

Planting & Maintenance of Apple Trees

A Quick Reference Guide for the Novice.

Produced by Century Farm Orchards for Winding Stair Gardens.

Apple trees require care and attention if they are to grow well and produce quality fruit. Many old apple trees exist without such care, but countless others die prematurely. Following the few guidelines set below will help you to grow more healthy and productive apple trees.

When to plant.

The best time to plant one of our apple tree is in late fall or early spring. The main criteria in this case is that the trees should be dormant (without leaves) and the ground not frozen. Planting in spring is also acceptable but requires a little more care (“babying”) and more watering during the hot summer months.

Grafted trees.

Almost all apple trees are grafted. Grafting is a technique that joins two plants into one. The size a grafted apple tree will reach is determined primarily by its rootstock (roots).

Grafted trees:

- Can be quite disease resistant (not immune)
- Can withstand wet spells (but can still be drowned)
- Can withstand moderate drought conditions
- Produce a tree about 15ft tall (manageable for most purposes)
- Will usually produce fruit in three to six years

Trees should be given an area of 15×15 ft in which to grow. If planting more than 1 or 2 trees, they should be planted in rows with 15ft between trees and 20ft between rows.

Size of trees.

Dwarf Trees should always be given permanent support with a heavy-duty stake or trellis system. They should be given ~8ft between trees and 15ft between rows.

Full-size Trees: Semi-dwarf or dwarf trees can become standard size, full-grown apple trees if they are planted with the graft a couple of inches beneath the soil. They will create new roots above the rootstock that will give the tree more vigor.

Site selection.

1. Trees should be planted where they can receive sunlight for most of the day. Gently sloping hillsides facing northeast or east are optimum.
2. Plant in soil that drains well (i.e., water should not stand for more than a few hours after heavy rains). Avoid floodplains.
3. Plant in soil that does not have a root-inhibiting layer. Rocky soils are acceptable as long as the rocks are not so extensive as to limit the tree roots to the top foot or so of soil. Native soil may need amending. Ask one of our team for help.

Site preparation

It is advisable to have soils tested to determine the best application rate for lime and other micronutrients. Our local extension office can help.

If Planting Only A Couple Of Trees:

1. Before planting, remove all vegetation in a circular area up to 4ft in diameter.
2. Till the soil to a depth of one foot with a shovel. When completed, the soil will be looser, enabling the tree roots to grow better during its first three years.
3. Depending on the results of your soil test, you may need to spread lime and other amendments to improve your soil condition.

Planting & Maintenance of Apple Trees

A Quick Reference Guide for the Novice.

Produced by Century Farm Orchards for Winding Stair Gardens.

If Planting Many Trees (i.e., a small orchard):

1. Weeks or months before planting, the planting area should be plowed/tilled thoroughly.
2. Lime may be added to the newly tilled soil. A general rate of 10lbs of lime per 100ft² is acceptable in most soils, however, check with the extension office for specific guidance.

