

Ison's Nursery & Vineyard

General Planting and Care of Fruit and Nut Trees

Thank you for your order. Fruit trees can be an attractive and useful addition to the home landscape. This fact sheet will help you to establish new fruit trees that will provide you with beauty and fruit for years to come. Should you have any questions regarding your trees, call our office and we will assist you. Your local County Extension Office can also be very helpful if you have problems with your trees or if you need additional information.

Receiving Your Trees:

If trees arrive and you are unable to plant them immediately, store them in a cool place such as your basement, garage or carport. If they need to be there for any length of time, you will need to do one of the following. Either one of these methods will keep your trees for up to six weeks:

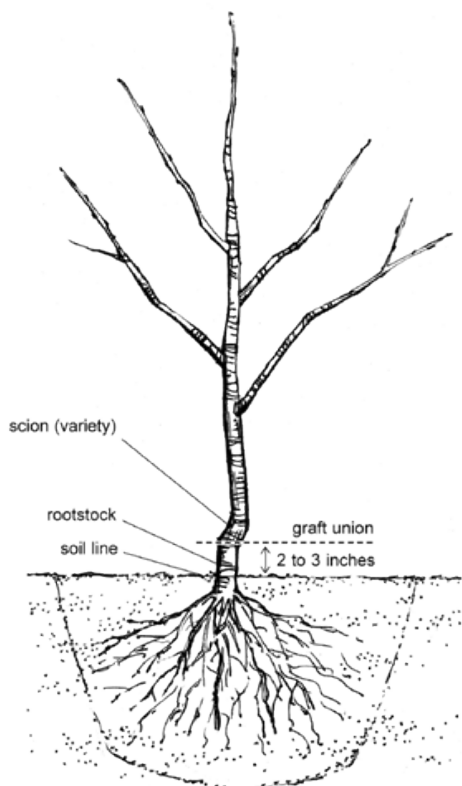
1. Dig a shallow trench and lay the plants on their side with roots in the trench. Cover the roots with moist soil. This is called heeling in. Make sure the soil stays moist. Avoid exposing the roots to frozen temperatures and never let the roots of the trees dry out.



2. Use a large tub or trash can and cover the roots of the trees with peat moss or soil and keep the roots damp.

Digging the Hole:

Select a site with direct sunlight. Allow enough room between the planting site and buildings, trees, power lines or other obstructions for the tree to fill its space when full grown.



Tree size varies with different species and the rootstock that the tree is on. The nursery where you bought the tree can advise you as to how much space the tree will need when full grown.

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 ledge or hardpan.

Start by cutting through the sod in a circle that is about a foot wider than the diameter of the root ball. Roll the sod out of the hole and discard it or use it to cover a place where you want grass. Then dig a hole wide enough to allow the root system to fit without roots wrapping around the edge of the hole in a circle. Dig the hole deep enough to allow the tree to be planted with the graft union two to three inches above ground. 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.

Filling the Hole:

What should you put in the planting hole? Only roots, clean soil and water! Never put any fertilizer in the planting hole. 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.

Trim off any broken or damaged roots before planting. Place the tree in the hole, and after making sure that the depth is correct, fill the hole with clean topsoil. It is helpful at this stage to have someone hold the tree straight while the hole is being filled. Pack the soil in the hole by gently stamping it with your feet. After the hole is filled, water the tree with two to five gallons of water, poured slowly enough so that the water doesn't run off.

Care, Fertilizing and Pruning:

All newly planted fruit trees will benefit from being staked. This will result in a straighter tree with more growth. Staking is especially important for trees planted on a wind-blown site.

Around April 1st, after the tree has started to grow you can apply a nitrogen fertilizer. Apply one ounce of actual nitrogen in a 12-inch circle around the base of the tree, and make sure the tree is well-watered after fertilizing. You can also use 10-10-10 fertilizer. We recommend about 1/2 pound of 10-10-10 in a complete circle 12 inches around the base of the tree. Another application can be added June 1st. All fertilizer should be applied before mid-June. Late application of fertilizer can lead to late-season growth, and the tree may not harden off in time to withstand winter.

