

A Rose for Every Garden

Roses are favored around the world. The rose species grow throughout the Northern Hemisphere, and many fine hybrids have been developed from them. They will grow in all climates except those that are extremely cold or hot.

Rose cultivars (varieties) vary greatly in flower color, bloom frequency, and growth habits. There are many different cultivars and thus, there is a rose for nearly every garden situation. Rose cultivars are grouped by parentage, growth habits, or flowering characteristics. The established groups are Hybrid Tea (HT) and Grandiflora Roses; Hybrid Perpetual (HP) Roses; Miniature or Dwarf Roses; Floribunda and Polyantha Roses; Climbing Roses; and Shrub Roses. The Shrub Roses include the rose species and related cultivars.

Each year, through the All-American Rose Selection Trials, new roses are designated "All-American" and offered for sale. Roses designated All-American are those that received the highest scores from the trial gardens located throughout the United States. Rose fanciers may want to add one or more of these new cultivars to their garden plantings.

Rose Cultivars

Hybrid Tea and Grandiflora

These everblooming roses flower in May or June and continue until frost. They are excellent for garden display or as cut flowers and, thus, are the roses grown in greenhouses. Grandifloras are a newer class of large-flowering, vigorous-growing cultivars and often have more than one flower per stem. Nursery catalogs may list Grandifloras separate from Hybrid Teas.

Red and Red Blends

Americana	Charlotte Armstrong
Christian Dior	Christopher Stone
Chrysler Imperial	Crimson Gory
Etoile de Hollande	Grand Duchess
John S. Armstrong	Mister Lincoln
Madame Henri Guillot	Montezuma
New Yorker	Nocturne
Olympiad	Pharaoh
Red Lion	Rubaiyat
Tallyho	Tropicana

Pink and Pink Blends

Aquarius	Bewitched
Camelot	Chicago Peace
Confidence	Dainty Bess
Friendship	Katherine T. Marshall
Kordes Perfecta	Picture
Pink Favorite	Pink Parfait
Pink Peace	Portrait
Princess de Monaco	Queen Elizabeth
Radiance	Royal Highness
Swarthmore	Tiffany

Orange and Orange-Red Blends

Arizona	Aztec
Brandy	Command Performance
Hawaii	Lucky Piece
Mojave	Prominent
Sutters Gold	Talisman

Yellow and Yellow Blends

Arizona	Buccaneer
Eclipse	Golden Girl
Gold Medal	Kings Ransom
Lowell Thomas	Oregold
Peace	Soeur Therese
Summer Sunshine	Sunsprite

White

Blanche Mallern	Garden Party
John F. Kennedy	Kaiserin Augusta Victoria
McGredy's Ivory	Sincera
White Knight	White Lightnin'

Lavender

Ambassador

Hybrid Perpetuals

These are vigorous growers that flower initially in the spring and again in the late summer. The flowers are large and are suitable for cutting. However, Grandifloras have largely replaced HP. The following are representative cultivars.

Red

General Jacqueminot	Henry Nevard
Hugh Dickson	Ulrich Brunner

Pink

George Arends	Mrs. John Laing
Paul Neyron	

White

Frau Karl Druschki

Floribundas and Polyanthas

In this class of roses, flowers are produced in small clusters of two or more blooms. The Floribundas are large flowering, vigorous, and hardy. The Polyanthas are not quite as vigorous and the flowers are smaller. Floribundas and Polyanthas are suitable for gardens where

a flower display is desired. Roses in this class begin to flower in the spring and continue until frost in the fall.

Red and Red Blends

Europeana	Fresham
Garnette	Masquerade
Permanent Wave	Red Pinocchio
Tamango	

Pink and Pink Blends

Betty Prior	Cecil Brunner
China Double	Gene Boerner
Ma Perkins	Pinocchio
Rose Parade	

Orange and Red-Orange Blends

Fire King	Floradora
Matador	Orange Sunshine
Sarabunde	Spartan

Yellow and Yellow Blends

Allgold	Circus
Fashion	Goldilocks
Gypsy Carnival	Little Darling
Red Gold	Sun Spot
Spanish Sun	Vogue

White

Iceberg	Ivory Fashion
Saratoga	Snow Fairy
Summer Snow	White Bouquet

Mauve

Angel Face

Miniatures

Miniature Roses, also known as Dwarf Roses, have leaves and flowers that are smaller than HT. Some Miniatures grow to only 6 inches tall; others may grow to 18 inches. These kinds of roses are effectively used with annuals and perennials in beds and rock gardens, or as a dwarf informal edging for flower gardens.

