

## How to plant a fruit tree

### PLANTING & CARE OF FRUIT TREES PRE-PLANTING CARE

If planting cannot be done immediately, fruit trees should be stored in a cool area for up to two weeks. Do not store trees in a closed area with fruit because Ethylene gas emitted by fruit will kill trees. Keep roots moist by spraying with water as needed. If planting will be delayed further, trees should be 'heeled in' by planting temporarily in loose soil as soon as possible. See general "Tree & Shrub Planting Guide" for more information. Learning about fruit tree care is essential for any gardener wishing to produce healthy, quality fruit. Fruit tree care can be very complex and intricate at times. While consulting a professional is often the best course of action to resolve any serious fruit tree problems, knowing a few basics about fruit tree care can save you money and give you the satisfaction of caring for your own orchard.

### CHOOSE AND PREPARE THE SITE

Select a site with direct sunlight, and full sun all day for best fruit production. Don't plant in shady locations that don't get at least half a day of full, direct sun light or you can expect weak, spindly trees, poor foliage, and poor fruit set. Allow enough room between the planting site and buildings, trees, power lines or other obstructions to allow tree to fill its space when full grown. For cross-pollination, plant trees within 50 feet of one another. Fruit trees are tolerant of a fairly wide range of soil types, but the soil should be well-drained, with a minimum of 18 inches of soil above any hardpan. They will not tolerate soils where water remains on or near the surface for more than one hour after a heavy rain. Trees should be spaced at least 15-20 feet apart and planted to allow for proper water drainage. The location should also have good air drainage, keeping low-lying cold air in the spring away from the tree. • If you are planting out in the lawn, consider marking where you want to plant individual trees, and several weeks before planting, kill the grass in a circle three feet in diameter at each tree site with Glyphosate(RoundUp®) or other similar broad-spectrum or grass-specific herbicides. The killed grass will make a good mulch for a year or so, and is easier to dig through than living grass. • If you are planting in worked up soil, make sure you remove rocks, roots, and other debris that you don't want present. In fresh soil, don't plant if it is muddy or too wet, but wait until it dries out and is more tillable. • If soil conditions are too dry, water your tree locations first and bring the soil moisture levels up so that adequate moisture will be available to the tree after transplanting, including the soil outside of the hole walls to encourage new roots to expand in that direction.

### HOW BIG OF A HOLE TO DIG?

Dig a hole large enough to hold all the root system of the tree and deep enough to cover the roots properly, approximately twice the diameter of the root system, and two feet deep. Do not plant too deep as trees will suffer and growth will be poor. Plant trees with the graft union exposed and 2-3" above ground level (see diagram on page 2). Fruit trees have a visible graft union which usually looks like a crook or jog above a straight rootstock and below the straight trunk. Above the graft union is the "scion" or actual variety of fruit that you hope to harvest. Below the graft union is the rootstock, the roots that take up moisture and fertilizer, anchor the tree, and determine the amount of dwarfing characteristic the fruit tree will have. This planting depth is critical for trees on dwarf or semi-dwarf rootstocks. If the tree is planted too deep and the graft union is below the soil line, the scion variety will form roots and the tree will become a

standard-sized tree. Hand digging: If you hand dig holes with a shovel, try to avoid glazing the sides of the hole when digging. Take a hoe or rake and loosen the soil on the sides and bottom so that newly growing roots can easily penetrate the sides and bottom, without "hitting a wall".

## **AUGERING**

If you auger holes with a power auger, you will almost always have glazed and hardened sides, even in sandy soils. Loosen them up as described for hand-digging so that you aren't forming something similar to a "clay pot" in the ground. 1 PLANTING Spread roots out in the hole on the loose soil, ensuring that they are not twisted or crowded. If roots are too long or stiff to easily fit into the hole, trim them slightly. Use the least amount of trimming on roots, as the roots hold all the energy and food that the young tree needs to get started with. Trimming the roots too much will result in poor initial growth. Fill the hole with soil in layers and press down the soil firmly around the roots to insure good soil contact and remove air pockets. Air pockets will cause the roots to dry out, not take root, and possibly slow initial tree growth down, or even dry out and kill the tree. It may be helpful at this stage to have someone hold the tree straight while the hole is being filled.

## **WATERING**

After the hole is filled, immediately water trees with 3 – 5 gallons of water to saturate the soil, pouring slowly enough so that the water doesn't run off. After settling, insure that the graft union is still 2 - 3 inches above the soil level and adjust as necessary. Leave an inch or more of unfilled hole to allow you to water easily so you can fill it up and let it soak in. When rainfall is not adequate (less than an inch of rainfall per week), add 3 – 5 gallons of water to newly planted trees at least once each week during the first growing season. Watering the new tree is important to help get it started, especially in the first few weeks after planting. SOIL

## **AMENDMENTS**

What should you put in the planting hole? Only roots, clean soil and water! Use your natural soil as much as possible and minimize the use of soil amendments. If the soil is poor, you can mix in peat moss or thoroughly conditioned compost before filling the hole. A ratio of up to 50/50 peat to soil may be beneficial. Plant the tree deep enough so that the graft union is two to three inches above the ground. This planting depth will keep dwarf and semi-dwarf trees from growing into standard-sized trees. The roots of a fruit tree eventually grow out and extend out past the "drip line" of the tree. The drip line is the farthest reach of the limbs, and in fact, many roots will go farther out than this. So logically, if the roots reach that far out, then any soil amendments in the hole really doesn't go very far. You want to encourage roots to extend far outside of the hole into the natural soil as fast as possible, and amendments may discourage that natural extension. Fruit trees are very resilient and are forgiving of nearly any type of soil as long as they receive adequate irrigation and nutrients. Adding a thick layer of organic mulch around the base of your fruit trees helps provide nutrients for the tree's feeder roots. These feeder roots are more abundant along the drip line of the tree.