Watering the new tree is important to help get it started. Do not water after planting until new growth begins unless the soil seems very dry. A good rule is to apply five gallons of water around the base of the tree every week of the growing season in which there is less than an inch of rainfall.

Apples and pears are usually trained as central leader or cone-shaped trees. If the tree is an unbranched "whip," prune the stem to a height of 40-44 inches above the soil line. This will stimulate the buds just below the cut to grow. The top bud will grow vertically and form the leader, or trunk of the tree. The next one or two buds can be rubbed off with the fingers to prevent them from competing with the leader.

The buds that grow out below the top two or three should be retained to form the scaffold branches. Remove branches that grow out below a height of 18 inches from the ground. Bend the branches that remain to an angle of 45 to 65 degrees from vertical using clothespins, toothpicks, or small weights. This keeps these branches from growing so strongly that they compete with the leader, and it stimulates flower production.

Stone fruit trees (peaches, plums) are usually trained as open-center (vase-shaped) trees. Two or three side branches are selected, and the remainder of the tree is cut off just above the top branch. Contact your county Extension office for other bulletins on training and pruning fruit trees.

Weed Control:

Weeds compete with young trees for water and nutrients. A weed-free zone should be established at the base of the tree that extends out to form a circle with a diameter of two to three feet. Mulch, herbicide or cultivation may be used to prevent weeds.

Keep Reading for Root Vegetable Planting Information:

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Horseradish Planting Instructions

Where to plant horseradish: Choose a generous site for this fast grower. Since horseradish is a perennial, don't put it in a vegetable garden that gets tilled every year. A corner of your herb garden is ideal. Also, can be grown in a deep container, such as a whiskey barrel planter. Try to give it full sun. Partial shade is fine; however, growth will be slower. Soil Ph should be between 5.5 to 7. The plant will grow approx. 24" tall and 18" wide.

When to plant horseradish: Plant your root as soon as you receive it! If ground cannot be worked, store root in refrigerator in loosely wrapped plastic bag. The next year's crop should be planted in early spring as soon as the soil can be worked. Also, can be planted in late fall, the same as garlic or onions.

How to plant horseradish plants: Dig a hole twice as deep as the roots of the plant. Hold the plant over the hole as you refill the dirt, keeping the base of the leaves at the soil line. Water plant well. It is normal for the plant to wilt for a few days after planting. If planted in full sun, we recommend temporarily shading the plants for the first couple of days until they recover from transplanting. You will see new leaves appearing soon!

How to plant horseradish roots: Dig a hole 1 foot across and as deep as your shovel. Loosen the soil in the bottom of the hole. Place root on a 45-degree angle, around 6 inches deep for the small end and top of root just below the surface. Refill the hole with compost and mound up a couple of inches because the dirt will settle with time and watering.



Root ready to be covered with compost



Same root after planting

How to water horseradish: Keep soil slightly moist, just as any other plant

How to fertilize horseradish: The compost you re-filled the planting hole with should give the horseradish plant most of its food for the season, but if needed apply a balanced or low-nitrogen fertilizer 2 or 3 times during the season.

When to harvest horseradish: For most pungent flavor does not harvest until the leaves have seen frost. In the south, harvest in late fall. One-year old plants have the most flavor, so dig it up and replant each season. See our "how to process" page for information on dividing your root for next year's crop.

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ASPARAGUS Planting Instructions



Asparagus is one of the first crops of spring harvest, and the fresh-picked spears are more tender and tastier during the growing season. Even more, this versatile green is rich in B vitamins, vitamin C, calcium, and iron, making it a healthy (and welcome) addition to any meal.

While the idea of growing asparagus may be overwhelming, it should not be - Asparagus is a great starting point because it is one of the few perennial vegetables that will grow fresh spears year after year with little space and effort. Even though it takes asparagus plants three years to fully mature, it will be well worth it.

