

- **Prepare the soil.** When it comes to soil, cranberry plants have unique requirements -- they need soil with a low pH value and a high level of organic matter. As a result, it is often necessary to replace your existing soil instead of trying to alter it. The average size for a cranberry plot is 4 foot (1.2 m) by 8 foot (2.4 m). However, if you are only growing a single plant, a 2 foot (0.6 m) by 2 foot (0.6 m) square will do just fine.
- Dig out the existing soil in the cranberry plot, to a depth of 6 to 8 inches (15.2 to 20.3 cm). Fill the plot in with peat moss, then mix in 1/2 pound of bone meal and 1 pound of blood meal.
- Optionally, you can add 1 cup of epsom salts and 1 pound of rock phosphate as well. (These quantities are for a 32 sq. foot plot, so adjust accordingly).
- Before planting, wet the soil thoroughly (but do not saturate it). You can do this by misting the plot with the garden hose, mixing the soil periodically to encourage absorption.

○ Planting Potted Plants:

- Choose a location in **full sun** with well-drained, very acidic **soil with a pH of 4.2-5.2**. If your pH is higher, add garden sulfur according to package directions starting in the fall. Lingonberries may also be grown in a raised bed to improve drainage.
- **Space plants 12-18 inches between plants and 4-5 feet between rows.** Plants will fill in like strawberries.
- Prepare the bed by turning the soil under to a depth of 6-12 inches removing any debris, and lightly raking as level as possible.
- The addition of organic matter (leaf mold, compost, well-rotted manure) benefits all gardens and is essential in recently constructed neighborhoods.
- Dig a hole at least 2 times the size of the root ball.
- Set the plant in the hole so that the root ball is level with the surrounding soil, backfill and press the soil firmly into the hole cavity.
- **Water deeply.** The water will seal off any air pockets around the root ball.
- Use a stick or marker to indicate where the plant is planted.
- Mulch with 4-6 inches of mulch to retain moisture and keep down the weeds.

- When selecting your planting site the first thing to consider is that Sea Berries are *very* shade intolerant. As a pioneer species that is adapted to colonizing disturbed areas it requires full day sunlight to reach maximum productivity. It is possible to grow Sea Berries in half day sun, but anything below six hours of direct sunlight and productivity begins to decline drastically.
- Good drainage is essential as well, otherwise plants will die from root rot. They prefer a sandy loam, but even growers with heavy clay soils have successfully grown Sea Berries if they are planted on a slope that drains well. This adaptation is also especially relevant for urban growers who might receive salt build up in their soils from road salt used in winter road maintenance.
- If you can meet these two broad requirements of full sunlight and good drainage then you will likely have no problem growing Sea Berries. As a nitrogen fixing species it can tolerate some of the poorest nutrient deficient soils and the Sea Berry plant thrives where most other species wouldn't stand a chance. Sea Berry plants will actually improve soil conditions over time. It has a broad pH tolerance, from 5.5 to 8.0, although it should be noted that the symbiotic root nodule-dwelling Frankia bacteria that are responsible for the Sea Berry's ability to fix nitrogen prefer a pH of 5.5-7.0. Plants will survive temperatures from -45 degrees Fahrenheit to 105 degrees Fahrenheit but typically set better crops below 90 degrees, and they are relatively drought tolerant.

- 1 Select a location for the chokeberry shrub in full sun or partial shade with slightly acidic soil, between about 6 and 7 pH. Space multiple plants 4 to 6 feet apart; if growing chokeberry for fruit, space 10 feet apart.
- 2 Dig the planting hole and work amendments into the soil, if needed. Break up soil in a hole about three times as wide and deep as the container the chokeberry is in. If desired, mix organic amendments like well-composted manure or plant materials into the soil to improve structure, moisture retention and fertility or to lower the pH; amendments should compose no more than 50 percent of the soil.
- 3 Plant rooted cuttings, seedlings or container specimens at the same depth they were planted in the container. Fill the space around the root mass with soil or amended soil, tamp it down gently, then water the roots thoroughly.
- 4 Apply a 3- to 4-inch layer of mulch around the shrub, leaving a gap around the stem so no mulch is in contact with the bark. Mulch controls weeds and conserves soil moisture and organic mulch slowly adds nutrients to the soil as it breaks down.
- 5 Irrigate the chokeberry deeply during periods of dry weather.
- 6 Pull weeds as they appear. Chokeberry has a tendency to sucker, sending up new sprouts from a spreading root system. This makes the chokeberry easy to grow in a row or as a hedge, but if suckering is undesirable, use a hoe to cultivate the area around the plant, breaking up any young suckers.
- 7 Chokeberry rarely suffers disease or pest problems but may be affected by powdery mildew.
- 8 Apply a balanced, slow-release fertilizer annually, if desired, to promote plant growth. Fertilizer applications are often unnecessary for the chokeberry shrub, particularly if nutrient-rich amendments were worked into the soil before planting and an organic mulch is used around the shrub.
- 9 Prune the chokeberry every few years by thinning out older stems. Plants older than about 10 years may benefit from a more severe pruning every four to five years to reduce their height to about 3 feet.

