

Easy Steps to Planting Nursery Stock

Plant Right Away

Soak roots of trees, shrubs and roses for several hours before planting. Soak strawberries and perennials 1/2 hour. If you can't plant immediately, see No. 4.

2. Protect Plant Roots

Don't expose roots to air or sun—keep covered with wet burlap or towels.

3. Planting Tips

Dig a hole wide enough to hold the roots without crowding and deep enough to set stock at the same depth it grew in the nursery. Trim damaged roots before planting. If the ground is hard, break up the soil at the bottom of the hole and add a little topsoil. Position the stock and add several inches of soil. Firm soil gently to remove air pockets, then water. When water has soaked in, add remaining soil and water again. Water frequently the first year and mulch with straw or hay.

Since all fruit varieties (named cultivars such as Red Delicious apple, Reliance peach, etc.) are grafted, the planting depth should be carefully monitored. The graft or bud union (enlarged trunk area located 4-8" above the roots) should be planted so that the union is 2-3" above the soil line after settling. If planted deeper, the varietal section above the union will produce its own roots and become a full-sized tree.

If Planting Is Delayed

BEFORE PLANTING IN THE GARDEN: You may heel in trees and shrubs by digging a trench in a shady spot and temporarily planting the roots under 6 inches of moist soil.

IF AREA IS NOT READY FOR PLANT-ING: Sprinkle roots of trees, shrubs and roses with water, rewrap and store in a cool basement. Do not allow the stock to freeze. Plant as soon as possible.

Store strawberries and perennials in a spare refrigerator (not used for fresh produce) or in an unheated area or basement until conditions are right for planting. Wrap roots in damp paper toweling and cover with a plastic bag to prevent drying. Keep bulbs and onion sets at 50°F. Store potted plants on a sunny windowsill. Remove the cardboard sleeve and water well until planting conditions improve. If potato sets show mold, spread them out to dry in an airy room.

Prune the Stock

Most stock is pruned before shipping to avoid damage in transit, so only minor pruning is needed. Remove crossed limbs and broken branches.

O. Keep Watering!

One tree or shrub may bud and leaf out quickly, while another will take much longer. This is normal. Keep watering on a weekly basis. If in doubt, lightly scratch the bark with your fingernail. If the wood is green, the plant is alive.

ARTICHOKES

Jerusalem—Cut the tubers into pieces so that each knob has part of the main tuber attached. 4-6 weeks before the last frost date, plant the knobs 3-5 inches deep and 18-24 inches apart in rows 36-42 inches apart. Tubers are ready for digging after the tops are killed by frost. Cut tops with a mower and dig like potatoes or leave in the ground and harvest throughout the winter. Freezing won't hurt the tubers, but a heavy straw mulch will keep the ground from freezing and make digging easier.

ASPARAGUS

Plant 12-18 inches apart in spring or fall. Prepare an 18-inch trench filled with 6 inches of compost followed by 6 inches of rich topsoil. Spread the crowns over the soil and cover them with 2 inches of soil (see below). Gradually fill the trench with soil as the plants grow. If planting in fall, fill the trench in completely. Each spring, apply 3-5 pounds of fertilizer per 100 square feet. Work into the soil before growth starts. Repeat application after the harvest is complete. Cut the tops back and mulch in late fall to help prevent deep freezing and sudden changes in soil temperature. Limit the first harvest to one or two cuttings by mid-June of the second year. A full crop can be harvested the third year after planting, when the spears are 6-10 inches tall. (If planting 2-year crowns, you should harvest a good supply the second year.) Harvest for 6-8 weeks only, or until about the first of July in the North. When harvesting, snap off or cut spears at ground level to avoid injuring new growth.

Trenching in Asparagus



BULBS, Fall-Planted

Fall-planted bulbs spend the winter making roots and come up early in the spring. The depths given in this section are measured from the soil surface to the top of the bulb. If your soil is sandy, plant 1 inch deeper; if your soil is clay, plant 1 inch more shallow. Firm the soil with your hand to eliminate air spaces. Hardy bulbs are not dug in the fall but most should be mulched in colder climates. Two rugged exceptions to this rule are crocuses and grape hyacinths. For best effect, plant varieties in a clump. After several years, or if flowering diminishes, divide in midsummer and make new plantings from the offspring that have formed around the mother bulb.

Planting Planting Approx. Sun or Variety Depth Distance Height Shade Allium 6 In. 15 In. 3-5 Ft. Sun Calochortus 3-4 In 6-8 In 24 In Sun Crocus 3 In. 3 In. 6-8 In. Sun Crocus, Fall 3 In. 3-4 In. 4-6 In. Sun Crown Imp. 2-3 Ft. 8 In. 8 In Sun Cyclamen 1/2 In. 6-8 In. 6 In. P. Sh., Sh. Daffodil 5-6 In. 6 In. 1-2 Ft. Sun, P. Sh. Dutch Iris 6 In. 6 In. 1-2 Ft. Sun Dwf. Allium 4 In. 5 In. 11/2 Ft. Sun Glory of Snow 3 In. 3 In. 6-8 In. Sun. P. Sh. Grape Hyacinth 3 In. 6-9 In. Sun. P. Sh. 3 In. Hyacinth 8-12 In. Sun 6 In. 6 In. 6 In. Magic Lily 5 In. 2 Ft Sun Mini Amaryllis 1-2 In. 4-6 In. 8-12 In. S. P. Sh. Oxalis 2 In. 4-6 In. 3-6 In. Sun, P. Sh. Scilla 3 In. 4 In. 8 In. P. Sh., Sh. Snowdrop 2-3 In. 2-4 In. 10 In. P. Sh. Span. Bluebell 3-4 In. 6-8 In. 12-14 In. Sun, Sh. Striped Squill 4 In. 3 In 6 In P Sh Tulip 6 In. 6 In. 12-30 In. Sun Wint.-Hdy. Glad 4 In. 6-8 In. 11/2-2 Ft. Sun Violet, Dogs Tth. 3 In. 6-8 In. 1 Ft. P. Sh., Sh.