Starting asparagus from one-year-old crowns gives you a year's head start over seed-grown plants.

Your asparagus needs a soil pH between 6.5 to 7.0.

Location & Planting:

Asparagus likes plenty of room to grow. Pick a sunny location to plant.

Space plants 12-18 inches apart with rows spaced 5 feet apart.

Wide spacing promotes rapid drying of foliage to help prevent the onset of fungal diseases.

Dig a hole 6 inches deep or dig a furrow (trench) 6 inches deep and wide enough to accommodate the outspread roots. In the bottom of the hole or furrow: make a mound about 2 inch high of dehydrated cow manure (or compost mixed with the soil taken from the hole).

Position the plant with the bud facing upward, on top of the mound, so the crown (center of the plant) is 3 inches below the soil surface.

Cover the hole or furrow with soil and gently pat the soil to remove any air pockets. Do not compact the soil over the newly filled hole/furrow or the emergence of the asparagus will be severely reduced.

Water your new plants thoroughly.

No pruning is necessary at planting time.

Weeds:

Weeds can be a major problem for asparagus. On small acreage, light cultivation with a hoe may be used to remove weeds— but avoid a tiller or any other tillage implement that can damage the crown. These could reduce yields and promote diseases. Organic mulches such as grass clippings, wood chips, straw/hay can be applied 4-5 inches thick to suppress weeds.

Fertilizer:

The first 3 years in spring, apply a well-balanced fertilizer. Starting the fourth year, delay application until June or July (immediately after harvest). This approach encourages vigorous growth of the “fern,” which produces and stores nutrients in the roots for next year's production season.

Water:

During the first 2 years after planting, asparagus plants need 1 to 2 inches per week. If you are not receiving adequate rainfall you will need to water. Use drip irrigation if possible. Mulch around the plant with compost or grass clippings to help soil moisture and reduce weed growth. After year 4 you can reduce irrigation to every 2-3 weeks.



How to Harvest Asparagus

Do not harvest any asparagus spears during the first two years that plants are in the permanent bed because they need to put energy into establishing deep roots. During the third season, pick the spears over a four-week period, and by the fourth year, extend your harvest to eight weeks. In early spring, harvest spears every third day or so; as the weather warms, you might have to pick your asparagus twice a day to keep up with production.

To harvest, cut asparagus spears with a sharp knife or snap off the spears at, or right below, ground level with your fingers.

Yields:

One plant will produce, 8 to 10 spears A family of 4 plants, 20-30 crowns.

Pruning Tips

Wait until all the foliage has died back and turned brown or yellow. This normally happens after the first frost. Cut the plants back to the soil surface and apply mulch to help against deep freeze or changes in soil temperatures. (Mulching also helps with weed control.) If you have issues with disease or insects, it is best to cut the tops off of your asparagus. You should not need to remove the entire fern. Before the new spears appear in spring, remove the old tops.



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RHUBARB Planting Instructions



Rhubarb Crowns should be planted while they are dormant which is through the fall, winter and into early spring.

Location:

Rhubarb grows best in full sun but will tolerate partial shade. Rhubarb produces a harvest for up to 8 years, so grow it in a sunny area where it will go undisturbed for a long time.

Choose a site with soil that is well-draining and fertile. Good drainage is essential, as rhubarb will rot if kept too wet. Mix compost, rotted manure, or anything high in organic matter into the soil. Rhubarb plants are heavy feeders and need this organic matter.

Soil pH is not critical, though rhubarb will grow best in a slightly acidic to neutral range (6.0–7.0). Rhubarb gets big! It can grow to 2-3 feet tall and wide. Make sure you choose a site where it will not be crowded.

Before planting, eliminate all perennial weeds in the planting site.

HOW TO PLANT

Dig large, bushel-basket-size holes. Space rhubarb plants about 4 feet apart and plant the roots 1 to 3 inches below the surface of the soil, with buds facing up. Water well at the time of planting.

