesting is done in July-September month. Unripened fruits are not harvested. Mainly

harvesting is done when fruits are having to fade orange or potato color and fruits having a less sticky milky color product and it is gets easily plucked from the tree.

Yield

Generally, 5-10 years old tree gives 250 to 1000 fruits.

REFERENCES

NHB, Database of National Horticulture Board, Ministry of Agriculture, Govt. of India.

TNAU Agritech portal, Horticulture.