

# HARRIS® SEEDS

## HOME GARDEN BARE ROOT CULTURAL GUIDE

Blueberry, Blackberry, Grape, Raspberry, Strawberry, Asparagus, Horseradish, Rhubarb



Thank you for ordering plants from Harris Seeds. We know you will enjoy the pleasures of growing and harvesting your own fruit and vegetables. Below you will find some general guidelines on transplanting, growing, and pruning your plants resulting in high quality fruit you are sure to enjoy!

### IMPORTANT NOTE ABOUT BAREROOT PLANTS

You may be a little startled when you first encounter a 'bareroot' plant. This is simply a plant that has had the soil washed from its roots to facilitate shipping, and to help prevent the transfer of soil-borne pathogens and pests. Our bareroot plants are shipped to you in a **dormant state**, just prior to your planting season. Unpack your plants and submerge the roots into a bucket of water for 1 hour so the roots will begin to absorb moisture. Be sure to plant them within 48 hours, before the plants break their dormancy.

### A note about Asparagus, Horseradish, Rhubarb, and Strawberry plants:

At shipping time, your plants will just be emerging from dormancy. Try to plant them immediately to avoid any plant injury. Be sure to water plants regularly to help get them established.

### GRAPES

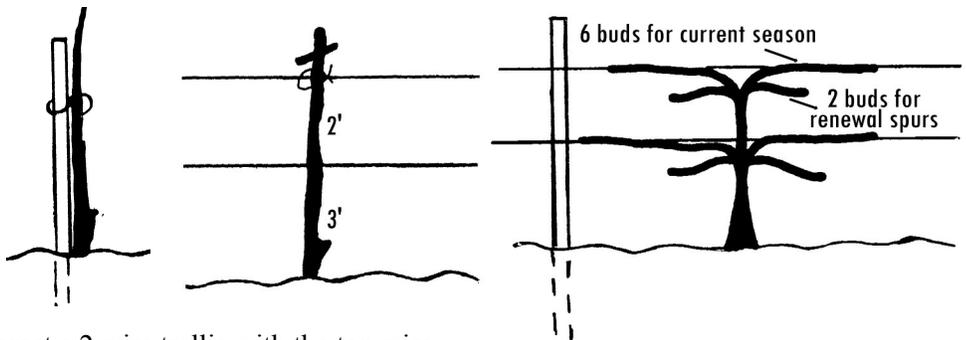
Grape plants will grow best in well drained soil with a pH of 5.5 to 7.5. Plant once the soil is workable, by digging a hole approximately 1 1/2 times the diameter of the root system. Set the rootstock into the soil, spreading the roots out in a circular fashion. Firmly tamp soil around base of scion (trunk). Space plants approximately 6 feet apart.

#### Trellising Grapes

The buds on the scion will produce lateral branches (canes). In this first season, once the laterals are produced, cutback to one strong shoot and tie to a 5 foot stake sunk 12" into the ground.

The following spring, you will need to erect a 2 wire trellis with the top wire approximately 5 1/2 feet above the ground and the second wire about 2 feet below the top wire. Tie the vine to the top wire and cut off the tip 3 inches above the wire. The 3rd season, tie 4 laterals to the wires and prune each lateral to 6 buds each. These will produce that summer's crop.

For the following year's fruit, take another 4 laterals and prune to 2 buds each (renewal spurs). Cut all other laterals off. The 4th season, cut off the tied canes from the previous year and tie up one new cane from each of the renewal spurs and cut it to 6 buds. Cut back the other 4 new canes to 2 buds each. These will be your renewal spurs for the following year. All pruning should occur very early in the spring before the sap flows.



### BLUEBERRIES

Your order of blueberries has included two different varieties, because blueberries are self-sterile, two separate varieties are necessary for cross-pollination and flower and fruit set. Therefore, it is important that both varieties be planted near each other to ensure cross pollination. Once established, your blueberry plants may last well up to 20 or more years provided they are well cared for.

#### Soil Preparation

Blueberries like an acidic soil with a pH range of 4.0 to 5.0. If your soil is more alkaline, add ammonium sulfate.

## **BLUEBERRIES (continued)**

### **Planting**

Space your blueberries about 5 feet apart, in 8 foot rows. Dig a hole double the size of the root system and plant the blueberries using a combination of soil and peat moss to fill the remainder of the hole. Do not plant too deep; try to keep the lower roots no more than 5" below the soil line and the top roots no more than 1" below the soil line. Once planted, tamp soil firmly around roots and water thoroughly. Now prune 1/3 to 1/2 of top growth. By reducing top growth, root development is stronger and new vegetative growth will increase. This will help the root system become well established.

### **Fertilization**

Blueberry roots are very fine and cannot absorb strong fertilizers. Over fertilization may cause burn. Ammonium sulfate is probably best used when the plants are well established, using no more than 1 tsp. for a 5-6 foot tall plant.