- **Soil**
- Well-drained soil with compost dug in. Soil pH range of 5.0 to 7.0 is preferred.
- **Position**
- Honeyberries grow best in locations that receive a half day of sun, preferably in the morning. They grow well in partial shade along a woodland edge.
- **Frost tolerant**
- Honeyberries can tolerate cold to -40F (-40C), so they are among the most cold-hardy small fruits you can grow. Cultivars descended from Russian breeding lines bloom and bear earlier than Japanese types, which are often called haskaps.
- **Feeding**
- Fertilize in late fall by spreading a 1-inch (2.5 cm) layer of composted manure over the root zones of the plants. Slow-growing plants can be fed again in early summer.
- **Spacing**
- **Single Plants:** 5'each way (minimum)
Rows: 3'with 10'row gap (minimum)
- **Sow and Plant**
- Plant in spring, just as the plants are emerging from dormancy. Mulch after planting to keep the soil cool and moist. Use wire cages to deter feeding by rabbits.
- **Notes**
- Often called edible blue honeysuckle, honeyberries produce fragrant white flowers in spring, at about the time strawberries bloom. Two compatible varieties are needed for good pollination.
- **Harvesting**
- Wait until the fruit is blue inside to harvest, because berries picked too soon taste tart. Fully ripe berries have a complex blueberry-raspberry flavor, with a hint of black currant. Honeyberries are easy to freeze, and they are great for making jams or wine.

○ **Before Planting**

- Before you plant, check your soil pH.. Ideally, elderberries need a soil pH between 5.5-6.5. Elderberries grow well in a wide range of soils, but do best in moist, fertile, well-drained soil.

○ **Planting Tips**

- Pick a location with full sun.
- Incorporate manure or compost before planting.
- Plant elderberries 6-8 feet apart in rows 10 feet apart.
- Plant 2 inches deeper than grown in the nursery.
- Water the plant thoroughly.
- No fertilizers should be applied in the first year.
- Elderberries are shallow rooted; keep them well watered the first season.

Currant and Gooseberry Plant Spacing

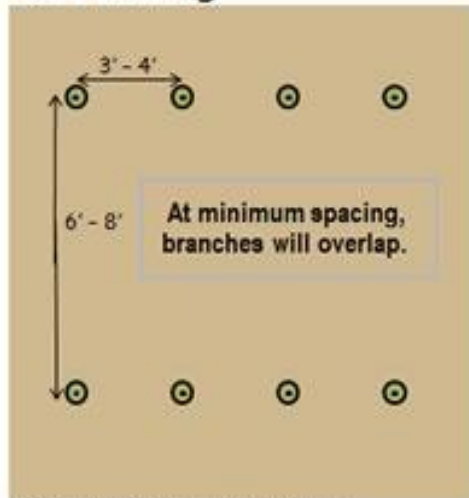
Spacing will depend on vigor and growth habit of the variety, site conditions including sun exposure and soil fertility, equipment you will use, and how you plan to grow the plants. You can grow Ribes as rounded shrubs or as single, double or triple cordons which require less space. Harvesting gooseberries from cordons is easier than from full shrubs. Avoid planting too densely because adequate air circulation is critical for hindering foliar disease problems. **Attention: Spacing is different for black currants.**

SPACING (Full Shrubs)	SPACING (Full shrubs)
gooseberry / red, white, pink currant	black currant
3' - 4' between plants	4' - 5' between plants
6' - 8' between rows	7' - 9' between rows

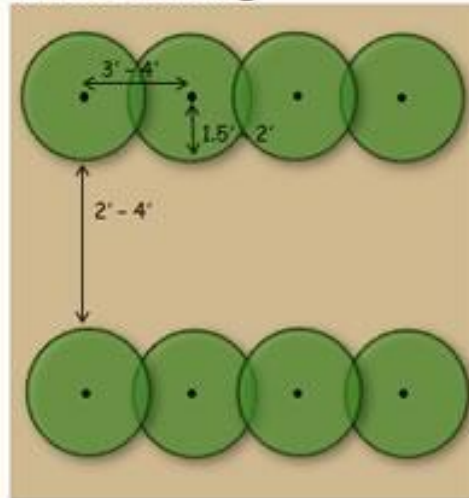


gooseberry / red, white, pink currant
Grown as Shrubs

New Planting



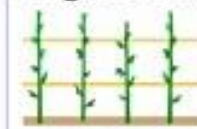
Mature Planting



Graphics by Janna Thompson, Naurse Farms

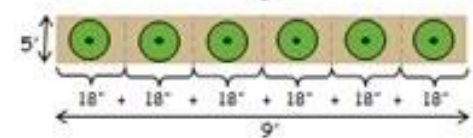
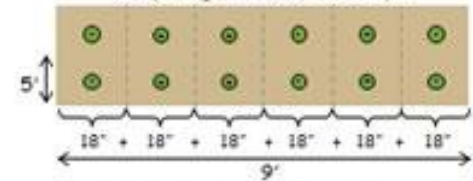
gooseberry / red, white, pink currant Grown as Cordons (rows are at least 5' apart)

Single Cordon

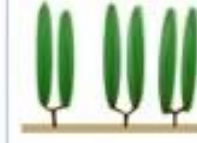
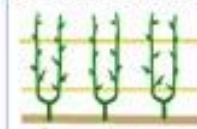


18" - 20" plant spacing

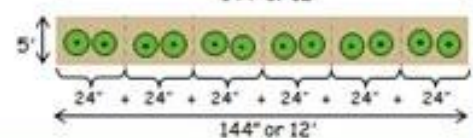
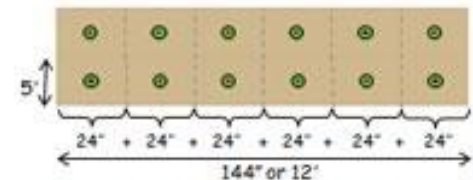
New planting with rows set five feet apart.