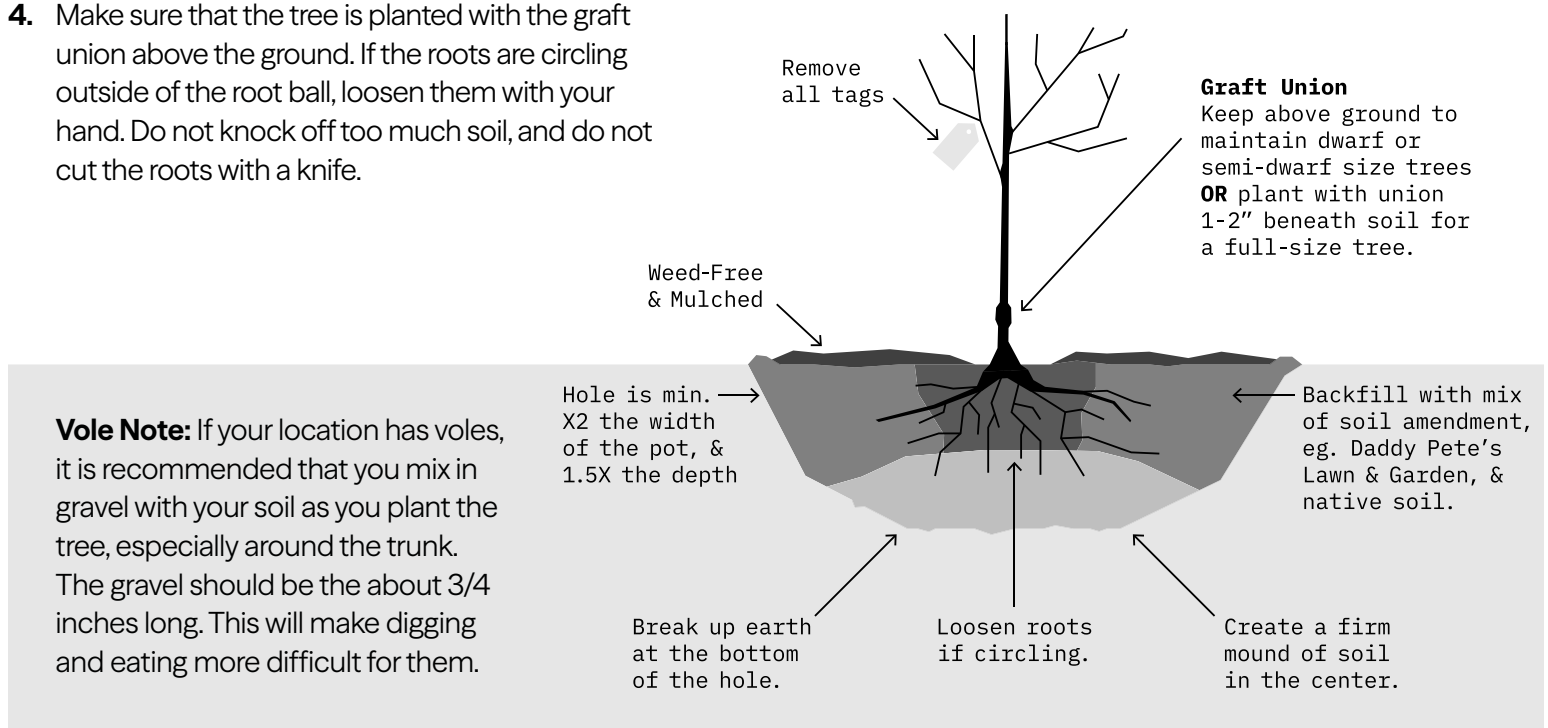
Note: The above directions for planting a small orchard are just recommendations. One could follow the simpler directions for planting only a small number of trees noted above and most likely have positive results.

If using an auger

Some people choose to use an auger to dig the holes that the trees will occupy. This technique is acceptable, but keep in mind that the soil in the hole will settle a great deal, so the tree must be planted as to avoid sinking too far into the hole in the months after being planted. The hole may also have to be expanded outward with a shovel if the auger is too small.

Planting.

1. Once home, plant apple trees as soon as possible.
2. Dig a hole at least double the width of the pot and 1.5 times as deep. With a shovel, break up the removed soil so that it is loose and free of clods. Place some of this soil into the bottom of the hole to create a mound over which to spread the roots.
3. All tags should be removed after planting. Tags can either choke and kill the tree or provide a place for insects to hide and damage the tree later.
4. Make sure that the tree is planted with the graft union above the ground. If the roots are circling outside of the root ball, loosen them with your hand. Do not knock off too much soil, and do not cut the roots with a knife.
5. Holding the tree vertically in the hole, add your soil amendment (e.g., Daddy Pete's Lawn and Garden). Be sure to mix your original soil into the mix so the roots can get accustomed to the native soil.
6. When the hole is filled with soil, gently pack it in with your foot. If the soil settles later, more soil should be added so that a depression is not visible.
7. Water the area thoroughly.



Vole Note: If your location has voles, it is recommended that you mix in gravel with your soil as you plant the tree, especially around the trunk. The gravel should be the about 3/4 inches long. This will make digging and eating more difficult for them.

A Quick Reference Guide for the Novice.

