



UNIVERSITÀ
CATTOLICA
del Sacro Cuore



PRODUZIONE DI CIBO APPROPRIATO: sufficiente, sicuro, sostenibile

AVOCADO (Fam. Lauraceae, *Persea americana* Mill., syn. Alligator Pear)

PLANTING

Tropical and sub-tropical fruits plants are evergreen and they arrive from the nursery in container or with a root ball. So to planting out it is necessary prepare a hole with the soil broken up below and to the sides to allow root penetration. The hole may have the diameter double of the diameter of the container but at least about 60 cm width, 60 cm length and 60 cm depth, in this way plants should be planted at the same depth as they were in the container.

Generally it is beneficial to dig in a small amount well-rotted manure or granular fertilizer, below the root zone. Plants also benefit from organic compost being mixed with the soil above the layer with the fertilizer: in this way the roots are not in direct contact with its. Add water directly to the top of the root ball to ensure the roots are kept moist, while keeping the trunk as dry as feasible. And, finally, control that the graft is not covered by the soil (fig. 1).



Fig. 1

BEST LOCATION AND TREE SPACING

Avocado grows best in full sun, though can tolerate a little shade. The best site is a protected and warm area. In fact, it is susceptible to wind damage, which breaks branches, reduces fruit-set and yields and scar fruits which leads to disease, bruising, etc. Trees benefit from organic mulch and from staking, until well established. However, once established the avocado is a fairly tough tree: it can reach a height of 15-20 m (fig. 2). So it is necessary to space the plant at 5-8 m to form a square.



Fig. 2

PRUNING

Most of the plants of avocado arrive from the nursery with one central woody axis. It is important remove the tip of this small stems to encourage a more bushy form (fig. 3). As a consequence the pruning is done in the first two years to get 5-8 branches spaced between them, very robust, to obtain a rational form like a vase with a rounded shape. Most trees are usually never pruned: if branches become exposed to the sun they become susceptible to sunburn and die-back. Pruning is only necessary to shape young trees and remove diseased or damaged branches, though you can prune very vigorous stems to reduce tree height. In some cases branches may need propping up to avoid breakage from the weight of fruits if they are not naturally dropped.



Fig. 3

FRUITING BIOLOGY

Avocado varieties are classified into A and B types according to the time of day when the female and male flower parts become reproductively functional. Avocado flowers may be both self and cross pollinated. Self-pollination primarily occurs by wind, whereas cross pollination may be effected by a large flying insects species. It is important to plant them in rows alternating A and B types which bloom simultaneously to facilitate adequate pollination.

FRUIT USES

The fruits are pear shaped, oval or almost round (fig. 4). They are used fresh in salads or added at other type of foods. It is also possible extract the oil from the oily pulp (10-34% of oil content). In general they are a highly digestible fruits recommended as a baby food and as a long-lasting energy source due to at the high content of protein and potassium and magnesium.



Fig. 4