PLANTING FALL BULBS

BULBS, Spring-Planted

Mix compost with your soil to improve drainage and to keep bulbs from rotting. Lily and anemone bulbs may be planted in the early spring; however, the remaining bulbs should be planted only after the soil has warmed and the danger of frost has passed. Add bonemeal at planting time to boost root development. Depths given in this section measure from the soil surface to the top of the bulb. If soil is sandy, plant 1 inch deeper; if your soil is clay, plant 1 inch more shallow. Bulbs contain ample nutrients for the first year's flowers but must replenish them in order to bloom again the next year. Fertilize down either side of the row with a balanced fertilizer at the rate of 1 pound per 100 square feet. Feed once a month from planting until the foliage yellows. Except for lilies, spring bulbs are tender and must be dug in the fall in cold climates. Store them for the winter at 50°F in vermiculite or dry peat moss.

Variety	Planting Depth	Planting Distance	Approx. Height	Sun or Shade
Anemone	4 In.	2 In.	6 In.	Sun, P. Sh.
Begonia	¹ /2 In.	1 Ft.	1 Ft.	P. Sh., Sh.
Caladium	3-4 In.	1 Ft.	3-4 Ft.	P. Sh., Sh.
Calla Lily	3 In.	1-11/2 Ft.	11/2-2 Ft.	P. Sh.
Canna	2 In.	15 In.	21/2-8 Ft.	Sun
Dahlia	4 In.	15-30 In.	3-4 Ft.	Sun
Freesia	2 In.	4-6 In.	12-14 In.	Sun
Gladiolus	4 In.	4-6 In.	11/2-2 Ft.	Sun
Lily	4 In.	3-4 In.	2-3 Ft.	Sun, P. Sh.
Oxalis	1-2 In.	3-4 In.	6-8 In.	Sun, P. Sh.
Patchwork Pe	t. 1-2 In.	3-4 In.	8-10 In.	Sun
Queen Fabiol	a 4-6 In.	6-8 In.	1-2 Ft.	Sun, P. Sh.
Ranunculus	1 ¹ /2 In.	6-8 In.	1-11/2 Ft.	Sun
Tuberose	2-3 In.	6-8 In.	3 Ft.	Sun, P. Sh.

PLANTING SPRING BULBS

EVERGREENS

Evergreens do best in fertile, well-drained ground and prefer slightly acidic conditions—a soil with a pH level range of 5.8-6.8.

Provide some form of temporary shade, such as cedar shakes, to help keep the plant cool. This helps to prevent death from sun, the leading cause of young tree loss. Water well, 1-2 gallons every 2 days for 2 weeks, then once every 7-10 days. Prune juniper and cedar in summer, pine and spruce in May or June before new growth hardens.

FRUIT TREES

Plant fruit trees as advised in the general planting directions on page 1, following the spacing recommendations from the Fruit-Planting Chart on page 4.

This spacing, less than 50 feet apart, ensures good pollination. Even trees that are self-fruitful bear heavier crops with a second variety planted nearby.

Proper planting depth is also critical. The graft or bud union (swollen area on the trunk, about 4-6" above the roots of all Gurney fruit trees) must be 1-2" above the soil surface (after settling). With dwarf and Li'l-BIG"-sized trees, permanent staking is mandatory immediately after planting. Use our patented Tree Support system, which lasts a lifetime and is very easy to install, or drive a 6-7" stake at least 18" in the ground near the tree and attach the trunk to it. If you use twine, tie it loosely to prevent girdling.

Additionally, young fruit trees are subject to damage during winter months from foraging rabbits. Until year four, the lower 18-24" of the trunk requires a protective barrier during winter.

As your trees grow, prune in early spring, removing crossed or injured limbs and any branches which rub against each other. This allows light into the center of the tree. Don't cut short spurs from the main stem since these bear first fruit.

The general rule is to prune less during the juvenile or early years, removing only the limbs that compete with desired limbs. Apple and pear varieties with a natural upright habit should have their limbs spread to a 60-degree angle.

Starting in year five, prune out shaded or crowded limbs annually in late winter. Never leave stubs; cut limbs where they connect with the trunk or other limbs you want to keep.

Regular spraying stops insects before they can damage your crop. Apply dormant oil before buds begin to swell. Spray trees with liquid fruit tree spray when flower petals fall. Make follow-up applications every 10 days or so until the harvest nears. With proper care, fruit trees will remain productive for many years. To maximize their productivity and quality, thin excess fruit each year. For apples and pears, remove one fruit per cluster. For peaches, nectarines, plums and apricots, leave only one fruit per 8-10" of limb space. Do this just after the flower petals have fallen or when tiny fruits become visible.

FRUIT-H	'LAN'I	ING	CHA	RT
Variety	Planting Distance	Approx. Height	Years to Bearing	Avg. Yield
Dwf. Apple	10-15 Ft.	8-15 Ft.	3-4	3-4 Bu.
Li'l-BIG [™] Apple	6 Ft.	5-7 Ft.	2-3	.5 Bu.
Std. Apple	25-35 Ft.	20-25 Ft.	4-5	10-20 Bu.
Semi Dwf. Apricot	10-14 Ft.	12-14 Ft.	3-5	2-4 Bu.
Std. Apricot	15-20 Ft.	15-20 Ft	5-7	3-5 Bu.
Bush Cherry	5 Ft.	4-8 Ft.	2-3	1-2 Qts.
Dwf. Pie Cherry	10 Ft.	10-15 Ft.	2-3	1-2 Bu.
Std. Pie Cherry	25 Ft.	15-20 Ft.	3-4	2-5 Bu.
Std. Swt. Cherry	25 Ft.	25 Ft.	4-6	3-7 Bu.
Std. Nectarine	15-20 Ft.	15-20 Ft.	3-4	3-8 Bu.
Semi Dwf. Nectarir	ne10-15 Ft.	12-14 Ft.	2-3	1-3 Bu.
Semi Dwf. Peach	10 Ft.	12-14 Ft.	2-3	2-5 Bu.
Std. Peach	15-20 Ft.	20 Ft.	4-5	3-8 Bu.
Dwf. Pear	10-15 Ft.	8-15 Ft.	3-4	2-3 Bu.
Std. Pear	20-25 Ft.	20-40 Ft.	4-7	4-8 Bu.
Semi Dwf. Plum	10 Ft.	12-14 Ft.	2-3	1-2 Bu.
Std. Plum	15-20 Ft.	10-25 Ft.	3-4	2-3 Bu.