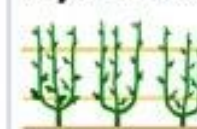
Double Cordon



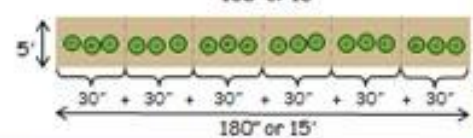
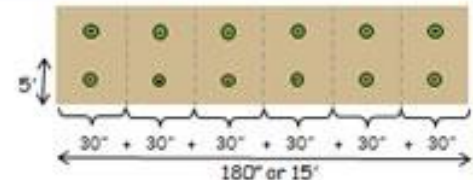
24" - 30" plant spacing



Triple Cordon



30" - 36" plant spacing



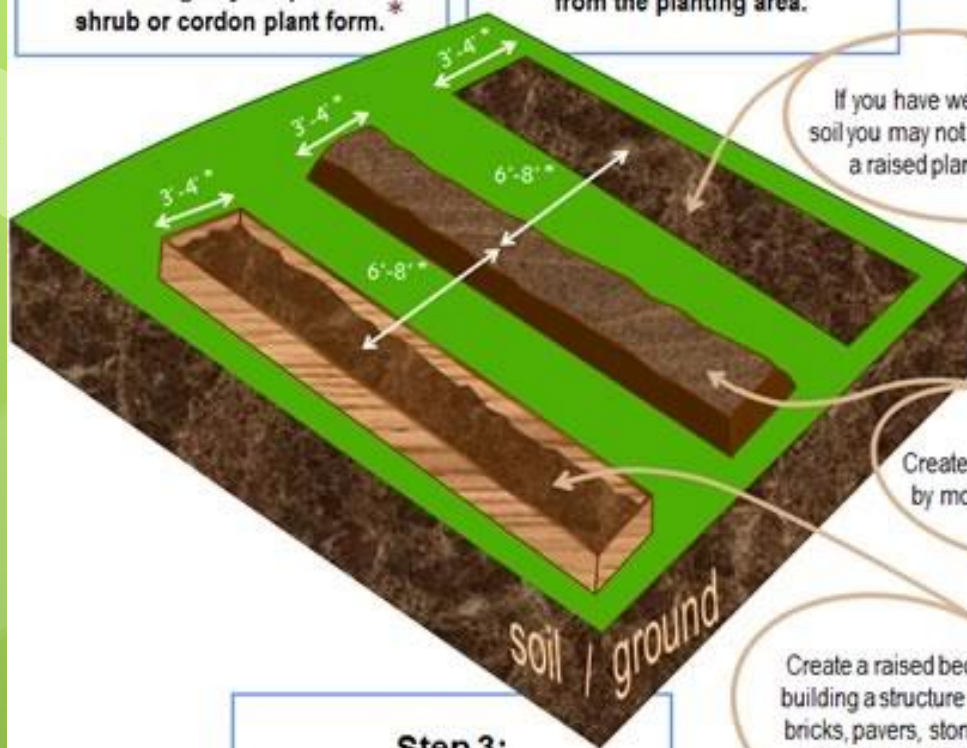
Diagrams not to scale

Step 1:

Measure your planting beds according to your planned shrub or cordon plant form.*

Step 2:

Remove grass and other weeds from the planting area.



Step 3:

Build raised beds, add organic matter and adjust pH as necessary.

Prepare Your Planting Area for Gooseberries and Currants

- Avoid southern facing slopes because intense sun may injure the plants.
- Planting on a slight slope will facilitate air drainage.
- Plants will thrive in well-drained soil that contains at least 2-3% organic matter. If organic matter is required, mix in some **well-aged** compost or composted manure a few weeks prior to planting or in the autumn prior to spring planting.
- If your soil is slow to drain after a rain, if you have heavier soil or clay soil, you may need to add some amendments and/or build raised beds. Your local extension service knows your soil and can advise you further on this.
- Adjust pH if necessary.
- Allow enough space to avoid overcrowding because adequate air circulation is critical in impeding foliar disease.
- Access to water is important. Plants will need irrigation at planting and throughout the growing season.
- Do not fertilize close to your planting date! In the fall prior to planting or at least 2 - 3 weeks prior to planting, till in $\frac{1}{2}$ lb - $\frac{3}{4}$ lb 10-10-10 per 100 sq. ft. Otherwise, wait until the plants are well established and top dress.

* Diagrams show recommended minimum spacing for red, white and pink currants and gooseberry plants as shrubs rather than cordons. If you are planning to grow your plants as cordons, growing black currants, or growing larger, highly vigorous varieties, you must modify your spacing accordingly. For details, please review additional pages and links on our website, call us or call your local agricultural extension office.

Currant & Gooseberry Planting

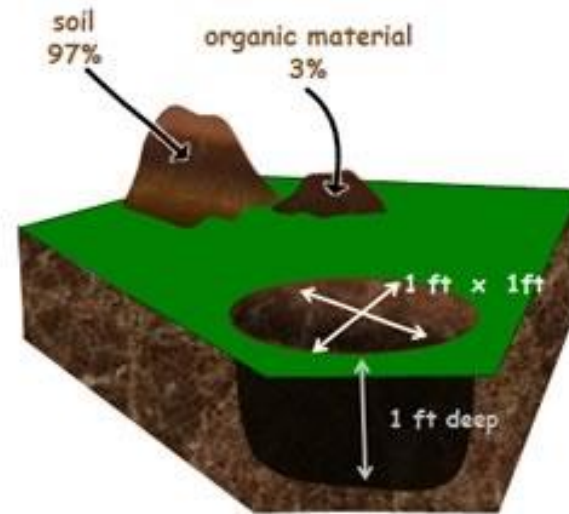
Do not fertilize close to your planting date. Mix $\frac{1}{2}$ lb - $\frac{3}{4}$ lb 10-10-10 per 100 sq. ft. in the fall prior to planting, or at least 2 - 3 weeks prior to planting, otherwise wait until the plants are well established.