Produced by Century Farm Orchards for Winding Stair Gardens.

Watering & mulching.

Apple trees should be watered weekly during hot and/or dry periods, especially during the first two years after planting. Water well enough to wet roots that may be several inches deep.

Place 4-6 inches of leaves, pine needles or pine bark mulch around the tree in a 4ft diameter circle. Do not use oak or other hardwood bark because it can release acids that rob the soil of nitrogen and weaken the tree. It is important to keep all mulch several inches from the trunk because it invites some smaller animal pests to attack the trunk.

What happens after the tree is planted?

Deer.

Deer can destroy an apple tree in many ways. They can eat the new young leaves and limbs, even when dormant. They can also ruin a tree by rubbing it with their antlers. It only takes a few minutes for a deer to cause severe damage. For this reason, a grower must take precautions. Here are some recommendations:

1. The best option is to build a fence around the orchard.
2. With just a few trees, try placing a small woven wire hoop around each young tree. It must be 5ft tall and pulled tightly to the ground. This option deters deer, but is not deer-proof.
3. Try spray products such as "Bobbex". Follow instructions for when to reapply.

Other animal pests.

Rabbits, mice, and voles eat apple-tree bark. It is best to enclose the tree trunk in a tree wrap. A small screen-wire cage 2ft high could also be used to encircle the trunk as long as it does not inhibit its growth.

Voles can also eat the roots of apple trees creating a major problem. Use extraordinary caution since family pets may be attracted to any bait traps.

Weed control.

For the first 3-5 years, grass and weeds should not get within 2ft of the tree as they can deplete soil moisture rapidly and may hinder tree growth. Pull weeds that may compete for nutrients.

Tree support.

An MM111 rootstock should enable a tree to eventually be free-standing. However, when the tree is young, support may be necessary. Most damage is done when a period of rainy weather is followed by strong winds from a thunderstorm or tropical system. It is recommended that a strong stake be driven into the ground to a depth of one to two feet. The material holding the tree in place should not constrict growth, nor be sharp enough to harm the bark, nor deteriorate in less than one year.

A Quick Reference Guide for the Novice.

Produced by Century Farm Orchards for Winding Stair Gardens.

What happens after the tree is planted? (continued).

Fertilization.

Apple trees may be fertilized up to three times a year if there is adequate soil moisture present. Feed in MARCH, mid-JUNE (smaller amount), and early-SEPTEMBER. Do not fertilize if experiencing a drought or dry period.

In year one you can use a small amount of fertilizer, and then increase the amount used in the coming years.

Spread the fertilizer out from the trunk evenly to just beyond the reach of the limbs. Ask our team for fertilizer recommendations.

Diseases and pests

Most insect damage and fungal infections occur early in the growing season, usually just before or after blooming. Never spray insecticides when trees are blooming as this will kill the bees and insects that are pollinating the trees.

Do not let Japanese Beetles or caterpillars defoliate young trees. It can happen over a span of a few days and cause permanent stunting of the tree. A 20-30% loss of foliage is acceptable.

Neem oil can be used, per the product label recommendations, to spray apple trees and protect them against many diseases. The secondary compounds in the oil trigger an immune response that fights many fungal, bacterial, and viral infections. Neem oil is also an excellent pesticide that kills and repels a variety of pests.

Cedar apple rust is a fungal disease transmitted in the spring from cedar trees to apple trees. It can blemish leaves and fruit with a rusty colored spot. If a case is bad enough, it can weaken the tree through a reduction in photosynthetic processes. Fungal sprays are effective, but not always necessary.

For more specific spraying instructions, it is best to contact your local agricultural extension agent for the proper sprays and the best schedule to use them.

We recommend organic products that do not impact our waterways, soils, native bees and pollinators.

Planting under and around the trees.

With proper use of apple companion plants, you may be able to fend off the deer, attract more pollinators to your trees, and prevent some common apple problems. Daffodils, for example, repel weeds and grasses and also deter deer. Dill, fennel and coriander are great edible herbs that attract beneficial insects and birds to your area. Nasturtiums are normally planted alongside apple trees to repel a wide variety of damaging insects.