FRUIT-PLANTING CHART

GARLIC

Garlic rarely produces seed, so the main bulb must be separated into small cloves to increase plantings. In early spring or fall, plant cloves 4 inches apart and 1 inch deep (2 inches for Elephant garlic) in moderately fertile soil and full sun. In rich soil, garlic develops more top vegetation and less bulb. Harvest bulbs after the tops have yellowed. Cure in the sun for 2 weeks or until dry. Place in mesh bags and hang in a cool, dry, dark spot. Replant bulbs in September for the following year.

GINGER

Plant one rhizome per 10-inch pot. Cover with 1-2 inches of soil, using a quality, well-drained mix. Place in a light-shaded and wind-free spot. Bring pot indoors when frost threatens. The rhizomes may be harvested anytime the plant begins to outgrow its pot. Remove a small portion to replant and store the remainder in a dry, cool location.

HEDGES

Dig a trench 12-18 inches wide, setting plants in a straight line or an offset zigzag pattern at the depth they grew in the nursery row, following the spacing chart below. (An offset pattern will give you a thicker, fuller hedge but may require 1/3 more plants.) To stimulate branching, pinch off the ends of each new shoot. When new growth reaches 10-12 inches, trim it back several inches. Hedges should be trimmed several times a season. A weak or straggly hedge should be cut back to within inches of the ground, then fertilized to encourage new growth. If a hedge is doing well, only minor pruning is needed-particularly if you favor an informal appearance. Be sure to prune the top narrower than the bottom so that the bottom gets sun. Prune flowering hedges, such as lilacs and spirea, after they have finished blooming. Hydrangeas, on the other hand, should be pruned later in summer, removing only the stems that have already flowered.

HEDGE-PLANTING CHART

Variety	Planting Distance	Approx. Height	Sun or Shade
Caragana	4 Ft.	15-20 Ft.	Sun
Chinese Elm	3 Ft.	50 Ft.	Sun
Cotoneaster	12-15 In.	10 Ft.	Sun
Dwarf Burning Bush	3 Ft.	4-6 Ft.	Sun
Honeysuckle	21/2-3 Ft.	10-12 Ft.	Sun, Sh.
Ginnala Maple	3 Ft.	20 Ft.	Sun
Japanese Yew	2-21/2 Ft.	10-20 Ft.	Sun, Sh.
Persian Purple Lilac	3 Ft.	4-8 Ft.	Sun
Privet	1-2 Ft.	10 Ft.	Sun
Redleaf Barberry	3-5 Ft.	3-5 Ft.	Sun
Robin Hood Rose	15 In.	6 Ft.	Sun
Russian Olive	3 Ft.	30 Ft.	Sun
Spirea Vanhouttei	2 Ft.	6-8 Ft.	Sun, Sh.
Tallhedge	11/2-2 Ft.	10-12 Ft.	Sun
Virginiana Juniper	3-5 Ft.	30-40 Ft.	Sun

HORSERADISH

Horseradish thrives in sun or shade but can become invasive in rich soil; keep it in an out-of-the-way corner. Plant cuttings 3-4 inches below the surface and 8 inches apart in rows that are 16 inches apart. Keep the soil evenly moist during the growing season. Your crop will be ready to harvest in 2 years. Harvest large roots after frost, leaving the smaller roots for the next harvest.

HOUSEPLANTS

Remove your houseplant from its packaging immediately and place in a bright window out of direct sunlight. After several days, sun-loving plants may be placed in direct sunlight. Don't be surprised if some houseplants lose their leaves due to shipping stress-they are not dying. Keep your plant in its original pot until it has had time to recover from shipping stress and produce two new leaves. Watch watering needs closely while your plant is in a small pot. When repotting, place into a 4-inch pot and water thoroughly. Avoid moving your plant into a very large pot until it is ready or root rot will likely result.

HOUSEPLANTS CHART				
Variety	Light	Soil	Water	
African Violet	indirect	well-drained	keep moist	
Angel Trumpet	direct	well-drained	keep moist	
Banana, Dwarf	direct	rich, well-drained	keep moist	
Bird of Paradise	direct	rich, well-drained	mist, allow to dry between watering	
Bougainvillea	direct	potting soil	let soil dry between watering	
Carniverous Kit	indirect	peat moss	mist, keep moist	
Clivia	indirect	well-drained	let soil dry between watering	
Eucalyptus	direct	well-drained	let soil dry between watering	
Fig, Indoor	direct	rich, well-drained	keep moist	
Citrus	direct	sandy, well-drained	let soil dry between watering	
Gardenia	direct	acidic	mist, keep moist	
Jasmine	indirect	potting soil	keep moist	
Passion Flower	direct	potting soil	keep moist	
Guava	direct	well-drained	keep moist	
Pomegranate	direct	potting soil	keep moist	
Powderpuff	direct	well-drained	keep moist	
Date Palm	direct, indirect	potting soil	keep moist	
Sweet Leaf	direct	potting soil	let soil dry between watering	

NUT TREES

Follow the general planting directions on page 1 and space as directed in the chart below. Nut trees thrive in full sun and well-drained soil. You can control the few pests and diseases that trouble them with liquid fruit tree spray. Most nut trees are self-fruitful, but the male and female flowers don't always develop at the same time. For best results, plant nut trees in groups of two or more of like variety within 50 feet to increase their chances of pollination. Those not self-fruitful need a pollinator planted nearby. Test harvested nuts for soundness by placing in a bucket of water. Save only those that sink to the bottom. Dry and store in a cool place. Shelled nuts can be frozen up to a year.

