

PRODUCTION TECHNOLOGY OF PERSIMMON



PERSIMMON (*Diospyras kaki*)

INTRODUCTION

- Family – Ebenoaceae.
- Chromosome no (2n) – 90
- Origin – china
- Persimmon is considered as the national fruit of japan.
- Edible part – mesocarp & epicarp.
- Type of fruit- berry
- Inflorescence –cymose (solitary).
- In india persimmon was introduced by the european settlers somewhere in 1921.
- At present it is being grown on a limited scale in jammu&kashmir, Himachal predesh, hilly area.

BOTANY

- Persimmon is a dicotyledoneae fruit
- Generally dioecious, sometime monoecious deciduous tree
- Terminal bud absent, lateral buds 2-4mm with reddish brown
- Leaves have short and thick petioles
- **NUTRITION-VALUE** (per 100g)
- Protein-0.8g ,fat-0.4g,vitamin-A-450mg,vitamin-c-40g, calcium-27mg,iron-2.5mg, phosphorus-26mg

CLIMATE & SOIL

- Persimmon can be grown in a wide range of subtropical and warm temperate region.
- Most cultivars have little chilling requirement(100-200 hours below 7.2°c) to ensure uniform bud break.
- The best quality fruit in non-stringent cultivars produced in the region where an average temperature during autumn season is between 16 and 22°c
- Persimmon perform best on well drained, lighter soil, which have a good sub soil containing some clay sandy loam soil.
- The soil PH for optimum growth is 6.0-6.8.

VARIETIES

NON-ASTRINGENT	CHARACTERS
Fuyu	Originated from japan,fruit size 200g,keeping quality good
Jiro	Fruit contains usually 1-2 seeds,fine texured
gosho	Old variety ,fine texture & sweet taste
Ito	originated from japan
ASTRINGENT	CHARACTERS
Hachiya	Widely adapted cultivar , fruit is large with orange -red
Kojongsi	Originated from korea , oblong shaped fruit , high suger content
Tonewase	Originated from japan

PLANTING

- The pits of 1X1X1 M are dug out
- The planting distance for persimmon depend on cultivar, rootstock and soli type
- Generally trees are transplanted at a distance 5.5 – 6.0M .
- Dwarf cultivar (jiro) can be closely planted at 5X2.5 M (800trees /hac)
- Semi dwarf cultivar (fuyu) at 5X3M (660trees / hac) and vigorous cultivar at 6X4.5M (370 trees /hac)

PROPAGATION AND ROOT-STOCK

- Persimmon commercially propagated by grafting.
- Grafting should be conducted during the dormant period, before vegetative growth begins, on rootstock at least 1/3 inch diameter.
- The scion should be 1/4 to 1/3 inch in diameter and about 3 to 5 inches long with 2 to 4 buds.
- D. kaki tree may be grafted or budded on seedling of three rootstock- D kaki, D lotus, D virginiana. suitable time – jan-feb

AFTERCARE

- There are two form of pruning and traning kaki tree
- Dwarf cultivars are suited to modified central leader system
- Vigorous and semi dwarf cultivars suited to palmette system
- The plant need staking to keep them in a straight position
- The young plants at the time of planting require watering at 8-10 day intervals

MANURE AND FERTILIZER

- Generally a basal dose of 40-50 kg FYM is applied every year for mature tree.
- After 5 year of age 500g N, 100g P, 450g K,500g Cao should be applied per tree per year.

PHYSIOLOGICAL DISORDER

- Chilling injury-it is the main physiological disorder.
- Control-the optimum storage and transport temperature is 0 (32 F).
- Rosette-caused by the lack of zn.
- Control-application of zinc sulphate @0.05 %.

MAJOR INSECT-PEST AND DISEASE AND THEIR MANAGEMENT

- Mealy bug- can be controlled 2% neem oil when 1ml/litre with fresh oil resin soap @25g/litre give effective control



- Fruit piercing moth- eudocima fullonia.
- Persimmon phylloxera, truck bober ,mites , whitefiy .
- **DISEASE –**
- Anthracnose- can be controlled by sanitation and spray with 1% bordeaux mixture or 0.25% copper oxychloride.
- ,sun scale, fruit drop, leaf spot

HARVESTING AND STORAGE

- The persimmon tree start bearing 4-5 years after planting
- Brix level at maturity in different varieties varies between 14 and 17c
- Average yield 50-100 kg/plant
- The optimum temperature for storing persimmon at 30-32°C and RH should be maintained at 90-95%, for 2-3 months



THANK YOU