

Ison's Nursery & Vineyard

APPLE TREE Planting Instructions

Growing Apples



Site and Soil Requirements

Sunlight, and plenty of it, is a key to increasing fruit production. Pick an area where the trees will be in the sun most or all of the day. The early morning sun is particularly important because it dries the dew from the leaves thereby reducing the incidence of diseases. If the planting site does not get plenty of sun, then you can't expect the best performance from the tree.

Although apple trees will grow well in a wide range of soil types, a deep soil ranging in texture from a sandy loam to a sandy clay loam is preferred. Apple trees will not thrive in soil that is poorly drained. In areas of poor drainage, roots will die resulting in stunted growth and eventual death of the tree. Conversely, apple trees will also perform poorly on droughty soils. Shoot growth can be stunted and fruit size and quality reduced.

Most fruit plants, including apples, grow best when the soil pH is near 6.5. Since the natural pH of most Georgia soils is below this level, you will need to incorporate lime before planting to raise the pH to the desired level. You can get information on soil testing and liming recommendations from your county extension office. Periodically (about every 3 years) check your soil pH. The soil test report will indicate if additional liming is required.

Soil Preparation and Planting

When fruit trees arrive from the nursery, open the bundles immediately. Soak the roots in water 6 to 12 hours if they are not moist. The trees should then be planted if the soil is not too wet.

If the soil is not prepared where the trees are to be planted, or the ground is too wet, heel the trees in by placing them in an open trench deep enough to cover all roots. The north side of a building is the best place for heeling because the trees will remain dormant longer. Place soil over the roots to the depth they will be planted in your yard.

Before planting, prepare the soil thoroughly by plowing or spading followed by disking or raking to smooth the surface. If you have not adjusted the soil pH to 6.5 previously, liming should be done before you prepare the soil so that the lime will be incorporated. When added to the surface and not plowed in, lime takes years to move down into the soil. Lime an area 10' by 10' where each tree will be planted. Similar to lime, phosphorus moves down through the soil slowly and thus should be incorporated, based on soil test results, along with lime before planting. During planting, dig holes large enough to receive the roots freely without cramping or bending from their natural position. Before planting, cut off all broken or mutilated parts of roots with a sharp knife or pruning shears. Keep root pruning to a minimum. Set the plants at the same depth they grew in the nursery. Work soil in and around the roots. When the hole is half filled, firm the soil with your feet before you finish filling the hole. When the hole is filled, pack the soil firmly. Do not leave a depression around the tree. Also, do not place fertilizer in the planting hole or fertilize immediately after planting. This should only be done after the soil is settled by a drenching rain. When the planting is completed, the graft union should be

least 2 inches above the soil line.

Post-Plant Care

After planting, apply sufficient water to thoroughly soak the soil in the area of the tree roots. This watering will help bring the soil into closer contact with all sides of the roots and eliminate air pockets around the roots.

Keep weeds out of a 3'x 3' area around the tree because they compete with the tree for moisture and nutrients during the growing season. This will also keep mowers away from the trees and reduce trunk damage. Mulching will help control weeds as well as conserve moisture.

Pruning and Training Apple Trees

The day you plant your trees is the day you begin to prune and train for the future production. Too often backyard growers plant apple trees and leave them untended for several years. This neglect causes poor growth and delayed fruiting.

The purpose of pruning a young tree is to control its shape by developing a strong, well-balanced framework of scaffold branches. Remove unwanted branches or cut them back early to avoid the necessity of large cuts in later years. Today, the recommended method of pruning and training is the Central Leader System.

Prune in late winter. Winter pruning of apple trees consists of removing undesirable limbs as well as tipping terminals to encourage branching. Similar pruning can be performed in the summer and is most beneficial if done in early June and early August.



Figure 1

At Planting: Whether you obtain a small unbranched whip or a larger branched tree, it is necessary to prune the tree at planting. Head the unbranched whip back to 24 to 30 inches from the ground (**Figure 1**). This will cause the buds just below the cut to grow and form scaffold branches. If branched 1- or 2-year-old trees are planted, then select four or five lateral branches with wide-angled crotches and that are spaced equidistant around the tree and 2 to 5 inches apart vertically. The selected laterals should be no lower than 18 inches above the ground, and they should be pruned back slightly by cutting off one-fourth of each limb's length.