Mulch generously with a heavy layer of straw to retain moisture and discourage weeds. Water your plant well and consistently. Rhubarb needs sufficient moisture, especially during the hot, dry days of summer.

Each spring, apply a light sprinkling of a fertilizer (10-10-10). Overcrowding is common problem with rhubarb and can lead to subpar growth. Dig and split rhubarb roots every 3 to 4 years. Divide when plants are dormant in early spring (or late fall). Divisions should have at least one large bud on them.

In the fall, remove all plant debris. Once your ground freezes, it's best to cover rhubarb with 2 to 4 inches of an organic mulch. By adding nitrogen to the soil, you are preparing the rhubarb plants for a good spring season.

Harvest and Storage:

The second year after planting, harvest lightly, removing only a few stalks from each plant. From the third year on, harvest stems freely. To ensure continued production, take care not to remove more than one-third to one-half the stalks from any one plant during any one harvest.

To harvest, choose stems that are 12 to 18 inches long and reddish in color. Grasp the stalk near the base and pull it upwards, twisting the stem as you pull. You can also use a sharp knife to slice stems from the plant. Cut as close to the crown as possible without damaging it. After harvesting, remove the leafy portion and the base of the stem, leaving only the colored stalk.



Early spring stems offer the most flavor and tenderness; they are ideal for pies. Stems harvested later in the season tend to be tougher, so reserve them for stewing, sauces, or jams.

Stop harvesting as stems get shorter and thinner. At this point, plants are storing up energy for next year's harvest. Mature plants typically provide an 8- to 10-week harvest. In general, expect 2 to 3 pounds of stalks per mature plant per season.

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Kiwi Planting Instructions



Types:

There are a couple of types of Kiwis we can grow for fruit in the US. Fuzzy Kiwi is the species that produces the brown fuzzy Kiwi we commonly find in stores. It is a very vigorous vine that is hardy to about 0°F. Hardy Kiwi produces smaller, very sweet and flavorful fruit that has a smooth skin and can be eaten just like grapes. It is also a very vigorous vine and, depending on the variety, is hardy to minus 25°F or below. Both Fuzzy and Hardy Kiwi like a site with at least 1/2-day sun.

Site Selection:

All Kiwis like well-drained soil, from clayey to sandy. Fuzzy and Hardy Kiwi like 1/2 day to full sun. If your soil is very wet, you can make a mound of soil several inches above the soil surface. This will allow water to drain away from the roots. Support – All kiwis are twining vines. Because of their vigor and heavy crops, Fuzzy and Hardy Kiwi need a strong arbor, trellis or other support. A typical arbor for these species would be 12 feet long, 6 feet wide and 6 feet tall. Use 4×6 or larger,

pressure treated posts and 4×4, 2×6 or larger cross arms for your arbor. Hi-tensile, New Zealand style fence wire works well spaced 1 1/2 to 2 feet apart across the cross arms.

Planting Your Kiwis:

Prepare your plant – If you are planting a bare-root plant, inspect the roots and cut off any broken or overly long ones. Pull some roots out of the root ball and, if they are very long, trim them back.

Prepare the site – If your planting site is covered by grass, start by removing a thin layer of sod in a circle 2-3 ft. in diameter. Removing it is important as grass will compete with your new plants for water and nutrients. In this newly cleared area, dig a hole wide and deep enough for the roots. After digging the hole, rough up the sides with your shovel so that your plants roots can easily spread.

Planting – For bare-root plants, locate the soil line on the trunk. This is indicated by a change in color, often from a dark green to yellow or black. Be sure that this point is no lower than the soil level surrounding your planting hole. Planting too deep can kill Kiwis. Make sure the roots are spread out in the planting hole and fill the hole with the soil you took from it. Work the soil around the roots and when the hole is full, tamp down the soil and water your plant in well. Please note We advise you to fill the planting hole with the soil that came from it. We do not recommend adding amendments or other materials to this soil. To be strong and vigorous, the roots of your Kiwi will need to grow far and wide into the surrounding soil. Once your new plant is in the ground, you can spread compost, organic fertilizer, and other materials on the soil surface to feed the plant naturally. Spacing should be 10' apart