Dig a hole deep and wide enough to cover the plug/roots. Plants should be set slightly deeper than they were in the nursery.

After you have mixed the appropriate amendments into the soil, you are ready to plant.

Prune the new plants. Cut gooseberry and red, white and pink currants to 6-8 inches. Prune black currants down to 2 buds.

Remove any flower blossoms that develop during the planting season to encourage the strongest plant growth.



Solitary Planting



Planting in Rows

* Black currants require wider spacing. If you want to train your plants as cordon forms, spacing will also be different. Review the spacing tab in this section and the spacing information in our planting success guide.

Maintain Your Currant & Gooseberry Plants

IRRIGATION

- 1" - 2" rainfall or equivalent per week throughout the growing season depending on soil conditions.
- Drip or trickle irrigation is best. Overhead irrigation supports development of foliage disease.

FERTILIZATION

- No fertilization is required the year of planting.
- Following years: Apply 5oz 10-10-10 per plant in the spring, or ½ the amount (2 ½ oz.) in the spring and again (2 ½ oz.) during the summer.
- Do not fertilize after July

WEED CONTROL

- Although use of mulch helps inhibit weeds, manual weeding will be necessary or regular, **shallow** cultivation by hoe.
- Mulch with a 2" – 4" layer of aged wood chips (not fresh), straw or finished compost. Commercial growers may use plastic with irrigation underneath.
- Avoid treated or colored bark mulch. Avoid using leaves, sawdust, and mushroom compost. Do not use Cedar or Black Walnut wood chips.
- Contact your local extension for chemical recommendations

PRUNING AS SHRUBS *(Also see diagrams in our [Planting Success Guide](#))*

(For more detailed information on other pruning methods and pruning cordon forms, please visit additional pages and links on our website, call us or call your local agricultural extension office.)

- Pruning will be required annually during dormancy.
- Regularly prune central canes and or branches to maintain some openness in the center of the plant to allow air and sunlight to enter.

red/white/pink currants & gooseberries

- At planting, it is recommended to cut the plant back to 6-8 inches.
- Remove the lowest branches, weak branches and any that are diseased, damaged or less than 6" long. Leave three or four each of one-, two- and three-year-old canes (8-12 canes total).
- Since red, white and pink currants and gooseberries fruit most heavily on spurs (short branches) of 1, 2 & 3 year old canes, you will remove all canes older than 3 years at ground level.

black currants

- At planting, prune each cane so that only two buds are left near the base.
- Black currants produce most on one-year-old (overwintered) growth. Therefore, your objective is to retain strong one-year-old canes as well as two- and three-year-old canes which have good one-year shoots. All four-year-old canes get cut out at the base.
- Remove the lowest branches, weak branches and any that are diseased or damaged.
- You may leave 8-15 canes per plant, depending on the vigor and growth habit of the variety.

- 1 Dig a hole in your yard twice as big around as the cherry root ball. This will allow the roots to spread out and establish themselves quickly. Choose a place in your yard that gets full sunlight for at least 6 hours every day. Loosen the soil in the bottom of the hole so all the roots can take hold easier.
- 2 Check the pH level of your soil using garden pH test strips. Bush cherry plants need a pH level of 4.5 to 7.5. If your pH level is too low, raise it by mixing in pulverized lime or wood ashes with the soil. If the pH level is too high, lower it by adding aluminum sulfate. Test the soil again to ensure you have the correct levels.
- 3 Plant the cherry bush at the same depth in which it grew in the pot from the nursery. Firm the soil down around the root ball and water it thoroughly.
- 4 Mix together a water-soluble high phosphorus fertilizer, following the package directions. Look for a fertilizer that has a high second number, noted as "P", on the label..

- For Beach Plum establishment of a fruit production orchard, the site selected should be well drained and receive full sun. Site selection should also avoid frost pockets as low spring temperatures may contribute to poor pollination (Carleo et al., 2018). Prior to planting the site should be cleared to minimize any weed competition. Incorporate soil amendments to achieve a pH of 6-7. Orchard designs may vary, but are typically either individually pruned larger shrubs spaced about 10 ft apart or smaller shrubs planted 3-5 ft apart and allowed to fill in as a hedge row production system. Select an appropriate row spacing that will accommodate intended equipment use; standard spacing is usually 12-16 ft. A grass or other suitable ground cover should be established as an inter-row cover to prevent erosion and minimize weed pressure

○ **Soil**

- Deep, fertile, well-drained soil.

○ **Position**

- Full sun or partial shade.

○ **Frost tolerant**

- Yes.

○ **Feeding**

- Mulch with well-rotted organic matter in spring.

○ **Spacing**

- **Rows:** 15' with 15' row gap (minimum)

○ **Plant**

- Prepare a large hole by breaking up the soil and adding plenty of well-rotted organic matter.

