



## ***Carica papaya* L. – Papita: Scientific Cultivation and Cultivars**

**M.K. Singhadiya<sup>\*</sup>, Sandeep  
Kr. Chauhan**  
Botanic Garden Indian Republic,  
Botanical Survey of India,  
Noida (UP)



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### **Article History**

Received: 10. 03.2024

Revised: 16. 03.2024

Accepted: 20. 03.2024

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### **INTRODUCTION**

‘Papaya’ is a polygamous species, and determination of sex until the time the flowering is difficult. Further, Papaya has varying degree of sex reversal influenced chiefly by temperature and humidity i.e., during summers the sex change is towards femineity and during winter’s reversal is to male phase. There are two types of male plants in papaya i.e., pure male and sex reversing male. Even pure male changes sex producing hermaphrodite flowers. Sometimes seedless fruits develop on pure female trees because of failure of fertilization. For commercial planting pistillate are preferred.

Propagated by seeds during February-April. Aril around seeds is removed before sowing by rubbing a number of seeds together. Seeds remain viable for several years, hence can be stored in airtight container.

Planting *in-situ* gives better results; however, the seedlings may be raised in polythene bags or in nursery and transplanted during monsoon. Soaking of seeds in water for 10-12 hours or in dilute cow-dung solution enhance the germination. Papaya requires regular light irrigation once in 5-10 days. Vegetative propagation by cuttings and grafting has so far given unsatisfactory results and, therefore, should be avoided. It is a fast-growing tree and comes into bearing within one and half year and produces fruits for about 4 months. Plants are very susceptible to water logging. Papaya may grow on any type of soils even alkaline or acidic provided it is well drained. Seeds are sown from February-April in pits. Generally, 3-4 seeds are planted in each pit. Later on, weaker seedlings are removed. Papaya is a heavy feeder, hence adequate manure such as dung-ash, bone meal and oil cakes should be applied during growing stage.

However, found wild, probably originate in West Indies and Central and Tropical America. Introduced in India in 16th century. Commonly cultivated commercially and in home gardens, orchards and shrubberies around bungalows.

Since 'papaya' is a cross pollinated tree and grown entirely from seeds, hence, bears fruits, which are highly variable from their parents. As such, it is very difficult to recognize cultivars. The well recognizable cultivars in the state are:

- i. **Washington** - Dwarf trees; stem with purple rings of nodes and leaf- stalk purple. Fruits oval, have a purple-coloured ring at the top where it is connected with the fruit stalk. Pulp yellowish to red. Seeds few.
- ii. **Coorg Honey Dew** - Fruits oval, ridged at apex borne heavily low on the trunk. Big central cavity. Plants hermaphrodite or few occasionally pistillate. The cultivar produces no male plants. Pulp yellow to orange.

- iii. **Coimbatore 1 & 2** - Dwarf trees, dioecious, fruiting above 1 m high from the surface. Pulp orange-yellow. Fruits obovate in Coimbatore 2 and spherical in Coimbatore 1.
- iv. **Honey Dew** - (Madhu Bindu): Fruits elongated. Pulp extra fine; seeds very less.
- v. **Pusa delicious** - (Pusa 1-15): A gynodioecious line. Fruits have deep orange-coloured flesh having excellent taste and flavours, round- oblong.
- vi. **Pusa dwarf** - (Pusa 1-45D): A dioecious line. Dwarf plants with oval, juicy fruits; flesh blood red to orange.
- vii. **Pusa Giant** - Dioecious, rigorous trees. Fruits large, oblong, flesh orange.
- viii. **Cultivar Gujarat** - Medium-sized tree with white flowers. Fruits ovate, large, sweet to somewhat bitter, flavour slightly objectionable.
- ix. **Pusa majesty** - Gynodioecious plants. Fruits medium to big, round- oblong, flesh firm.