

Orange (*Citrus x sinensis*)

Common Names: Orange

Order: Sapindales

Family: Rutaceae

Genus: *Citrus*

Species: *x sinensis*

Growth Habit: small-medium tree

Height: 1.5 (dwarf)-10m

Width: 1 (dwarf)-10m

Description: a dense, rounded canopy with glossy evergreen leaves that are oil-filled and ovate in shape with crenulate edges.

Flowers: creamy white, five-petalled flowers appear as either singles or in clusters, on new wood or semi-mature growth. They have a sweet, citrus perfume.

Fruit: both the skin and flesh of the spherical or oblong fruit are orange in colour when mature. Inside the thick, oil-filled rind is a white, bitter, inedible pith surrounding ten juice-filled segments that contain up to six seeds. Unripe fruit is green, ripening to bright orange.

C. sinensis is subdivided into four classes with distinct characteristics: common oranges, navel oranges, blood or pigmented oranges, and acidless oranges.

Valencia (a 'common orange'): few to no seeds. Ripens from mid-September but will hold fruit for many months. Sweeter fruit. Juice does not go sour in fridge. Fruit has an average diameter of 70–76 mm. Often carries two crops on the tree at the same time, fruit from last season's flowers, and flowers for this season. First harvest at 3yrs of age.

Navel: seedless (has to be propagated by grafting). Identified by the growth of a second fruit at the apex which protrudes slightly and resembles a human navel. Thicker skin makes them easier to peel. Less juice and higher bitterness makes them more suitable for the fresh fruit market rather than for juice production. Fruit ripen Autumn-Winter.

Blood: natural mutation with higher concentrations of anthocyanin that gives the flesh and juice the distinctive blood-red colour. Flavour differs and is considered superior to other oranges.

Acidless: very low acid levels results in short shelf life and unsuitability for juice production or export.

Location Preferences: tropical and sub-tropical climatic zones with deep, fertile, free-draining, sandy-loam soil with pH 6-7. Prefers a sheltered area. Can tolerate a semi-shaded position but full sun will produce more flowers and fruit. Sensitive to frost but are more tolerant than lemons and limes. Do not tolerate waterlogging.

Irrigation: supply regular water when young (at least once or twice/week). Once established, water deeply every 2-3 weeks, more as fruit is forming and in hot, dry weather. Droughted trees will jettison fruit, especially in hot weather.

Maintenance: it is not necessary to regularly prune oranges to produce fruit. However, pruning them to 2-3m will aid access during harvesting. Conduct regular maintenance prunes to remove dead or diseased wood, crossing branches, congested growth (improving air flow within the tree will decrease the likelihood of fungal diseases and improve access if pest spray is required) and citrus gall wasp galls. Heavier prunes, to maintain overall shape and height may only be needed every 2-3 years.

Citrus prefer a good supply of trace elements. Test and maintain a slightly acidic soil (pH 6-7) to ensure access to iron, magnesium and zinc. Signs of deficiency include yellowing of the leaves (leaf veins remain green) and slowed growth. Regular foliar feeds with seaweed emulsion and fertilising trees in spring and autumn with compost and/or worm castings can assist in prevention.

Fertilise with a well-balanced organic citrus food in July, November and February. Spread evenly around the tree and



out to 1m beyond the canopy. Water in well.

Pests and Diseases: scale (and the associated ants and sooty mould), leaf miners and gall wasp are the main pests. Sap-sucking bronze-orange stink bugs may also be a problem. Unless infestation is great most damage done is only superficial. Prevent by keeping the tree healthy. Avoid wholesale pest sprays as this will also kill pollinators.

Other notes: the juice of 'Valencia' does not go off and turn sour in the refrigerator like the juice of 'Navel' does, but 'Navel' also ripens in Autumn-Winter, allowing for harvest and processing during the cooler months.

References:

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