NUT-PLANTING CHART				
Variety	Planting Distance	Approx. Height	Years to Bearing	Average Yield
Almond	25 Ft.	15-20 Ft.	3-7	25-40 Lbs.
Butternut	40-50 Ft.	40-60 Ft.	10-15	50-100 Lbs.
Chestnut	40 Ft.	30-60 Ft.	7+	30-40 Lbs.
Hazelnut	15 Ft.	15 Ft.	3-4	20-30 Lbs.
Hican	40-50 Ft.	50 Ft.	7-10	25-75 Lbs.
Hickory	40-50 Ft.	60 Ft.	7-10	25-50 Lbs.
Pecan	50 Ft.	40-75 Ft.	10-15	50-100 Lbs.
Trazel	15 Ft.	20 Ft.	3-7	20-25 Lbs.
Walnut, Blk.	40-50 Ft.	30-75 Ft.	10-20	50-100 Lbs.
Walnut, Eng.	40-50 Ft.	30-50 Ft.	6-8	50-100 Lbs.

ONIONS

Sets—Plant sets as soon as the ground can be worked. One pint will plant 25 feet at 1-2 inches deep and 3-4 inches apart. Onions are ready to harvest when 3/4 of the top has fallen over. After digging, leave bulbs in the garden to cure for a few days until roots are brittle. Spread out on newspaper in a dry, dark spot for 2-3 weeks. Then remove dirt and papery skin. Cut tops 1 1/2 inches above the bulb. Store bulbs in mesh bags in a cool, airy spot. Use those with thick necks first as they are likely to be the first to spoil.

Shallots—Plant sets 1-2 inches deep and 4-6 inches apart. When foliage starts to wither, dig bulbs and cure 2-3 weeks before storing like onions.

PERENNIALS & GROUND COVERS

Perennials come back year after year if left undisturbed. Most do not bloom the first year but develop roots and foliage to support flowers the next year and after. The illustration at right shows planting depths, while the following perennial charts offer tips on optimum spacing.

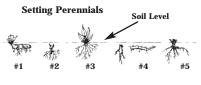
Set irises and yuccas with roots barely covered with soil (#1). Plant peonies, lilies of the valley and hostas with buds 1-2 inches below the surface of the soil (#2). Set plants with a distinct crown with the crown even with the soil surface (#3). Plant those without a distinct crown, that look like a chunk of root, 1 inch deep. If you can't tell which end is up, lay the root on its side (#4). Some plants with distinct crown should be planted with the crown 1 inch below the soil (#5).

Perennials require little care after planting. Mulching helps keep weeds down and retains soil moisture. Fall-planted perennials should be mulched heavily to prevent frost damage. Remove faded and dying flowers often to prolong the plant's flowering period. Most perennials need to be divided every 3-5 years to rejuvenate the plant as it spreads. Ground covers are a special breed of low-growing plant often used on banks and slopes where it's difficult to mow.

Crown Vetch—Plant crowns 2-3 feet apart, roots pointing straight down and tops above the soil. If tops are indistinguishable, plant crowns on side and cover with 1-2 inches of soil. Water well until established and mulch to reduce weeds. Plants don't make much progress until the second season, when they form a solid mat of ferny growth.

Iris—Plant in early fall in a sunny, welldrained spot, working soil to a depth of 12 inches. Most irises prefer moist ground, with rhizomes set just below the soil surface. An exception is the bearded iris, which likes it dry; 1/3 to 1/2 of its rhizomes should be left aboveground. Divide and replant from July to October when plants are dormant. Remove all but 4 inches of leaves and cut rhizomes to 4-6 inches in length, discarding the older portion. Water well after replanting.

Mum—Plant in full sun and almost any soil, adding lime if ground is acid. Feed weekly after midsummer. To keep bushy, pinch tops off each strong shoot when plants are 7 inches tall. For larger blooms, remove all but two buds per plant. When end bud is bigger, remove the other one.



POTATOES

Potatoes do best in rich, well-cultivated, well-drained soil that hasn't been planted with potatoes for a few years. Plant sets 4-5 inches deep and 12-15 inches apart in rows 2 feet apart. (NOTE: Kennebec sets should be planted closer to hold down tuber size.) Keep rows weeded but do not cultivate too deeply. Tubers form close to the soil surface, so it may be necessary to mound 2-3 inches of soil over the row as they grow to keep the sun from turning them green and bitter. Dig when tubers are large enough to make it worth your while—usually 7-8 weeks after planting. Do not dig up the entire plant.

Carefully dig larger tubers, leaving the smaller ones to continue to grow. Har vest for winter storage when plant tops begin to dry. Leave tubers in the garden for a day to cure the skins, then store in a cool, dark, airy place.

ROSES

Soak bareroot roses in water or mud for several hours before planting. Plant in a sunny, well-drained spot in early spring. Place the joint or bud union 1 inch above the ground in warm regions and up to 2 inches below the ground in cold areas. Mound 8-10 inches of soil around the top of the plant and leave until new growth

PERENNIAL CHART

Shade-Loving Varieties

Shade Loving functies	Dlanting	Planting
Variety	Depth	Distance
Ajuga	#3	8-12 In.
Amsonia, Arkansas	#4	18-24 In.
Astilbe	#5	12-18 In.
Bleeding Heart, Fernleaf	#4	8 In.
Bleeding Heart, Old-Fashioned	#4	18-24 In.
Bleeding Heart, White	#4	18-24 In.
Coral Bells	#5	12-18 In.
Fern	#4	2 Ft.
Foxglove	#4	15-18 In.
Geranium	#5	12-15 In.
Ginger, Canadian	#5	6-12 In.
Hosta	#2	2 Ft.
Lily of the Valley	#2	8-12 In.
Lobelia	#3	18-24 In.
Merrybells	#5	12-18 In.
Monkshood	#5	12-18 In.
Pachysandra	#3	12-18 In.
Primrose, Hardy	#3	6-12 In.
Primrose, Poker	#5	1-2 Ft.
Ribbon Grass	#5	18 In.
Sage, Bethlehem	#3	18-24 In.
Sedge Grass, Evergold	#5	1-2 Ft.
Snow-on-the-Mountain	#4	10-12 In.
Solomon's Seal	#4	12-18 In.
Strawberry & Cream Grass	#5	2 Ft.
Toad Lily	#5	2-3 Ft.
Wintercreeper, Purple	#3	2-3 Ft.