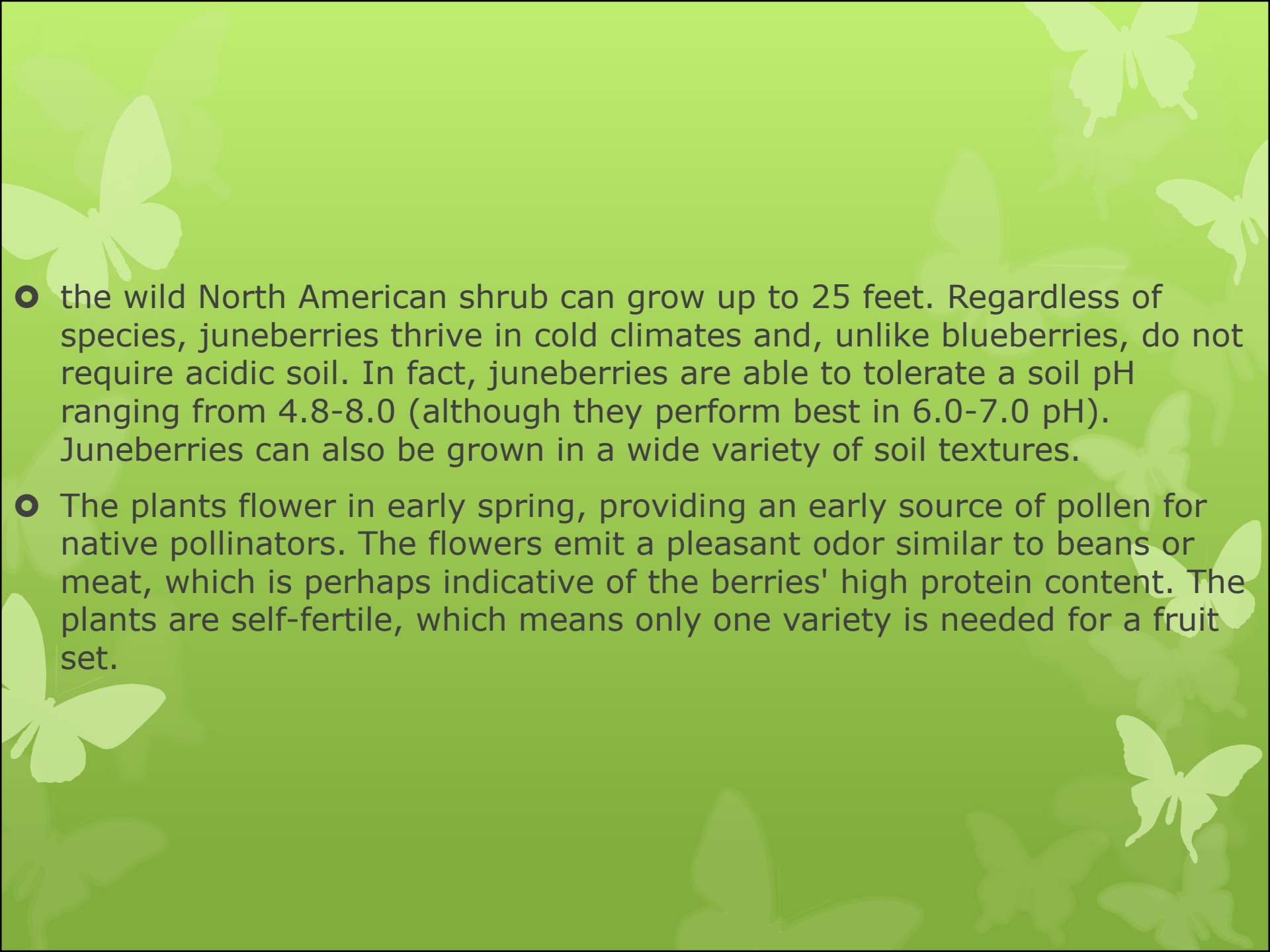
Notes

- Stake trees for the first 3-4 years. Healthy medlar trees will bear for decades.

