

# Planting Olive Trees

## Site Selection

Extreme cold is not compatible with olive production. They do require some chilling for fruit set: about 200 hours of winter temperatures below 45° F. The University of California guidelines state that temperatures below 22° F can kill young trees and cause branch die back on older trees. Mature trees are said to be at risk at temperatures below 15° F.

There are many variables in cold tolerance, including the variety, the severity of temperature fluctuations and water status. Microclimates can also be critical when temperatures are low, so avoid frost pockets and stagnant areas. Cold temperatures, or extremely hot and windy conditions, during bloom in April or May can be a problem, causing poor fruit set. Freezing before harvest is troublesome also. Temperatures below about 29° F will freeze the fruit and cause defective flavors in olive oil.

Olive trees can thrive in a fairly wide variety of soil conditions with one exception: *they are completely intolerant of poor drainage*. Waterlogged soil causes the death of more olive trees than anything else. Soils with a moderately high clay content are not completely off limits, but you must compensate by planting on a hillside or on a berm. A soil test will reveal any nutrient deficiencies or toxicities in a particular location. Olive oil production does not benefit from first-rate soil; modest fertility will produce the best olive oil. One other important issue when selecting a site is the cropping history of the location. If the field has been planted in tomatoes, cotton, peppers or any other verticillium susceptible crop, the soil should be tested for the presence of the pathogen.

## Varieties

There are many excellent oil and table varieties available. Popular dual purpose olives include Mission, true Picholine (not “Redding” Picholine) and Manzanillo. If you are interested in producing olive oil, the Tuscan blend of Leccino, Frantoio and Pendolino (the pollenizer) is a good choice. If you want olives just for appearances, plant a fruitless variety like Wilsonii or Swan Hill. These will produce little, if any, fruit.

For home gardeners, it makes sense to plant big trees if you can afford to; 5 gallon trees are a good choice if you can find the variety you want.

## Irrigation

New plantings of olive trees will do best if they are well watered. Even though olives are famously drought tolerant when established, they benefit from regular, deep watering, especially when young. Your soil type will have a big impact on water needs, so monitor your irrigation carefully; you want to give the trees adequate water but avoid “wet feet.” When the trees are first planted, it is critical that a drip emitter be placed close to the trunk so that the root ball of the tree is being watered. As the tree grows, however, you want to move the emitters away from the trunk to encourage the roots to spread. The majority of a tree’s roots are at the drip line of the canopy, so don’t crowd the emitters close to the trunk.

## Fertilizing

Nitrogen is the only fertilizer most olives will require. While the trees are getting established, feed them regularly. Once you are producing olives you will want to reduce the amount of nitrogen to improve the quality of the oil; many growers feed their trees every other year (during a heavy crop year).

## Pruning and training

In general, olive trees should not be pruned for the first four or five years. The more foliage an olive tree has, the more energy it produces, so you don’t want to remove growth when the tree is getting established. The primary exception to this is training to a single trunk, if desired, to make weed management, harvest and other

practices easier. Remove suckers and large branches that develop below three feet on the trunk. It is not necessary to strip the lower trunk completely during the first few years, but cut back any substantial branches to eight inches so that they don't compete with the main trunk. At four or five years you will do the first major pruning to open up the center of the tree and create a good scaffold. If you are training to multiple trunks then simply remove suckers for the first several years while the trees get established.

### **Planting**

Dig a hole that is one-and-a-half to two times the diameter of the container. Pay close attention to the soil level when you plant an olive tree; you want the final soil level of the planted tree to be at the same place as the ground level was in the container. Don't dig the hole too deep or you can have problems with the tree sinking. This is bad because it allows water to pool around the crown of the tree. Score the sides of the planting hole to roughen it and avoid root circling. Make a mound of soil in the bottom of the hole for the root ball to sit on. When you remove the tree from the pot, loosen the roots and unwind any that are circling. If they are troublesome, go ahead and cut them. You want the roots to be untangled and draped down around the mound of earth to encourage them to grow outwards. Plant the tree a little bit high to allow for settling.

### **Weed management**

Controlling competition from weeds will make a big difference for your newly planted olive trees. There are many ways to manage weeds, from organic mulch to synthetic herbicides. Each method has its pros and cons so you need to make a decision based on your needs and convictions. But be sure to do it. Poor weed management will stunt the growth of your trees and delay the onset of production.

Use of organic mulches will reduce soil moisture evaporation and enhance soil biological activity while suppressing weeds. A three to five inch layer of organic mulch such as (weed free) straw or tree chippings applied under the trees will significantly reduce water evaporation from the soil's surface, suppress germination of weed seeds, and will slowly decay, providing a source of carbon—food for microorganisms in the soil.

—**Alexandra Kicenik Devarenne and Tom Nemcik**