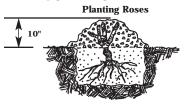
Sun-Loving Varieties

Variety	Planting Depth	Planting Distance
Ajuga	#3	8-12 In.
Alyssum	#5	18 In.
Aster	#5	12-24 In.
Baby's Blanket	#3	6-12 In.
Baby's Breath	#4	36 In.
Balloon Flower	#4	12-18 In.
Bee Balm	#5	12-24 In.
Bellflower, Blue Chips	#4	24 In.
Black-Eyed Susan	#3	12-18 In.
Blanket Flower, Goblin	#3	10-12 In.
Blanket Flower, Baby Cole	#3	24 In.
Blue-Eyed Grass	#1	12-18 In.
Butterfly Plant	#4	12-18 In.
Campion, Arkwright's	#4	18-24 In.
Canterbury Bells	#3	18-24 In.
Carnation	#3	12 In.
Catmint	#4	18 In.
Chameleon Flower	#3	12-18 In.
Chinese Lantern	#4	24 In.
Chrysanthemum, Gold & Silve	r #3	18-24 In.
Columbine	#3	10-15 In.
Coneflower	#3	18-24 In.
Coreopsis	#3	12 In.
Creeping Baby's Breath	#4	18 In.
Daisy, Shasta & Painted	#3	12-18 In.
Daylily	#5	18-24 In.
Delphinium	#5	12-24 In.

Sun-Loving

Sun-Loving	D1 t	DI
Variety	Planting Depth	Planting Distance
Dianthus, Zing Rose	#3	6-10 In.
Fescue, Blue	#3	8-10 In.
Festuca	#3	12 In.
Feverfew	#3	15-18 In.
Foamflower	#3	18-24 In.
Gaura	#3	24 In.
Gerbera	#3	10 In.
Globeflower	#3	10-12 In.
Gracillimus	#5	3-4 Ft.
Graziella	#5	3-4 Ft.
Hen & Chicks	#3	8-10 In.
Hibiscus	#2	18 In.
Hollyhock	#4	15-18 In.
Iris, Dwarf & Siberian	#1	10 In.
Iris, German & Japanese	#1	18 In.
Juniper, Blue Rug	#3	3 Ft.
Lamium	#3	18-24 In.
Lavender	#3	12-18 In.
Liatris, Dwarf	#4	12-18 In.
Liriope/Lilyturf	#3	12-18 In.
Lupine, Russell	#4	18-24 In.
Maltese Cross	#4	10-18 In.
Marigold, Marsh	#3	12-18 In.
Mum	#5	1-2 Ft.
Obedient Plant	#5	24-36 In.
Pampas Grass	#3	3-4 Ft.
Pansy	#3	6-8 In.
Peony	#2	2-4 Ft.
Phlox, Creeping	#2	1 Ft.
Phlox, Garden	#3	15-18 In.
	#4	12-15 In.
Pincushion Flower	#3	8-12 In.
Plumbago Parama Oriental	#3	
Poppy, Oriental Potentilla, Gibson's Scarlet	#3	15-18 In. 18-24 In.
	#5	12-18 In.
Prairie Mallow		
Primrose, Missouri	#4	12-15 In.
Purpurascens	#5	4-5 Ft.
Red-Hot Poker	#3	18 In.
Sage, Russian	#5	2-3 Ft.
Salvia, Hardy	#5	12-18 In.
Salvia Plumosa	#3	18 In.
Sea Holly, Blue Star	#4	24 In.
Sedum	#5	18-24 In.
Silver Mound	#5	12 In.
Spiderwort/Widow's Tears	#4	12-18 In.
Stokes Aster	#3	12-18 In.
Sunflower, Maximillian	#4	4-6 Ft.
Sweet Pea	#4	18-24 In.
Sweet William	#3	18 In.
Tansy	#4	3-4 Ft.
Verbena, Hardy	#3	12-15 In.
Veronica	#3	12 In.
Vinca Minor	#3	8-12 In.
Wintercreeper, Purple	#3	2-3 Ft.
Yarrow	#3	1-2 Ft.
Yucca	#1	2-3 Ft.
Zebra Grass	#3	36 In.

appears (see illustration below). This protects the bud union, where most canes originate, and helps roots get established before top growth begins.

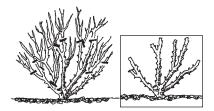


Once new growth appears, carefully remove the soil mound and add mulch. A 2- to 4-inch layer conserves moisture and helps keep weeds down. Water to supply the equivalent of 1 inch of rain weekly, soaking soil to a depth of 8-10 inches. Fertilize after pruning in early spring and just before plants bloom. An additional feeding should be given as one flowering period ends to stimulate the next one. However, in cold climates, roses should not be fed after August.

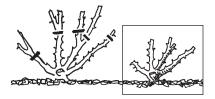
Prune just before new growth begins, as the buds begin to swell. Hold off pruning until danger of frost is past or newly trimmed tips may be killed. (NOTE: Climbing roses are the exception. They benefit from a light pruning immediately after flowering.)

When pruning roses, remove 1/3 to 1/2 of the previous year's growth. Trim off suckers (canes emerging from the roots) as they appear. Remove any damaged branches and work to open the plant up so air and sunlight can reach the center (see illustration above right). Additional pruning may be needed in cold climates.

To improve production, remove flowers as they fade. To keep climbers blooming, prune just above the first five-leaf grouping when the first flush of flowers has faded. Roses need winter protection in Northern regions. Mound dirt, leaves or straw over plants or cover with rose cones after a couple of good, hard frosts. (The ground should be frozen to a depth of 2 inches before cones are added.) Lay climbers on the ground and cover with heavy mulch.