First Growing Season: When 2 to 3 inches of growth has occurred, begin training the tree. Position wooden spring-type clothes pins between the main branch and the new succulent growth (**Figure 2**). The clothes pin will force the new growth outward and upward thus forming the strong crotch angles needed to support the fruit load in years to come.



Figure 2

One Year Old: A number of branches should have developed after the first growing season, and if they were clothespinned, they should have good, wide crotch angles. The objective now is to develop a strong central leader and framework of scaffold branches. Here we can see the 1-year-old tree before (**Figure 3**) and after (**Figure 4**) pruning. Note that we have left only four scaffold branches spaced around the tree. All the branches left as well as the central leader have been pruned back by about one-fourth. Always make sure the ends of the scaffold branches are below the end of the central leader after they have been pruned back.



Figure 3



Figure 4

Second Growing Season: During the second growing season, develop a second layer of scaffolds on the central leader 24 to 30 inches above the scaffolds you established the year before. Be sure to use the clothespins on new succulent growth, particularly shoots that develop below the central leader pruning cut, so you will develop wide crotch angles. **Figure 5** illustrates a properly trained apple tree in late May of the second growing season.



Figure 5

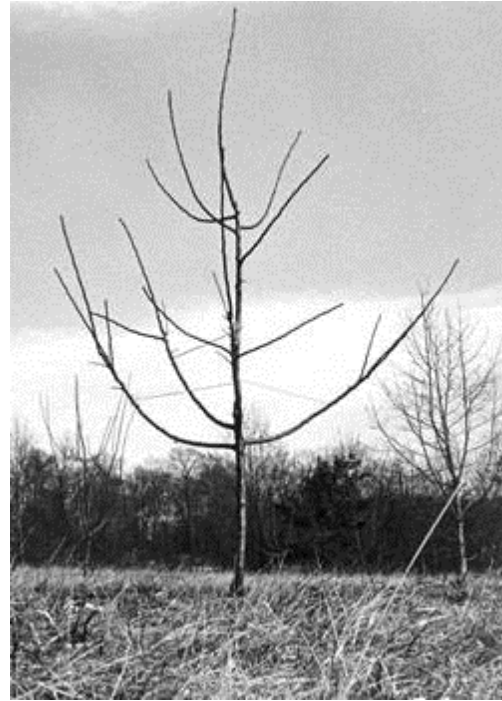


Figure 6

Two Years Old: The use of limb spreaders can help bring about earlier fruit production, improved tree shape and strong crotch angles. Spreaders can either be short pieces of wood with sharpened nails driven into each end, or sharpened metal rods. Limbs should be spread to a 45 to 60 degree angle but not below a 60 degree angle from the main trunk. Limbs spread wider than 60 have a tendency to produce vigorous suckers along the top-side of the branch and may stop terminal shoot growth. The spreaders will need to remain in place for up to one year until the wood "stiffens up." Figure 6 illustrates a 2-year-old tree after pruning in which metal rods have been used as spreaders. Pruning consists of entirely removing undesirable limbs and, only where necessary, reducing the length of terminal scaffolds by one-fourth. Weaker side limbs should not be pruned unless excessively long, so they can develop flower buds. Excessive and unnecessary pruning will invigorate a tree and delay fruit production.

Figure 7 is a tree approximately 4 years old. Proper training, spreading and pruning have resulted in the development of flower buds that will produce a good crop in the coming season.

Notice that the upper (2nd) set of scaffolds should be shorter than lower (1st) set. The second and any succeeding scaffold layers should always be kept shorter by dormant pruning than the layer below it. A properly trained and pruned central leader tree should conform to roughly a pyramidal (Christmas tree) shape.



Figure 7

Pruning Neglected Apple Trees: Many people will purchase a house where an apple tree was planted on the property several years ago. Often, the previous owner did not take the time to properly prune the tree and the result is similar to **Figure 8**. The tree has become bushy and weak and will produce very poor quality apples. Such a tree requires extensive corrective pruning.

The main objective in pruning such a tree is to try and open up the interior to allow good light penetration. The first step is to remove all the upright, vigorous growing shoots at their base that are shading the interior. As with the young apple trees, it is necessary to select three to five lower scaffold branches with good crotch angles and spaced around the tree. Limbs with poor angles and excess scaffold limbs should be removed at their base. In some cases it is advisable to spread the corrective pruning over two to three seasons. When severe pruning is done in the winter, do not fertilize the trees that spring.