Red and Red Blends

Baby Masquerade	Beauty Secret
Dwarf King	Little Artist
Magic Carrousel	Midget
Red Cascade	Red Imp
Red Gilardi	Scarlet Gem
Starina	Tom Thumb

Pink and Pink Blends

Baby Betsy McCall	Baby Darling
Bo-Peep	Chipper
Judy Fisher	Minnie Pearl
Opal Jewell	Pacesetter
Patty Lou	Pixie Rose
Rosa Rouletti	Sweet Fairy
Tinker Bell	

Yellow and Yellow Blends

Baby Gold Star	Bit-O-Sunshine
Ella Mae	Party Girl
Pixie Gold	Rise N Shine

White

Cinderella	Easter Morning
Gourmet Popcorn	Pixie
Twinkles	

Orange and Orange-Red Blends

America	Climbing Joseph's Coat
Climbing Spartan	

Yellow

Climbing Peace	Golden Showers
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White

City of York	Silver Moon
White Dawn	

Shrub Roses and Species

This group consists of several hundred different species and cultivars. In some cases, Shrub Roses can grow to be quite large—up to 5 or 6 feet. They exhibit a wide range of colors and vary in form from truly single flowers to very fully double ones, and many have showy fruits in the fall. Many roses in this category are hybrids produced 100 or more years ago and are sometimes referred to as “old-fashioned roses.”

Species

Rosa alba—white to pink
Rosa centifolia (Cabbage Rose)—pink
Rosa rugosa—white to red
Rosa spinosissima (Scotch Rose)—white to pink or lavender

Cultivars

All That Jazz—reddish salmon
Austrian Copper—vermillion gold
Carefree Beauty—double pink
Carefree Wonder—pink and white
Conrad F. Meyer—pink
Dr. Eckener—copper rose
Frau Dagmar Hastrap—pink
Frühlingsgold—yellow
Gruss an Teplitz—red
Harison's Yellow—yellow
Hermosa—light pink
Mabelle Stearns—light pink
Nymphenburg—apricot
Pink Grootendorst—pink
Reine des Violettes—lilac
Queen of Denmark—pink
Sea Foam—white
The Fairy—pink
York and Lancaster—red and white

Climbing

Climbing Roses are cultivars that produce long canes or shoots. These cultivars are used on fences, trellises, and in some cases, as ground covers. There are several different groups of Climbing Roses, such as ramblers, climbers, and trailing roses. Ramblers are rapid growers with clusters of small flowers. An established plant may develop many canes or shoots. Climbers are somewhat less vigorous than ramblers. Climber flowers are large with only a few per cluster. Climbers include the varieties that flower in the spring or early summer and again in late summer or fall, and the Climbing varieties of the HT's and the Floribundas. Trailing roses are climbers that are adapted to planting on banks or as a ground cover, such as the cultivars Max Graf, Coral Creeper, or *Rosa wichuriana*.

Red

American Pillar	Blaze Improved
Climbing Crimson Glory	Don Juan
Paul's Scarlet Climber	

Pink

Blossom Time	Coral Dawn
Dr. J.H. Nicholas	Morning Dawn
New Dawn	Rhonda

Propagation

Roses are propagated by cuttings (softwood and hardwood), layering, budding, and grafting. Seeds are used primarily by breeders when they are attempting to produce new cultivars. Seed is also used in the propagation of *Rosa multiflora* for understock purposes. Most kinds of roses may be started as softwood or hardwood (dormant) cuttings.

Softwood cuttings. Softwood cuttings are made in the summer from flowering shoots (approximately 6 inches long) after the petals have fallen (Figure 1). Remove all leaves except the top one or two (Figure 2). Then insert the cutting into well-drained soil and cover it with an inverted glass jar. After rooting occurs, remove the jar.

Another propagation method is to make softwood cuttings as noted above and place them in sand in a small propagating frame covered with glass. When the cuttings are rooted, transplant them in soil (Figures a, b, and c). The use of root-inducing powders will hasten root formation.

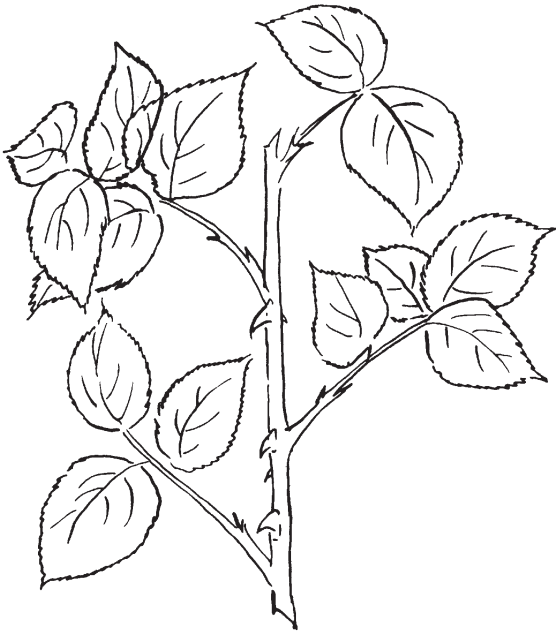


Figure 1. Make cuttings from the flowering shoot after petal fall. Make cuts about one-half inch below the bottom leaf and one-quarter inch above the top leaf.