Remove Deadwood, Weak and Twiggy Branches and Any Crossed Branches



In Cold Climates, Reduce Bush to Half the Size it Was in Fall

TREES

Follow the general planting directions on page 1. Varieties that grow taller than 50 feet are best located at least 30 feet from the street and the house. Larger varieties look best alone; smaller ones are more appealing planted in clusters of two or three. After planting, trunks can be wrapped to protect the bark from sun, wind, insects, rodents and deer. This is best done in fall and should be removed the following spring. Wrap the tree from the ground to the crotch of the first major branches. Most trees are pruned before shipment to avoid damage in transit. However, they may need some additional pruning. Prune out crossed limbs and remove broken or injured branches by trimming just outside the branch "collar"-the small, raised area around the branch where it grows from the main stem.

SHRUBS

Follow the general planting directions on page 1. Give shrubs room to grow by setting them rather far apart unless you want to form a dense, upright hedge. It's better to allow too much room than too little since cramped quarters will cause shrubs to lose their natural shape. Set shrubs far enough from the house so that they won't touch the walls when mature. This avoids a cluttered look in the landscape and, more importantly, protects the health of the plants. It permits air to circulate freely, lessening the chance of disease. Never plant directly under the drip line of a roof where shrubs could be damaged by falling icicles or snow. Avoid planting under overhangs where the plants won't get sufficient moisture. Don't place a shrub in an exposed site if it's a variety that needs shelter from winter winds. Most shrubs need very little pruningjust enough to maintain the basic shape of the bush and to keep dead wood trimmed out. Shrubs should not be pruned straight across the top because this spoils their natural habit of growth. Lightly prune early blooming shrubs immediately after they finish flowering. Midseason and late bloomers can be pruned in late fall after flowering or in early spring.

Hydrangea—These plants thrive in rich, moist soil and flower freely in sun or shade. Flower color is determined by soil acidity. Where soils are acid, blooms are blue. Where soils are alkaline, blooms are pink. For pink flowers, sprinkle 1/2 to 1

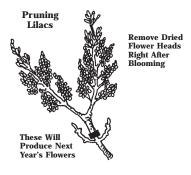


cup lime around the plants at planting time. For blue flowers, add 1/2 to 1 cup aluminum sulphate. Prune stems which have just borne flowers and leave those that won't flower until next year (see illustration left). Older, darker canes can be removed almost at the ground. Go easy on young, vigorous green shoots; they shouldn't be drastically pruned.

Lilac—Lilacs prefer cool temperatures and early planting—as soon as the soil can be worked—in a soil pH of 6.0 to 7.0. Never prune lilacs severely—just trim off the old blooms immediately after flow-

SHRUB-PLAN	ГING	CHART
Variety	Planting Distance	Mature Height
Almond, Pink-Flowering	3-4 Ft.	3-5 Ft.
Azalea, Northern Lights	3-5 Ft.	4-6 Ft.
Barberry	5-6 Ft.	2-3 Ft.
Bayberry, Northern	4-6 Ft.	7-9 Ft.
Boxwood, Korean	3-4 Ft.	3-4 Ft.
Buckeye, Red	6-8 Ft.	10-15 Ft.
Burning Bush	5-6 Ft.	4-6 Ft.
Butterfly Bush	6-8 Ft.	8-10 Ft.
Cranberry, Highbush	8-10 Ft.	8-12 Ft.
Dogwood, Golden Twig	3-5 Ft.	7-9 Ft.
Dogwood, Red Twig	3-5 Ft.	5-8 Ft.
Enkianthus	6-10 Ft.	10-15 Ft.
Forsythia, Meadowlark	6-8 Ft.	10 Ft.
Holly, Blue Girl & Blue Boy	4-6 Ft.	10 Ft.
Hydrangea, Annabelle	3-5 Ft.	3-5 Ft.
Hydrangea, Multiflora	4-8 Ft.	12-15 Ft.
Hydrangea, Nikko Blue	3-5 Ft.	5 Ft.
Hydrangea, Pink Beauty	2-4 Ft.	3-4 Ft.
Japanese Pieris	5-6 Ft.	6-12 Ft.
Koreanspice Viburnum (See	Pink Snow	/ball)
Lilac, Dwarf Korean	3-5 Ft.	4-5 Ft.
Lilac, Hybrid	3-6 Ft.	8-12 Ft.
Lilac, Old Fashioned	3-6 Ft.	10-15 Ft.
Lilac, Persian Purple	2-5 Ft.	4-8 Ft.
Magnolia, Royal Star	6-8 Ft.	10-15 Ft.
Mock Orange	4-6 Ft.	5-7 Ft.
Mountain Laurel	6-8 Ft.	6-8 Ft.
Potentilla	2-3 Ft.	2-3 Ft.
Pussy Willow	4-6 Ft.	8-15 Ft.
Rhododendron, Hybrid	4-8 Ft.	4-6 Ft.
Rhododendron, P.J.M.	3-4 Ft.	3-4 Ft.
Rose of Sharon	3-6 Ft.	10 Ft.
Smokebush, Pink	6-8 Ft.	10-15 Ft.
Snowball, White	6-8 Ft.	8-10 Ft.
Snowball, Pink	6-8 Ft.	9-10 Ft.
Spirea, Peppermint Stick	2-4 Ft.	2-3 Ft.
Spirea Vanhouttei	3-6 Ft.	6-8 Ft.
Sumac, Fernleaf	6-8 Ft.	15 Ft.
Weigela, Red Cardinal	4-6 Ft.	6-8 Ft.
Winterberry	6-10 Ft.	6-10 Ft.
Witch Hazel	15 Ft.	15 Ft.

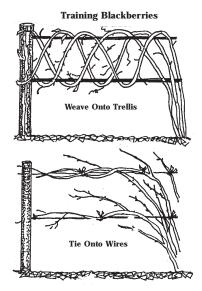
ering. It's easy to see where you should make the cut; you'll notice next year's buds developing just below this season's flower clusters (see illustration below). As soon as the blooms are spent, remove them to make way for next year's crop of blossoms.



SMALL FRUITS

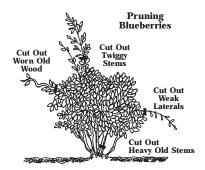
Follow the general planting instructions on page 1. Prune any crossed limbs or branches which rub against each other. This lets light into the center of the plant and becomes more important with each successive season as plants get bigger and bushier. Work the soil well so that the plants' roots aren't restricted. Avoid crowding—berry bushes need lots of room because they're heavy feeders, and the brambles put out numerous suckers. Place small fruits away from fruit and shade trees which might need spraying when the berries are ripening.