Fertilizing and Irrigation

Because of their vigor and rapid growth rate, Fuzzy and Hardy Kiwis can use abundant amounts of nitrogen. After the first year, applying 1/2 lb. of nitrogen annually in early spring will ensure good growth throughout the summer. We recommend using organic sources of nitrogen. For example, if an organic fertilizer contains 5% nitrogen, apply 10 lbs. per plant. After 4-5 years, increase the nitrogen to 1 lb. annually. All Kiwis have a

shallow, spreading root system and need adequate water during the growing season. A 4-6" deep mulch in a 2-3 ft. circle around the plants will conserve moisture and deter weeds. Hay, straw, or compost are good materials for mulching. During warm weather, a deep watering once a week should be sufficient. Be sure to check the soil and be careful not to overwater your plants. Reduce watering frequency in early fall to harden off your plant for winter weather.

Pruning and Training

After planting, tie your plant loosely to a stake or other support to hold it up. Once roots are established and growth begins, your Kiwi will likely produce one or more vigorous shoots from near the base of the plant. After these shoots grow approximately 2 feet, tie the strongest to a stake and allow it to grow to the top of your trellis. Tip back the other shoots at this time so they won't compete with one you have chosen. After the main shoot reaches the top of your trellis or support you can remove the other less vigorous shoots, leaving the one you have chosen to become the main trunk of your Kiwi vine. After the main shoot grows past the top of your trellis, cut back the tip and allow two upper buds to grow. Train these new shoots to grow along the wires or structure of your arbor or trellis and tie them loosely. These new shoots will form the lateral cordons and become the permanent structure of your Kiwi.

By the end of the second season, you should have a good framework established for your Kiwis. During the second winter, prune back the new cordons (side shoots) to 10-12 buds. The lateral shoots from these basal buds will produce shoots, which can bear your first flowers and fruit. Train one of these shoots along the trellis or arbor to add length to the cordon and repeat the pruning process the following winter. Continue this process until the cordons reach the limit of your support.

Kiwi's flower and bear fruit on shoots that have grown from the previous season's growth. Annual pruning during the dormant season is important for good fruit production. Pruning is best carried out in December or January and consists of heading back the previous year's new shoots to 10-12 buds and removing older wood, if any, that has already fruited. In addition, twisted, tangled and broken shoots should be removed as well as those crossing from one side of the plant to the other. Any shoots hanging to the ground should be removed or tied to the support. As you prune and observe your Kiwis, you will get a sense of what should stay and what should be removed.

Male plants are grown and pruned in the same way as female plants, but, since they are grown only for their flowers, they need only about 1/4 of the trellis space and can be pruned more severely.

Please note that it may take 3-4 years or more before Fuzzy and Hardy Kiwis begin flowering and fruiting.

Spring Frost Protection:

Depending on the species, Kiwis can withstand temperatures from 0°F to minus 40°F. While the plants are hardy to these temperatures, the new shoots and flowers of all Kiwis can be damaged by temperatures below approx. 31°F. If plants have begun growth and frost threatens, a simple way to prevent damage is to sprinkle your plants during the night with water. While ice will form on the plant, the temperature of foliage will not fall below 32°F. If the plant is small, you can simply cover it with plastic or fabric.

Winter Care of the Fuzzy Kiwi

While the Fuzzy Kiwi is hardy to 0°F., sunny weather while nighttime temperatures fall below 20°F can cause sap to flow which can freeze and damage the trunk. In severe cases, this may result in girdling of the trunk and death of the top. While shoots may come from the base, the top of the plant is lost. The best way to prevent this damage is to wrap the lower 2 to 3 ft. of the trunk with some type of insulating or reflective material. Painting the trunk with a 50/50 mix of water and white, interior latex paint can also help prevent this damage. In addition, mulching the base of the plant with straw or other material will also help protect your Fuzzy Kiwi during severe winter weather.