Figure 9 is the same tree after the first season's pruning. The next year, it will be necessary to remove more limbs, especially on the left side. Note that most of the cuts were thinning types; that is, the wood was removed to its base or point of origin. When making these thinning cuts, make sure the cuts are made flush along another limb.

The remaining limbs can be pruned back by one-fourth of their length to a side limb if it is desired to stiffen them. If you don't cut them back, the limbs may bend and/or break under a heavy crop load.



Figure 8



Figure 9

Fertilization

Nitrogen is the most important nutrient needed. Phosphorous and potassium, are needed in relatively large amounts, particularly on young trees. After the trees mature, fertilization with phosphorus and potassium will probably not be required.

To fertilize apple trees the year they are planted, broadcast over a 2-foot circle 1cup of 10-10-10 fertilizer about one month after planting. **Do not put any fertilizer in the hole before planting.** In June following planting, broadcast another cup of 10-10-10 fertilizer around the tree.

In early spring of the second season (when the tree is 1 year old), broadcast 2 cups of 10-10-10 fertilizer over a 3-foot circle. Repeat this again in June.

In succeeding years, follow these guidelines for the different trees:

Standard Trees: Increase the diameter of the broadcast circle and the amount of fertilizer (10-10-10) by 2 cups per year. When the tree is 6 years old and older, only nitrogen fertilizer is needed. Use 4 cups of ammonium nitrate per tree for trees 6 to 8 years old and 6 cups for trees 9 years old and older.

If you severely prune the tree, do not apply any fertilizer that year. If growth is excessive, omit fertilizer for a year or two until growth is reduced to a desirable amount (terminal growth on bearing trees averaging 10 to 15 inches per year).

Caution: When fertilizing, never dump large amounts in a small area. Root burn may result. Also, keep fertilizer 6 inches or more away from the trunk. Always broadcast the fertilizer evenly over the recommended area.

Once the trees begin to bear, use shoot growth to determine if you need to reduce or supplement the fertilization rates previously suggested. Ten to 15 inches of growth are ideal for bearing trees. If growth is more than this, apply less fertilizer. If growth is less, apply a little extra fertilizer the next season.

Annual Fruit Production through Thinning

Apple trees grown under favorable conditions will set more fruit than they can successfully carry to maturity. The removal of excess fruit from the trees is essential to assure satisfactory development of color, shape and size of the apples remaining on the tree. Failure to remove the excess fruit will decrease flower formation for the following year and cause the tree to only produce a crop every other year.

Remove fruit by hand, reducing the apples to one per cluster with fruiting clusters spaced about every 6 inches along the limb. To remove fruit without damaging the spur or other apples on the spur, hold the stem between the thumb and forefinger and push the fruit from the stem with the other fingers. This method will remove the apple, leaving the stem attached to the spur.

The earlier hand-thinning is completed, the more effective it will be. Mid-summer thinning will help improve fruit size, but it will not aid the formation of next year's flower buds. Most of the flower buds for next year are initiated during a **four- to six-week period following full bloom**, so you need to thin before this time.

How to Pick Apples

When picking apples, be careful to avoid injuring the fruit. Remove the apple from the spur by pulling upward and outward while rotating the fruit slightly. On some of the thin, long-stemmed varieties such as Golden Delicious, it may be necessary to firmly place the index finger at the point of attachment of the stem and spur to prevent the spur from breaking. Pick apples with their stems attached to the fruit; otherwise, they will not keep as long.

Diseases and Insects

A grower who produces the best quality fruit controls diseases and insects. Several of these pests damage the tree and fruit.

Diseases common to apples that should be controlled are scab, black rot, bitter rot, alternaria and fire blight. Damaging insects are apple tree borers, red spider mites, scales, aphids and fruit worms.

For more information, check with your county extension agent or visit the [Georgia Cooperative Extension web site](#).

