

# PERSIMMON CATALOGUE

## DIOSPYROS

Persimmons belong to the genus *Diospyros*, in the Ebony family, and are fairly common trees in the warmer regions of the world, particularly in Asia and North American. In Japan the fruit is third in importance to citrus and apples.

The genus *Diospyros* contains many species. There are mainly four species used for the commercial production of fruit, principally *D.kaki* (Oriental or Japanese Persimmon), *D.lotus*, and *D.virginiana* (Native American Persimmon).



## POLLINATION

Persimmon varieties are classified into two main groups known as pollination constant and pollination variants. Pollination constant do not undergo any change in flesh colour as a result of pollination; varieties in this group include Hachiya, Tanenashi, Fuyu and Tzuru. Pollination variants are subject to darkening of the flesh as a result of pollination and formation of seed. (this includes Maru, Yemon, Gailey, Hyakime and Okame)

Varieties are also subdivided into pistillate constant, which have only female flowers and include all varieties mentioned in the previous paragraph except Gailey and staminate constants, which produce only male flowers and which include Gailey as the only common variety.

## VARIETIES

There are two types of Persimmon fruit, astringent and non-astringent. Astringent fruit are acid tasting and make your Mouth pucker unless fruit is soft ripe. Fruit of the non-astringent varieties can be eaten when they are firm ripe.

## A. NON-ASTRINGENT/POLLINATION CONSTANT

**FUYU** – Also known as Fuyugaki, is medium to large in size approximately 6 cm deep and 7 cm in diameter. The shape is oblate and the base sometimes has four creases extending outward from the stem. The Apex of the fruit is depressed to form a smooth, shallow basin. The skin is orange-red and tough. The flesh is firm and of deep orange and contains minute widely scattered dark specks. The flavour is sweet, with no astringency, even in the unripe fruit. The fruit frequently contains a few long seeds.

**SUNAMI** – A large fruited bud mutation of Fuyu recently planted in Japan. The fruit matures 10 days before Fuyu, it is yellow in colour and weighs approximately 300 grams.

## B. ASTRINGENT

**O'TANE NASHI - POLLINATION VARIANT.** The Japanese word tane means 'seeds' and nashi 'without'. The fruit is symmetrical, of roundish conical shape with slightly rounded apex, and very large – 7.5 to 10 cm long and almost as broad. The skin is a light bright yellow until the fruit is almost mature, when it changes to a brilliant red. The flesh is yellow, or a peculiar pasty consistency, of very high quality, and astringent until ripe.

**TANE WASE** Not much is known about this variety. The sugar content is very high (18.2 Brix).

## ROOTSTOCK

*Diospyros Kaki*, the common fruiting oriental or Japanese persimmon, produces seedlings with long taproots that have few fibrous laterals. Varieties that do contain seed generally produce uniform vigorous seedlings, providing the most desirable rootstock for propagation purposes.

## DISEASE

Persimmons are very susceptible to the bacterial disease crown gall and it is essential to treat seedlings and nursery trees with a registered inoculant before planting.

## FLOWERING

To understand pruning of persimmon trees, you need to comprehend the growth and fruiting habits. Flowers are produced on new growth in the spring period. This new growth emerges from one-year-old wood. We can refer to this one-year-old wood as fruiting wood. It is the light-

brown growth you see on trees in the dormant period (winter).

The best fruiting wood is about 1 cm thick and 30 cm long. It usually has about ten buds. The end four to six buds will produce new growth in September to October, and these will have flowers. The bottom two to three buds will produce weak non-bearing laterals. These weak laterals usually die out.

The flowers will be produced in the bottom (first) few leaf axils of the new growth. Many of the flowers will be shed or must be thinned out to leave one to two fruit per lateral. Vegetative growth will continue until about December.

If no pruning is done the fruiting wood will be produced further and further away from the main leader. There will be more but smaller fruit. Limb breakage may occur.

## **PRUNING**

### **FREE STANDING CENTRAL LEADER**

This is fairly inexpensive and a simple system to develop. For these reasons it is the system most commonly used. Disadvantages are that trees become fairly tall and because it is untrellised, limb breakage and fruit rub can be a problem. Spacing will vary with cultivar and soil depth. A suitable spacing for Fuyu on fertile soil is about 6m x 5m.

### **PRUNING YOUNG TREES**

The aim of pruning in the first 3-4 years is to develop the main framework of the tree.

A grafted persimmon tree, obtained from a nursery, usually consists of a single stem. Pruning is needed to encourage a strong central leader with tiers of branches at 70 cm intervals up to the trunk. The usual times to prune are August and late November.

The first pruning is just after planting. If there is no branching within 50 cm of the ground, cut the single stem at that height. If the central leader is not the highest point, the tree should be pruned.

Over the next two-three years the central leader should be pruned about every 70 cm to encourage branching at those positions.

## **PLANTING**

Persimmons are best planted when fully dormant in June or July. The tree has rather fragile roots and an extensive taproot system (on kaki stock), therefore transplant it with great care.

It is strongly recommended that container-grown plants be used in preference to open grown stock as these suffer less transplanting shock. Irrigate the trees immediately after planting. Trees that are not handled carefully during and shortly after planting will never develop satisfactorily and may become permanently stunted. Trees that suffer initial setback rarely develop a satisfactory root system and generally lack vigour.

## **SOIL MANAGEMENT**

Management practices should aim at maintaining soil fertility at the highest possible level so trees grow vigorously, produce consistent crops and are long-lived.

Avoid excessive cultivation, as erosion will occur, due to soil instability. Keep the cultivation as shallow as possible, just enough to control weed growth and to avoid damage to the trees fibrous root system.