### **Mulching**

Mulching your blueberry plants will help with water retention and general plant health. Apply a heavy layer of wood chips, bark or aged sawdust.

### **Pruning**

Prune your blueberry bushes in early spring, prior to breaking dormancy. Remove thin, weak and old wood. If you find that your plants are producing numerous, but small berries, try cutting back the tips of the canes so that only 4-5 fat flower buds are left on each twig.

### **Bird Protection**

Since birds enjoy blueberries as much as humans do, you may want to consider covering your bushes in bird netting once the fruit has set. We recommend the Bird-X that is listed in the Home Garden catalog and at [www.harriseseeds.com](http://www.harriseseeds.com).

## **RASPBERRIES and BLACKBERRIES**

### **Soil Preparation**

Raspberries and Blackberries will perform best in well-drained loamy soil, with a pH of approximately 6.5 to 7.0 that has been supplemented with compost or manure.

### **Planting**

Plant once the ground is workable. Dig a hole 12" wide and deep enough so that when set, the stem will be approximately 2" lower than they were in the nursery. (You should be able to tell by the dried soil line on the stem.) Make a small cone in the middle of the hole and spread roots evenly around cone. Fill hole with soil, tamping firmly as you go. Water well.

Raspberries should be planted 30" apart in 7-8 foot rows. Blackberries should be planted 3' apart in 8 foot rows. Both types should NOT be planted in areas where eggplants, peppers, potatoes or tomatoes have been grown in the previous 3 years due to possible infection of verticillium wilt fungus.

### **Fertilization**

At planting time, sprinkle a regular garden fertilizer of 10-10-10 on top of the soil once the plants are planted, at a rate of 1/2 to 3/4 lb. per 100 sq. ft. For established beds, apply 1 1/4 lbs. per 100 sq. ft. early in the season.

## **PRUNING**

**Raspberries:** Raspberries can be pruned in a couple of different ways. The summer fruit is produced on canes that developed the previous season. The fall fruit is produced on canes that develop in the current season. If you want fruit both in summer and fall, keep in mind that the summer fruit will generally be smaller than the fall fruit. In early spring before the buds open, prune out the dead, weak or damaged canes, leaving about 4-6 healthy canes per square foot.

Then prune the remaining canes to about 4-5 feet, that is where the majority of fruit production occurs. If you want only fall fruit (this will cause the plants to produce a particularly heavy fall crop), cut or mow the entire plant back to 1-2



inches in the fall, after all leaves have dropped. (All refuse should be either burned or put in the trash, because they can harbor disease. DO NOT put them in your compost!)

Because raspberries propagate themselves by underground suckers, pull out the suckers you don't want. Pruning them will only cause more suckers to grow.

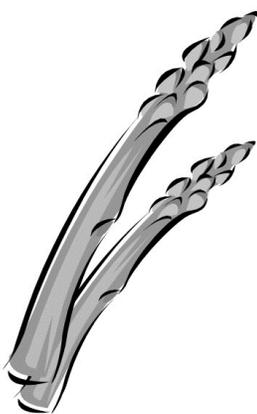
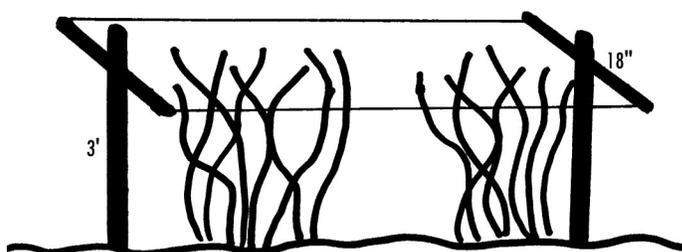
**Blackberries:** Blackberries produce fruit on the previous season's wood. In mid-summer, snipping the tips off the new canes when they are about 3' tall will cause them to send out lateral branches that could more than double fruit production the following season. In the spring, remove all but 3-5 strong canes and cut the laterals back to about 8-10". Each bud on the laterals will bear several clusters of berries. Once the fruit-bearing canes have finished producing, they should be cut back.

### **Bird Protection**

Birds love raspberries and blackberries! To protect your harvest, you may want to consider bird netting such as Bird-X, or a light, non-woven covering such as any of the floating row cover products listed in our Home Gardening catalog and at [www.harriseseeds.com](http://www.harriseseeds.com).

### **Trellising**

Trellising your raspberries will help keep them manageable as well as provide better aeration and light infiltration. A recommended trellis is the T-bar system that supports 2 wires, 12" apart at 3 feet above the ground. Plants should be trained to grow between the 2 wires.



### **ASPARAGUS**

Asparagus grows best in well-drained, fertile soils with a pH range of 6.8-7.2. Apply enough lime to bring the pH up to the necessary level. When choosing your site, plan for a permanent spot that is in a sunny location.

