PLANTING OLIVE TREES

By Paul Vossen

For planting container trees larger than 1-gallon see the UC publication on Planting Landscape Trees #8046 available free from the University of California Department of Agriculture and Natural Resources online at: http://anrcatalog.ucdavis.edu



Ideal 1-gallon tree

Olive trees for orchard planting usually range in size from 4-inch pots to 1-gallon sized containers. 4-inch potted trees are normally about 18-24 inches tall with numerous side branches. 1-gallon sized trees are usually about 4-5 ft tall with a single trunk and branching starting at about 3 ft. Trees larger than this have often been kept in their container too long, are frequently root bound, and are not actively growing. Ideally trees should be actively growing, so that after transplanting into the orchard, they will just continue to grow. Actively growing trees have new, soft growth at the end of shoot tips. Stunted inactively growing trees will tend to just sit there for several weeks or months before beginning to grow.

Unless the desire is for a low bush shaped tree with multiple trunks, the single trunk tree is much preferred. Single trunk trees provide a location for trunk shakers to grab onto, if trunk shaking becomes a harvest option later on. Multiple trunk trees tend to grow wide into the row and the outermost shoots

grow as vigorously as the leader making it difficult to form the ultimate tree shape. It is also easier to control weed competition around single trunk trees. In order to change 1-gallon multiple trunk trees to a single trunk, they should be pruned at the time of planting or allowed to grow for a year before pruning. Remove all side branches up to 3 ft from the ground. 4-inch potted trees should be allowed to grow a year in the orchard before removing the lower side branches.

Normally olive trees are spaced about 20 ft apart, because that is the ultimate size of an olive tree. Even compact growing varieties ultimately will get this big unless continuously pruned to keep them smaller. Sites with deep soil, high moisture holding capacity, and high fertility should have the trees spaced farther apart than sites with shallower soils, poor water holding capacity, and low fertility or less intensive management. There is no exact recipe for tree spacing. It depends on the variety, climate, proposed harvest method, tree training system, fertility, irrigation management, and soil conditions. Spacings range from as close as 3 ft x 12 ft to 28 ft x 28 ft and every combination in between.

Planting Instructions

- Dig the planting hole about the same size as the container.
- Remove the tree from its container and examine the roots. Untwist or cut any circling roots, but otherwise disturb the root ball as little as possible.
- Place the tree in the hole slightly higher than grade level and place about one inch of soil on top of the root ball while building up the grade slightly with the original soil from the hole and some surrounding soil. Do not add soil mix, compost, or fertilizer to the planting hole. The tree has to grow out into the native soil; adding a nice soil mix to a large hole creates a potted effect and limits root growth out into the native soil.
- Do not add gravel or place perforated drainage tubing under the planting hole. This actually reduces drainage and can make a poor drainage problem worse.

- It is preferable to not to have to stake trees, because they tend to have stronger trunks and the cost of the stake can be omitted. Tall trees grown in the nursery tend to be leggy and top heavy, however. If the tree flops over, either prune back the ends of the top branches or stake the tree and tie it loosely to the stake until it can stand on its own. Windy areas will require larger stakes.
- Weed control is extremely important to newly planted young trees for the first few years. There should never be any weed competition within 3 ft of young olive trees. Use fabric mulch, organic mulch, frequent mechanical cultivation, hand hoeing, herbicides, flaming, or whatever it takes.
- Place drip irrigation emitters right next to the tree trunk if planting in the late spring when weather can get hot. Olive trees were probably irrigated daily in their nursery pots, so they will need to be irrigated at the root ball every day throughout the summer. Next year the emitters must be moved away from the trunk at least 24 inches. Then place another emitter on the other side, no closer than 2 ft. to have two per tree. With Autumn planted trees, the emitters can be placed 24 inches away from the tree in the Spring.



May growth and bloom from a September planted, 4" potted tree

• Mini sprinklers should ideally be spaced to wet the area between trees without wetting the tree trunk. They should be run long enough to wet down about 2 ft. (usually applying about 4 inches of water). Place some empty cans under the mini sprinklers in order to determine their application rate. Most mini sprinklers apply about 0.10 to 0.20 inches of water per hour, so they would have to run approximately 20 to 40 hours to apply 4 inches of water.





- Begin irrigating the trees as soon as the soil becomes slightly dry. Drip irrigated trees should be watered every day for about an hour during the summer months. Mini sprinkler irrigated trees should be watered about twice per week. Once the trees become well established the irrigation frequency and duration can be modified.
- Fertilize newly planted olive trees only after good growth begins in the spring. Place the nutrients directly below or through the irrigation system. The trees mainly need some nitrogen. Use compost, conventional fertilizers, or concentrated organic fertilizers.
- Train the trees as little as possible the first 4 years, only the minimum to maintain tree form. Most trees in the open center form should only have their trunk cleared of side branches below 3 ft and suckers removed. In the 4th to 6th years the trees are shaped into their ultimate form. Removing too much growth through excessive pruning on young trees can significantly stunt the tree's growth and delay production.
- Central leader trees should be tied frequently to a stake placed right alongside the tree. Any vigorous upright side shoots (waterspouts) should be pruned out, but all flat lateral shoots should remain unheaded.



1 year old central leader olive trees in the super high density system.

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