## **FERTILIZING**

Never add fertilizer when planting a fruit tree. The fertilizer can burn the young roots and cause a great deal of damage. If you have not had a soil test done for your soil, a general

recommendation is to apply 1/2 pound of 10-10-10 fertilizer or its equivalent 7 to 10 days after planting and the same amount again 40 days after planting. Broadcast the fertilizer evenly, 8 to 12 inches away from the trunk, and work into the top few inches of soil. Trees should be well watered after fertilizing. In the second and third years after planting, the tree should receive 3/4 pound of 10-10-10 in March and again in May. Broadcast the fertilizer around the outer edge of the tree keeping the trunk area free of fertilizer, and work into the top few inches of soil. Trees should be well-watered after fertilizing.

## **WEED CONTROL**

Good weed control is very important in the immediate vicinity of transplanted trees to reduce competition. Mulch, herbicide or cultivation may be used to prevent weeds. Do not cultivate the soil surface within the area of the planting hole to avoid damage to the roots. Composted mulches are useful for weed control and retaining soil moisture however soft mulch materials can harbor mice and voles. Large hardwood chips are less likely to harbor damaging rodents. Crushed limestone or pea-sized 2 gravel is also a good material. A bushel of stone per tree, 2 - 3 inches in depth extending 2 – 3 feet around the base of the tree is adequate.

## **PEST MANAGEMENT**

Managing disease and insects usually doesn't become a big challenge until the trees begin to fruit. Inspect the trees on a regular basis to see if there is fresh damage. Insects like aphids, leafrollers, mites, moths, slugs, and maggots can all destroy fruit trees. In addition to insects, molds, mildew, blights, scab and brown rot can be problematic for fruit trees as well. Because insect infestations and diseases can be very contagious, you must treat any problems quickly to prevent infecting neighboring trees. Contagious outbreaks can even spread to professional orchards and drastically affect fruit production for that season and possibly the following season as well. Contact the Master Gardeners at the Washtenaw County MSU Extension office (734-997-1819) for help in identifying any diseases or pests and the appropriate treatment methods. Protect the tree trunk against girdling by rabbits and rodents. Spiral guards, made of white plastic, are a popular and inexpensive option. The white color also helps prevent winter injury to the trunk. However, this type of guard should be removed during the summer and re-fitted in the fall to prevent it from becoming a safe haven for trunk-boring insects. An alternative solution is to paint the trunk with white interior latex paint and wrap the trunk with an 18-inch tall piece of galvanized hardware cloth. This type of guard doesn't need to be removed in summer. Deer can cause major damage to young fruit trees by feeding on the developing shoots and leaves in summer, and by browsing the fruit buds in winter. Repellents or home remedies such as small bars of hand soap, or small cloth bags of human hair, can deter hungry deer. Sturdy fencing is the only long-term solution to possible deer damage. Controlling Birds in Cherry Trees If you don't work to keep birds from getting to your cherry tree, you stand to lose a serious portion of the harvest. Here are some methods that other home gardeners have used: Netting: Smaller trees can be wrapped in netting. Use a fine mesh netting to reduce the possibility of birds becoming caught in the netting. It is very effective until the tree grows so big that it becomes impractical to cover it. Another way to cover the trees is to build a cage or square wooden frame that will sit over your tree. Netting can then be attached to the frame. Aluminum Pie tins on a string: It's an old favorite. But, it can be irritating to you and the

neighbors. Noisemakers: Anything that is loud and sporadic will startle the birds. Fake Predators: Plastic and blow-up owls and snakes.

Planting and Care of Young Fruit Trees via UC DAVIS:  
<http://homeorchard.ucdavis.edu/8048.pdf>

## **FRUIT TREE CARE**

### **I. Irrigation schedule.**

#### **A. Fruit Trees**

May-October: 3x per week for the first year followed by 2x per week in subsequent years.

November-April: 2 x per week. per week for the first year followed by 1x per week in subsequent years.

After the first three years the fruit trees and grape vines will be irrigated on the same schedule as the rest of the trees in the park. Like any newly planted tree, they will need an increased schedule of watering during their first three years.

### **II. Fertilization schedule.**

The soil in the park is fertile such that neither the fruit trees, the grapes nor the herbs need supplemental fertilizing. However, if the other trees in the park are on a fertilization schedule, they will benefit from it too. An all-purpose fertilizer will serve well.

**III. Pruning.** While pruning is good for the trees, it is not truly necessary to their thriving. We have enclosed basic pruning instructions (in Addendum) and community members are already organizing themselves into a volunteer maintenance team (see details below). Pruning is necessary for good grape production.

### **IV. Artist Intention**

The proposed trees, herbs and grapes do not need to look like a professionally maintained orchard. They are intended to blend into the general environment of the park and neighborhood and thus can look more casual, following their natural growth pattern. All of Fallen Fruit's work tries to maintain this casual and friendly look.

### **V. Community Involvement**

We hope to enroll the larger community members and neighborhood activists of Omaha to feel a sense of investment in and responsibility for the fruit trees. While the trees will flourish with a minimum of care, the project will be most successful with the buy-in of the local residents. Ultimately this is not a project about pruning or tree care, but rather one that inspires the community to reach out and work together. The neighbors, students and teachers will arrive at their own appropriate level of engagement.