#### **Planting**

In early spring, apply a garden fertilizer of 5-10-10 at a rate of 5 lbs. per 100 sq. ft. Till your soil deeply, making sure to work in all of the fertilizer. Make sure your bed is free of weeds, then make furrows about 8-10 inches deep and 4-5 feet apart. Plant the asparagus crowns approximately 12-14 inches apart within the row. Cover with only 2 inches of soil.

As the plant produces ferns, slowly fill in the trench. By the end of summer, the trench should be at soil level. In early August, sidedress the plants with 5-10-10 at a rate of 1 lb. per 20 linear feet.

Work lightly into soil, being careful not to disturb the crowns and fern. Allow the fern to grow all season, keeping it weed-free and irrigating as needed.

#### **Maintenance**

In early spring of the following year, cut the old ferns to ground level. Broadcast lime and 5-10-10 at a rate of 1 1/2 lbs. per 100 square feet. Work lightly into soil taking care not to injure the crowns. Each year, a split application of 5-10-10 before and after harvest should be enough to maintain healthy plants.

#### **Harvesting**

You should be able to begin harvesting your asparagus the year after planting, but only cut for about 2 weeks. The next year cut only for about 4 weeks. The 3rd season you should be able to harvest for the entire season. Probably the easiest method of harvesting is to simply snap the spear off at its base. After harvest, be sure to maintain good growing conditions. Allow the ferns to grow throughout the entire season and remove only after they have naturally died back. The ferns help to nourish the crowns which should increase in size each year.

## **RHUBARB**

Rhubarb is easy to grow and make a fine addition to grow along with your fruit and vegetables. Space plants 3' apart and space rows 5'-6' apart. When planting the new buds should be about 1" below the soil.

Rhubarb is a heavy feeder so it is important to mix in a good amount of fertilizer and compost into the soil before planting. Rhubarb can take two or three years to become fully established. It grows quickly in the spring and can be harvested until early summer. Remove seed stalks from plants as soon as they emerge for faster growth.

### **Harvesting**

Rhubarb is ripe when the stem is mostly red and shiny. The duller colored stems are more mature and tend to be tough. To harvest, hold the stalk near the base and pull sharply or cut with a sharp knife at ground level. For larger future crops it is suggested not to harvest the first year allowing plants become more established.

## **HORSERADISH**

### **Soil Preparation**

Select a site in an area that has rich, well-drained soil. Till the soil to a depth of about 12 inches.

### **Planting**

Plant in a furrow to a depth of 6-8 inches, spacing the plants about 12-18" apart, with the flat, cut end facing up. Cover with 2-3 inches of soil. Fertilize generously with compost, manure or garden fertilizer.

### **Harvesting**

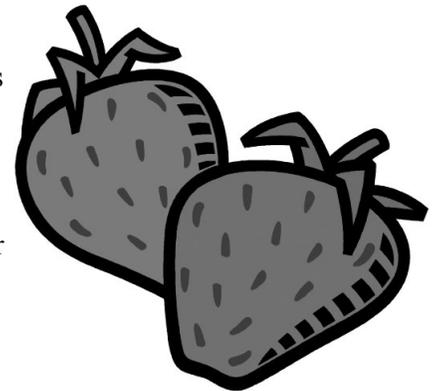
Allow the root to develop by not harvesting the first season. Roots can be harvested after the first killing frost or in early spring before new growth begins. Lift plants and roots with spading fork. Wash off roots and store in clean, plastic bag in refrigerator.

**Horseradish Sauce:** Wash and peel roots. Grate roots into bowl, making sure you are in a well ventilated area. Mix in white vinegar and salt (if desired). Store in a tightly capped jar in the refrigerator.

## **STRAWBERRIES**

### **Soil preparation**

Strawberries will perform best in well-drained soils with a pH at 6.5-6.8. Avoid areas where peppers, potatoes or tomatoes were previously grown in the previous 3 years due to possible infection of verticillium wilt fungus. You may want to consider planting your strawberries on a raised bed. This is especially useful for soils with poor drainage and also promotes larger berries. Into the top 8-12" of soil, dig in a 2-4" layer of well-rooted manure or compost OR work in a 10-10-10 garden fertilizer at a rate of 1/2 lb. per square foot.



### **Planting**

Plant as early as possible in the spring. Snow or light frost should not hurt the plants. Space plants approximately 12-18" apart. Your planting hole should be deep enough for the roots to be placed straight down into it. When planting the crown, make sure that half the crown is below the soil line and half above. Planting too deep or too shallow will result in harm to the plant. As runners are produced, set them in the ground (hairpins work great!) to help them in rooting. To help direct energy to establish the plant the first season, pull flowers off until late summer, giving yourself a fall crop. For following seasons, let blossoms mature for an early summer and fall crop.

### **Mulching**

Mulching your strawberry plants will protect the crowns from freezing and thawing in areas where average night temperatures fall below 20° F. Cover the strawberries with a 3-4" layer of clean straw or hay. In early spring, pull mulch off the plants, but keep it surrounding the plants. This will help in weed control and prevent fruit from resting on the soil.