Blackberries—All brambles require deep, well-drained loam soil high in organic matter. They can't tolerate sandy soil or soil that's so heavy it leaves moisture standing around the roots. Apply a balanced fertilizer at a rate of 10 pounds per 1,000 square feet. Cut plants back to 6 inches and place them in the hole at the same depth they grew in the nursery row. Space blackberries 5-6 feet apart in rows 8-10 feet apart and provide a trellis for trailing types. Canes can be woven or tied to keep them in place. Do not allow canes to set fruit the



first year. Water heavily and mulch to reduce weeds. Thick layers of shredded bark, leaves, wood chips and hay make excellent mulches for any type of berry.

Blueberries—Blueberries must be planted where they have full sun most of the day and acidic soil (a pH of 4.5 to 5.5) that's well drained, porous and high in organic matter. The plants have shallow root systems and must be irrigated. A heavy mulch will help retain soil moisture and keep the roots cool. Prune off half of the top growth and space plants 4-5 feet apart in rows 8-10 feet apart. Incorporate plenty of organic matter in and around the planting holes. Control weeds with mulch instead of cultivation.



In cold climates, blueberries benefit from a thick layer of mulch during the winter. Prune for fewer but larger berries by removing old branches; fruit is produced on year-old wood.

Boysenberries-Set plants 6 feet apart in rows 8 feet apart. Mulch with straw or compost. Culture is the same as for blackberries. Plants can be left to trail on the ground the first season. In the fall, after growth has stopped, prune back half of new growth. Cover with additional mulch just before the ground freezes. When vines begin to bud, build a three-wire trellis with the top wire 5 feet high and the bottom wire 2 feet above the ground. Weave vines onto the trellis in a fan shape. Remove small canes and prune long ones to fit. Do not cultivate. Cut out old canes and destroy them after the harvest.

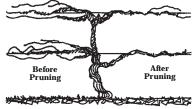
Cranberry—Grow this ground coverlike plant in an environment similar to blueberries, spacing the plants 3 feet apart. While the plants do not need to be grown in a bog, they do prefer plentiful moisture. Cover the plants when frost threatens in the spring to prevent damage to flowers or fruits.

Currants & Gooseberries—These plants do best in rich soil that is cool and moist but has good drainage. Plant 5 feet apart, in rows 8 feet apart, in full sun where summers are mild and in a partially shaded location where summers are hot and dry. Trim stems back by 2/3 after planting. Prune in spring after flowering. Fruit is produced on older wood—in the fall, remove any wood more than 3 years old.

Elderberries—Elderberries thrive in moist, heavy soil and do not tolerate drier conditions. Plant 7-20 feet apart in full sun. Plants grow 12-14 feet tall; some pruning is necessary to maintain size and shape. Berries are produced on the end of the current season's growth.

Grapes—Grapes thrive in fertile, welldrained soil. Choose a site that offers protection from wind and late frost. If possible, run vines east-west to reduce shade cast by the trellis. Work in fair amounts of compost before planting but don't overfertilize. Set the plants 8 feet apart in rows 10 feet apart. For the first vear, main stems should be allowed to grow unchecked, and vines should be trained on a trellis using two support wires. Prune in winter when dormant but before the weather becomes too cold. Canes that have borne fruit should be pruned back sharply (see illustration below). Remove old canes coming from the main stem and leave four new canes (shoots that started to grow the previous spring). The new canes should be cut back to 6 or 8 inches and 3 or 4 buds. These buds, found at the joints, produce the new shoots that bear leaves and grapes the following summer. Four of these new shoots will be used to repeat the same fruiting-and-pruning process the following winter.

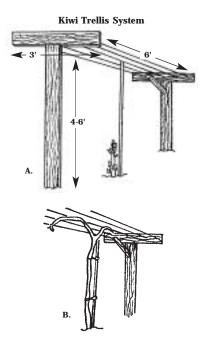
Pruning Grapevines



Hardy Fig—This pest-free plant does best in moist, well-drained soils and full sun. Space plants 10 feet apart. North of zone 7, plants may die back to the ground unless protected by mulch for the winter.

Kiwi—Plant in any well-drained soil, mulch to retain moisture and keep plants shaded during the hot part of the day until well established. This is a fruiting vine that requires support, like a trellis similar to one you'd use for grapes, only stronger. (See illustration above.) Endposts should be 4-6 inches in diameter and 6-8 feet tall, with strong wires stretched between them. Place a temporary stake the height of the trellis next to each plant. The first season's growth should be tied to this stake and allowed to grow to the top of the trellis (see A). Remove suckers and all but four lateral branches cut back to 18 inches, directing the plant's energy toward a single trunk. After the vine reaches a top wire, cut it back 3-6 inches to just above a plump bud. This causes the central vine to split and grow into a Y shape. Train lateral growth to wires but don't allow the two new leaders to twine around the wire supports (see B).

Once trained to a trellis, prune your kiwi regularly. In late winter or early spring, trim away 3-year-old branches (those that have finished a second year of fruiting) and any damaged or twisted wood. Keep fruiting laterals pruned to 12 buds. You should also prune where necessary to keep branches 2 feet above the ground. Hardy kiwi generally begin bearing 3-10 years after planting. The Issai and Arctic Beauty varieties bear within 4-7 years if properly pruned.



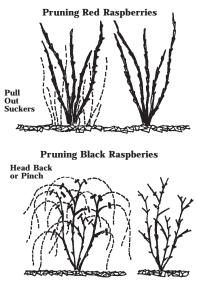
Mulberries—Mulberries prefer a damp location in fertile, loam soil. Add a generous helping of organic matter to the site before planting and work it in well. Male and female flowers are produced on separate trees, so it is best to plant in groups of three to five to ensure proper pollination. Set plants 15 feet apart or 3 feet apart for a hedge. Water frequently the first few years, especially during fruit development. Mulberries grow 25-40 feet tall and bear 4-5 years after planting.