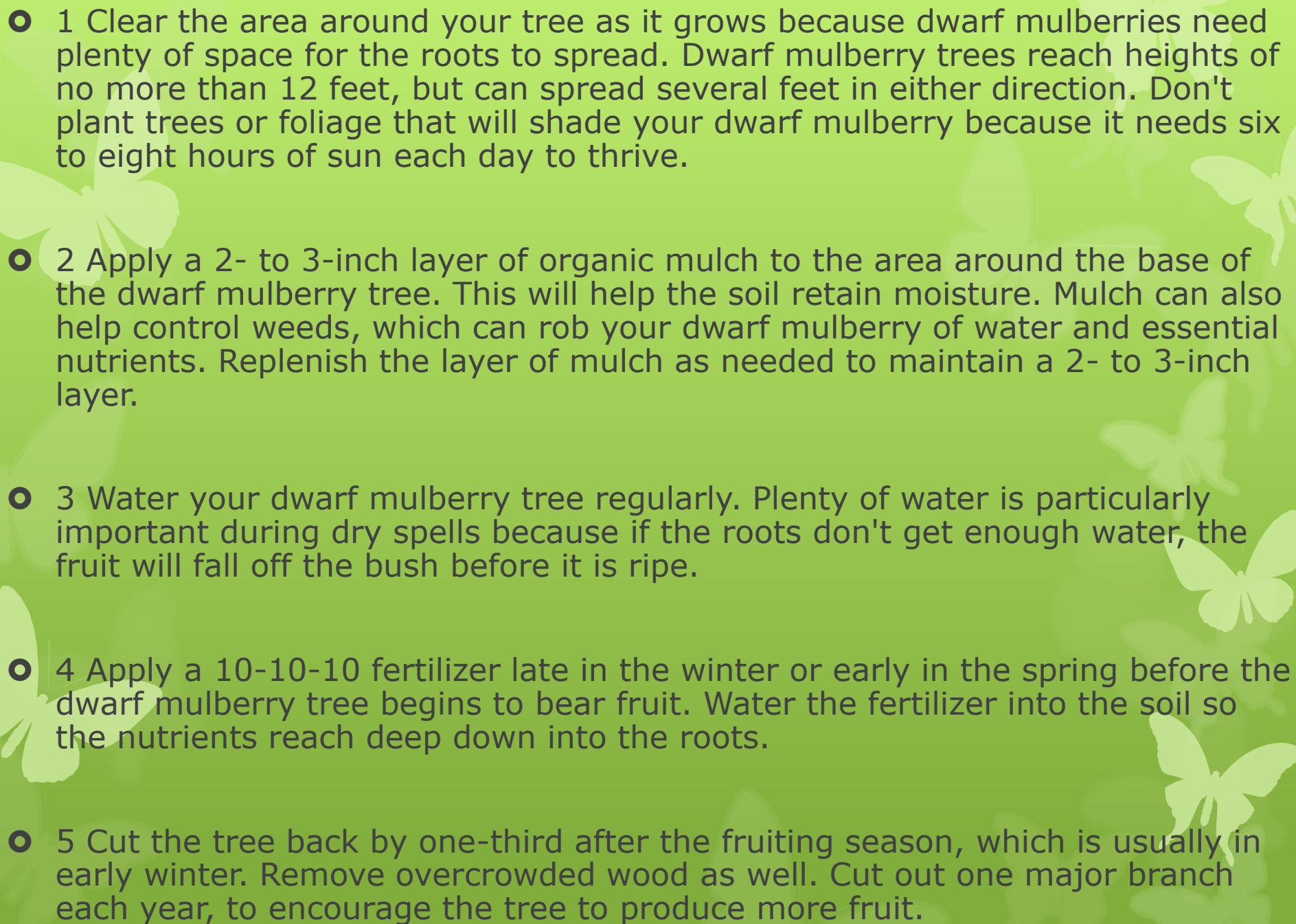
○ **Harvesting**

- Can harvest in fall before the fruits are fully ripe or else leave until they ripen if there is no danger of frost. Fruit must first be 'bled' before eating raw. To do this, leave them in a cool place until they turn dark red-brown and become soft.

- Quince trees are hardy in U.S. Department of Agriculture zones 5 through 9. Growing quince trees isn't that difficult as long as you can provide appropriate conditions. Choose a sunny location with fertile soil. Quinces adapt to wet or dry soils but perform best when the soil is well-drained. You will also need to plant two trees for good pollination.
- Quince Care - trees have some drought tolerance, but you should water them during prolonged dry spells as part of your routine quince care. It is hard to overwater a quince tree, so water them any time if you are in doubt. Fertilize with a low-nitrogen fertilizer in spring. Lawn fertilizers and other high-nitrogen plant foods encourage lush foliage and new growth at the expense of flowers and fruit. Quinces are small trees with a good natural shape that is easy to maintain. Shape a young tree by removing all but five main branches from the canopy so that you won't have to do any heavy pruning when the tree is mature. Remove dead, diseased and damaged branches as they appear.

- 
- the wild North American shrub can grow up to 25 feet. Regardless of species, juneberries thrive in cold climates and, unlike blueberries, do not require acidic soil. In fact, juneberries are able to tolerate a soil pH ranging from 4.8-8.0 (although they perform best in 6.0-7.0 pH). Juneberries can also be grown in a wide variety of soil textures.
 - The plants flower in early spring, providing an early source of pollen for native pollinators. The flowers emit a pleasant odor similar to beans or meat, which is perhaps indicative of the berries' high protein content. The plants are self-fertile, which means only one variety is needed for a fruit set.

- The ensuing fruit is initially very tart and looks much like olives. In fact, the ancient Greeks pickled the fruit much like olives. There are actually a myriad of other uses for cornelian cherries such as for syrups, jellies, jams, pies and other baked goods. In Russia it is even made into a cornelian cherry wine or added to vodka.
- How to Grow Cornelian Cherry Trees While historically significant, cornelian cherries have not been mass produced due to the elongated pit inside the fruit that is difficult to remove, as it is firmly entrenched in the pulp. More often, the trees are seen as ornamental specimens, popular and planted around the 1920's.
- Cornelian cherry cultivation is suited to USDA zones 4-8. The trees do best in full sun to part shade and while they do well in a variety of soils, they prefer fertile, well-draining soil with a pH of 5.5-7.5. This adaptable plant is winter hardy to -25 to -30 degrees F. (-31 to -34 C.). The tree can be pruned and trained into a single stemmed tree if desired and is primarily insect and disease resistant.

- 
- The background is a light green color with a pattern of white butterflies and leaves scattered throughout. The butterflies are of various sizes and orientations, and the leaves are simple, rounded shapes.
- 1 Clear the area around your tree as it grows because dwarf mulberries need plenty of space for the roots to spread. Dwarf mulberry trees reach heights of no more than 12 feet, but can spread several feet in either direction. Don't plant trees or foliage that will shade your dwarf mulberry because it needs six to eight hours of sun each day to thrive.
 - 2 Apply a 2- to 3-inch layer of organic mulch to the area around the base of the dwarf mulberry tree. This will help the soil retain moisture. Mulch can also help control weeds, which can rob your dwarf mulberry of water and essential nutrients. Replenish the layer of mulch as needed to maintain a 2- to 3-inch layer.
 - 3 Water your dwarf mulberry tree regularly. Plenty of water is particularly important during dry spells because if the roots don't get enough water, the fruit will fall off the bush before it is ripe.
 - 4 Apply a 10-10-10 fertilizer late in the winter or early in the spring before the dwarf mulberry tree begins to bear fruit. Water the fertilizer into the soil so the nutrients reach deep down into the roots.
 - 5 Cut the tree back by one-third after the fruiting season, which is usually in early winter. Remove overcrowded wood as well. Cut out one major branch each year, to encourage the tree to produce more fruit.