Original publication developed by M. E. Ferree, Extension Horticulturist (retired)
Courtesy: The University of Georgia Cooperative Extension



Ison's Nursery & Vineyard

Fig Tree Planting Instructions

Growing Figs



Soil Preparation and Planting

Soil preparation should always include a preplant soil test. If your soil pH is low, adjust the pH to 5.5 to 6.5 with dolomitic limestone. Spread the limestone evenly over the entire area where the figs will be planted, then till the soil. If possible, till at least a 6-foot by 6-foot area where each bush will be planted at least 8 inches deep.

Figs grown in the bush form may be set as close as 10 feet apart in the row and 15 feet apart between rows. Figs grown in tree form should be set 15 to 20 feet apart in the row and 20 feet apart between rows. Plant fig trees while they are dormant. In warm areas, bare-rooted trees can be set out in fall or winter.

Before planting a bare-root tree, prune about one-third of its top, unless it was topped by the nursery, spread their roots, and set them in the planting hole.

Set trees in the planting hole 4 inches deeper than they were in the nursery to encourage low branching for bush form. Fill the hole with soil; water heavily enough to settle the soil around the roots. Do not apply fertilizer in the hole at planting.

Training and Pruning

Bush form is generally recommended for most areas. In the bush form, more of the fruit will be closer to ground level and easier to pick.

Begin training to bush form at the time of planting by cutting off one-third of the young plant. This forces shoots to grow from the base of the plant. Let these shoots grow through the first season. Then, late during the winter after the first growing season, select three to eight vigorous, widely spaced shoots to serve as leaders. Remove all other shoots.

Be sure the leaders you select are far enough apart to grow to 3 to 4 inches in diameter without crowding each other. If they are too close together, the leaders cannot grow thick enough to support themselves and their crop, and they tend to fall over or split off under stress of high winds. If this happens, remove the damaged leader and select a new one late the next winter by choosing one of the many suckers that arise annually.

If more branching is desired, head back the bush each spring beginning the second year after planting, after danger of frost is past but before growth has started. Do this by removing about one-third to one-half the length of the last year's growth.

Also, prune all dead wood and remove branches that interfere with the leaders' growth. Cut off low-growing lateral branches and all sucker growth that is not needed to replace broken leaders.

Fertilization and Watering

Fertilizing: Fig trees grow satisfactorily in moderately fertile soils with limited fertilizer. But fertilizer is needed in soils of low fertility or where competition from other plants is heavy.

Although nitrogen is usually the only needed plant nutrient, other nutrients may be lacking in some areas. If your soil is not very fertile, follow these general guidelines:

- Use a fertilizer with an analysis of 8-8-8 or 10-10-10.
- Apply fertilizer three times a year to bushes you are trying to bring into full production: early spring, mid-May, and mid-July. Mature bushes can be fertilized just once a year in the early spring.
- Fertilize newly set bushes with about 1½ ounce of fertilizer at each application. Spread the fertilizer evenly over a circle 18" in diameter with the bush in the center. On second-year bushes, increase the amount of fertilizer to 3 ounces at each application and the diameter of the circle to 24".
- On bushes 3 to 5 years old you are trying to bring into full production, apply 1/3 pound per foot of bush height per application. If the fruit are not reaching maturity and ripening properly, excess fertilizer or drought may be the problem; fertilization should be reduced.
- Mature bushes 6 years and older should be fertilized once a year in early spring. On bushes spaced 10 feet apart, apply ½ pound of fertilizer per foot of height, up to 5 pounds per year. On bushes spaced 20 feet apart, apply 1 pound of fertilizer per foot height, up to 10 pounds per year. Scatter the fertilizer evenly under and around the bush. A satisfactory amount of shoot growth for mature plants is about 1 foot per year.

Watering: For highest yields, figs need watering throughout the summer. The frequency and the amount of water depends to a large extent on the soil. As a rule of thumb, 1 to 1½ inches of water per week from rain or irrigation is adequate. Yellowing and dropping of leaves may indicate drought.

In lawns, the grass beneath fig plants may wilt in the heat while the rest of the lawn does not. This indicates the figs need water. Figs grown with lawn grasses may require one or more waterings a week during hot, dry periods.

Mulching: Figs respond well to mulching with organic materials. Mulch may reduce the effects of nematode problems.

If you are attempting to grow figs near the mountains, limited fertilizer should be applied to make the plants as cold hardy as possible.

Courtesy: The University of Georgia Cooperative Extension