Pawpaw—Plant pawpaws in a fertile, moist location where they will have plenty of room to grow; the trees can reach 30 feet in height. Pawpaws prefer partial shade but will tolerate full sun. Plant two or more for best pollination. Little maintenance is required. Simply water during dry spells and fertilize each spring. Harvest when fruit is soft and copperybrown to almost black.

Persimmon—These trees can grow to 30 feet or more, so be sure to give them lots of room. Plant in full sun, digging a deep hole so the taproot fits without curling. Fertilize and mulch each spring. Water during dry periods. Prune out suckers as they appear. Persimmons do not ripen until late in the fall. The crop is best harvested after a frost, when the fruit is softened and slightly creased.

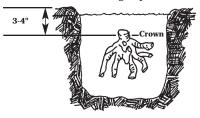
Raspberries—Raspberries are a bramble fruit and should be cultivated as you would blackberries. Plants are more erect, however, still benefit greatly from a simple trellis. Space red and yellow varieties 2 feet apart in rows 6 feet apart, blacks and purples 3 feet apart in rows 8 feet apart. (NOTE: Plant blacks and reds 300 feet apart to prevent the spread of disease.) Except in the case of fall-bearing types, new canes don't produce fruit and put out few, if any, branchees. Little thinning is needed until plants have been in the ground for a few years.

When thinning brambles, leave the thickest canes and remove the thinnest. Prune red and yellow raspberries back to 8-12 buds on a cane, leaving the thickest canes at least 4-6 inches apart in the spring. Remove the fruiting canes after harvest. Prune blacks and purples when new growth starts in the spring, leaving 10-15 buds per cane and four-five canes per clump. Encourage branching by pinching back the tips of black raspberry plants in late summer. With reds, remove suckers rather than canes from original plants (see illustration below).



Rhubarb—Plant divisions in spring, spacing plants 3 feet apart in fertile soil. Position crowns 3-4 inches below the soil surface (see illustration below). Water heavily, cultivate regularly and feed generously the first year. Stalks can be lightly harvested the second year. After that, they may be pulled over about a 6-week period from early spring until early summer. Plants can be mowed, dug and divided in either fall or spring.

Rhubarb Planting Depth



Saskatoon Blueberry—Native to North America, this hardy shrub provides blueberrylike fruit in harsher climates and drier, more alkaline soils than true blueberries. Plant in full sun to partial shade and water regularly for best fruit production. Prune only to maintain an attractive shape or to remove crowded or damaged branches.

Strawberries—Strawberries need well-worked soil with good drainage and plenty of organic matter. Add 1 pound of fertilizer per 100 square feet. Plant so that the crown is even with the surface of the soil and make sure all the roots are covered.

Junebearing strawberries produce a single crop. Everbearers produce one crop during the regular strawberry season and another smaller one later in fall, plus a few fruits in between. Day neutrals are the truest everbearers, producing fruit spring, summer and fall.

Set strawberries 15-24 inches apart, water well and mulch with straw. Remove blossoms from Junebearers the first year. Remove everbearers' and day-neutrals' blossoms until July 1, then allow the plants to set fruit. This allows the plants to become established so they'll set far more berries the second year than they ordinarily would have. Water them well, keeping the top 2 inches of soil evenly moist all season long. Protect in cold climates with a winter mulch.

VEGETABLE PLANTS

If your vegetable seedlings arrive on a cloudy day, plant them right away. If it is hot and sunny, wait to set the plants out until late afternoon or early evening, digging to the correct depth and spacing for each. Fill the holes with water and let it soak in. This first soaking gives the roots plenty of moisture to get seedlings off to a good start. Set the plants in the holes and firm the soil around them to remove air pockets. Leave a slight depression around each plant to collect and hold moisture; water well. If temperatures still dip below freezing at night, protect newly planted seedlings by covering them with protective caps or floating row covers.

VINES

Plant vines a minimum distance of 1 foot from the house to ensure adequate air circulation. After they're planted, cut them back and stake them securely. Lightly firm the soil around the roots and fertilize after new growth appears. Remember that climbing vines need plenty of water and well-drained soil.

Bittersweet—This vine does well in poor soils and full sun to shade. Both a male and female plant must be planted for fruiting to occur. Great for fences, rockpiles or old trees.

Boston Ivy—This vine requires highly organic soil and a sturdy support. A brick structure is ideal; wood siding can be damaged by the invasive tendrils. Prune Boston Ivy in spring.

Clematis—Some varieties of clematis (Niobe, Jackmanii, Ville De Lyon) bloom on current season's growth and should be pruned to about 1 ft. in late winter/ early spring to encourage new growth. Other clematis (Belle of Woking, Ramona, Nelly Moser, Multi-Blue, Mrs. Norm Thompson, Henryi, Duchess of Edinburgh) bloom on old wood or old and new wood and should be pruned lightly *after* bloom and in the spring. **Honeysuckle**—This twining vine needs full to partial sun and a sturdy support such as a fence. Prune in spring, removing dead wood or broken vines.

Hops—Lay root cuttings on their side in a 6-inch trench, covering them with 2 inches of soil. Gradually fill in trench as the vine grows. Keep well watered.

Silver Lace—Another twining type, this adapts to most conditions. Provide good support and prune in spring.

Trumpet—Place in full sun and secure to a support. This vine can take 3-7 years to bloom after planting. Prune vigorously in spring, as it flowers on new growth.

Wisteria—Wisteria prefers slightly acidic, organic soil and flowers 3-5 years after planting. Provide a sturdy support and trim back aggressive growth during the summer. Regular pruning in spring encourages formation of flower spurs.

WINDBREAKS

Plant windbreaks to the north and west of the area you're planning to shelter. The first row should be planted 100-150 feet away from the house or building to be protected. Follow the general planting directions on page 1. Trees will grow two to three times faster if weeds are kept down the first 2 years. Plant the tallest trees in the middle, with shorter trees next to them and bushes on the inside. Use densely needled evergreens for the outside rows. Distance between windbreak rows may vary, but if you plan to use a cultivator for weed control, leave room to maneuver.

NOTES

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