○ **Planting Fig Trees in Containers**

○ **Find the right container:**

- The container you use can be made of any material (wood, clay, ceramic, recycled materials, etc.) just be sure there are plenty of drainage holes to let excess water escape.
- Try to avoid heavy decorative pots, since they may be difficult to move once they are filled with soil, water, and a fig tree.
- Don't waste space! Start small and move up to a larger container size as the tree roots fill the current container. For example, you may start out with a 5- or 7-gallon container and move up to a 10-gallon container when the tree's roots fill the previous container size.
- Your tree may eventually end up growing in a container as large as 2.5 feet in diameter, like a half whiskey-barrel, but these are heavy and difficult to move, so make sure you can manage the container size you choose to plant your fig tree in.

○ **For a unique growing experience:**

- Consider a *container on wheels* for your mobile convenience! Before putting the tree into the container, place the container on a wheeled plant stand, which can be purchased at almost any garden center, hardware store, or nursery. This will make your life a whole lot easier when you get ready to move the container around for the winter season.

○ **Planting Tips:**

- **After planting your fig tree in its container**, water it well, then add a layer of mulch. The mulch will keep the soil from drying out too quickly. Put the fig tree in a sunny spot in your yard, and keep well watered. During hot summer weather, your fig tree may need more frequent watering, possibly even daily. Observe and respond accordingly to your tree's environment. Note: If your tree's leaves begin to yellow, chances are it is being over-watered.
- **Pruning your fig tree.** Unlike most other fruit trees, fig trees typically don't require routine pruning, but you can prune them to a size that works for your space. Depending on the variety, fig trees naturally mature around 10- to 15-foot tall or larger! Many fig-tree growers find that keeping them between 6-8 feet tall is most manageable, especially in a container environment. Some fig trees have a natural bush-like appearance if allowed to grow naturally. If your fig tree has more of a "bushy" shape and you'd prefer one main trunk, you can prune the additional low growth out until you are left with one main trunk.
- **In autumn**, when the leaves start to turn and fall (ideally before the first killing frost), it is time to move the fig tree to an unheated basement, garage, or shed where the fig tree will go dormant. Check occasionally during the dormant period for soil moisture. Be sure to allow the soil to become dry to the touch 2-3 inches below the soil surface before watering. Dormant roots don't take in much water, but the moist soil keeps the roots from drying out. Avoid drenching or overwatering your dormant fig trees; this will avoid root rot and other water-related issues.
- **As warmer weather approaches** and the days get longer, move the fig tree out to the yard for *a few hours* every day. This will help acclimate it back to its favored warm weather. Take it back indoors in the evenings. When the last frost date has passed for your area, move the fig tree back to a sunny spot outdoors. In no time, your healthy, vigorous tree will produce sweet and luscious fresh figs for your snacking, cooking, and drying pleasure.

Height: 10 - 12 feet.

Spacing: 10 - 12 feet.

Depth: Prepare an area 36 inches in diameter, clearing all sod and weeds. Work the soil 24 inches deep. Dig the planting hole right before planting deep enough and wide enough to accommodate the roots without crowding. Plant bareroot trees 1 inch deeper than they were grown in the nursery.

Spread: 10 feet.

Light Required: Full Sun

Pollinator: Plant at least 2 trees for good pollination.

Yield: Approximately 1/2 - 2 bushels at maturity.

- **Soil**
- Fertile, well-drained soil with a slightly acidic pH.
- **Position**
- American persimmon trees tolerate partial shade from high pines or other typical neighbors.
- **Frost tolerant**
- American persimmons tolerate much colder conditions, often surviving to -25F (-32C).
- **Feeding**
- Persimmons usually need no fertilizer when grown in lawns. Too much nitrogen can cause fruit to drop.
- **Companions**
- Mint. To get good fruit set, male and female trees are required of American persimmons. Oriental persimmons are self fertile, but fruit better when multiple trees are grown.
- **Spacing**
- **Single Plants:** 20' each way (minimum)
Rows: 20' with 20' row gap (minimum)
- Persimmons do not need to go through a frost to be palatable, but they do need plenty of time to finish ripening after they have been picked. Persimmons may take seven years to start bearing, and then produce for decades.
- **Harvesting**
- Let fruit drop ripe from tree.

- 1 Prepare a bed for Kousa dogwood. This tree has a shallow root system and needs room to spread and grow. Till the soil in an area that is at least three times as wide as the root ball of your tree. Spread 2 inches of organic mulch over the area and work it into the soil with a garden spade.
- 2 Dig a hole as deep as the root ball of your tree and twice as wide. Set the soil aside for filling in around the tree roots.
- 3 Remove your tree from its pot. Check the roots to see if they are wrapping around the perimeter of the container. Loosen roots or cut them if necessary to allow them to grow freely. If your tree is balled and burlapped, the roots were already pruned. Remove strings and clamps from a balled-and-burlapped tree.
- 4 Set the Kousa dogwood tree in the hole so that it is planted at exactly the same depth as its previous depth. Do not plant deeper than the top of the soil of a potted plant or above the flare of the trunk at the top of the soil line on a balled-and-burlapped tree.
- 5 Lightly shovel dirt back into the hole to stabilize the tree. Tamp lightly to remove air pockets. When the hole is half-filled with dirt, finish filling the hole with water. After the water drains away, continue to fill the hole with dirt. Tamp the soil again. Water the tree again.
- 6 Mulch with organic matter. Water daily or as needed to keep the soil slightly moist for the first week. Water weekly thereafter for the first growing season.

○ **Planting Steps**

- Space your trees 15-25 feet apart, depending on variety.
- Dig the hole deep and wide enough so the root system has plenty of room. (Keep the topsoil in a separate pile so you can put it in the bottom of the hole, where it'll do the most good.)
- Roots grow better in soil that's been loosened, so mix in our Coco-Fiber Potting Medium into your pile of topsoil. You can also use dehydrated cow manure, garden compost or peat moss (up to 1/2 concentration).
- Plant the same depth as grown in nursery row or in pot.
- Fill the hole, putting the topsoil back in first. You can avoid creating air pockets by working the soil carefully around the roots and tamping down firmly.
- Create a rim of soil around the planting hole 2" above ground level. This allows water to stand and soak in. (In the fall, spread soil evenly around tree to prevent damage from water freezing around the plant.)

○ **Post-Planting**

- Fertilize sparingly with root starter Fertilizer. (If planting in the fall, wait to fertilize until spring for best results.) This effective starter fertilizer helps trees and plants grow quickly and vigorously. After watering, if soil compacts, be sure to add enough soil to fill the hole to ground level.
- No pruning is necessary at planting time

- Growing goji berry plants is easy. The plants need well-drained soil with pH levels between 6.8 and 8.1. Check the drainage and add sand or compost to improve the texture of the soil if necessary.

The goji berry plant is a great addition to the garden. Hardy in USDA zones 3 through 10, this large branching shrub produces bright red berries that are both tasty and being touted all over these days as a superfood.

How To Prepare Your Soil

- Roots grow faster when they're spread out. Dig the hole deep and wide enough so the root system has plenty of room to easily expand. Keep the topsoil in a separate pile so you can put it in the bottom of the hole, where it'll do the most good.
- To loosen the soil, mix dehydrated cow manure, garden compost or peat moss (up to 1/3 concentration) into your pile of topsoil. Make sure the peat moss you get is either baled sphagnum or granular peat. You can also add our Coco-Fiber Potting Medium or 2 or more inches of organic material and work in evenly with the existing soil.

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- Male and female flowers are born on different plants, so both males and females must be planted in roughly a 1:6 ratio of males to females.
- The plants often take several years to mature and usually do not bear fruit until they are 5 to 9 years old.
- Although the plants are extremely winter hardy--tolerating temperatures as low as -30°F --they develop shoots early in the spring that are extremely sensitive to frost. In most years, we see some shoot "burning" due to frost, although the plant usually survives, regrows, and fruits despite some spring shoot removal. If flowers are frosted, fruit will not develop that year.
- Hardy kiwi are extremely vigorously growing vines that require a substantial supporting trellis.
- Dormant rooted cuttings should be planted 10 feet apart as soon as the soil can be worked in the spring. The planting row width, if rows are used, will depend on the type of trellis and the equipment used in the planting. Containerized plants may be planted in the spring after the danger of frost has passed. Distribute male plants throughout the planting.
- **Nutritional Requirements**
- Because hardy kiwi roots burn rather easily, apply fertilizer cautiously. No fertilizer will be necessary in the year of planting. In the spring of the second year, apply 2 ounces of 10-10-10 per plant, and increase this amount by 2 ounces each year until plants receive a total of 8 ounces per plant.

- 1 Plant your grape vine in spring. Choose a site in full sun on a slope that faces south or east, with deep, light soil and good air circulation.
- 2 Dig two postholes ten feet apart and two feet deep. Set 8-foot black locust posts in the holes and fill the bottom of each hole with 6 inches of crushed gravel before adding soil. String two wires between the posts, one 3 feet high and the other 5 feet high.
- 3 Soak the roots of your vine in a bucket of water for several hours. Dig a hole next to the wires halfway between your two posts, and plant the vine at the same height it grew in the nursery. Make sure that any graft union is above the soil line. Water the vine well and mulch it with compost.
- 4 Drive a lighter stake into the soil directly behind the grape vine and up against the wires. Let the vine grow unpruned the first year with the shoots loosely tied to the stake.
- 5 Add more compost mulch the following spring and prune the vine back to two buds. Note which shoot grows most strongly from those buds, and train it up the stake to be the plant's trunk. Cut it back to just above the top wire once it has grown 18 inches higher than that wire.
- 6 Refresh the compost mulch in the third spring and tie four branches horizontally along the wires to be your fruiting canes, one on either side of the trunk on both wires. Prune them to be about 3 feet or ten buds long. Leave an additional two-bud spur on each branch, close to the trunk, to produce the canes for the following year. Cut out all other growth.
- 7 Continue to add fresh compost in the fourth year. Prune out the previous year's fruiting canes and train four new ones from the previous year's spurs. Cut new spurs as well, so they can produce fruiting canes in the following year. Repeat this process each spring

- Harvest Times
- Bush Cherries-**harvest** can be as early as late July or as late as September.
- Papaws-ripen mid-August thru September
- Persimmons-ripe as early as mid-September or as late as February
- **Goji** berry **harvest** starts in the summer until you experience a frost
- Grapes-usually in late summer or early fall
- Hardy Kiwi-"vine ripen," at which time they will have about 18 to 25 percent sugar.
- Dwarf Mulberry- harvest when they will "dull" a little and be their sweetest.
- **Currants** and **gooseberries** ripen in June and July
- Honeyberry ripen late may and into June
- Aronia- ripen late summer into the fall
- Lingonberry- Summer and late September into October
- Cranberry- harvest from mid-September until around mid-November
- Elderberries-harvest mid-August to mid-September
- Quince-**harvest** in October or November
- Saskatoons- harvest mid-June to early July