Hardwood cuttings. Hardwood or dormant cuttings are made from straight, medium-sized branches in the fall after the trees have lost their leaves. The branches should be cut into 6- to 8-inch lengths and buried outdoors in sand. Early in the spring, plant them deep in the ground with only the upper bud showing.

Layering. Layering is when a long shoot of a climber or rambler is bent back to the earth and a cut is made one-half way through the stem. This portion of the shoot is buried, and roots should form near the cut. Leave 6 to 12 inches of the tip exposed. Shoots layered in the spring should have enough root formation by fall to be cut from the parent plant and transplanted.

Budding. Budding is the commercial method of propagation used to produce HT, HP, Floribunda, and some Climbing Roses. The process is done in the summer, June through August. A single dormant bud is removed from the parent plant and inserted into the stem of the plant that is to provide the root system. A slit is made in the stem, the bud is carefully inserted under the bark, and the area is tied

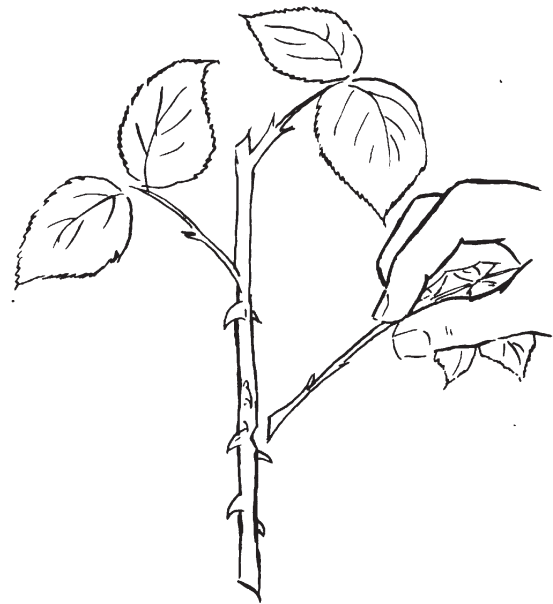


Figure 2. Remove the lower leaves before setting the cutting in the location for rooting.

with a rubber band, raffia, or string. After 2 to 3 weeks, if there is sign of growth of the stem by swelling or enlarging, cut the tie without removing it. Normally, the cultivar bud does not start to elongate until the following spring, at which time the top of the stock plant above the bud is removed and the new, hybrid shoot starts to grow. *Rosa multiflora* is commonly

used as understock for the budding of roses. Under usual conditions, most roses will produce large plants more quickly by budding than by any other propagation method.

Grafting. Grafting is primarily performed under greenhouse conditions and will not be discussed in this publication.

Where to Plant

Roses should be planted in an area that receives at least 6 to 7 hours of sun daily during the summer. Shrub Roses may be planted successfully in a border with other shrubs, but HT, HP, and Floribunda Roses should be planted in sunnier areas, preferably by themselves. Do not plant roses close to trees or large shrubs. These plants will compete with roses for soil nutrients and moisture, and may block needed sunlight. Avoid areas that are poorly drained. Moreover, do not plant roses close to walls, buildings, or dense hedges that would prevent or retard air movement. Poor air circulation provides environmental conditions that are favorable for diseases.

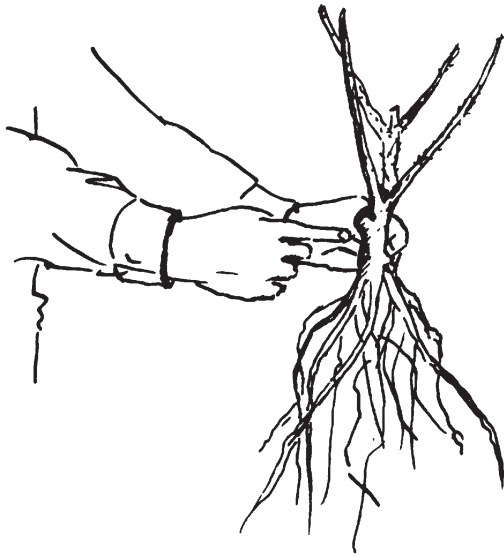


Figure 3a. Plant so bud, where stem and root stock join, is at the soil level or no more than 1 or 2 inches deep.

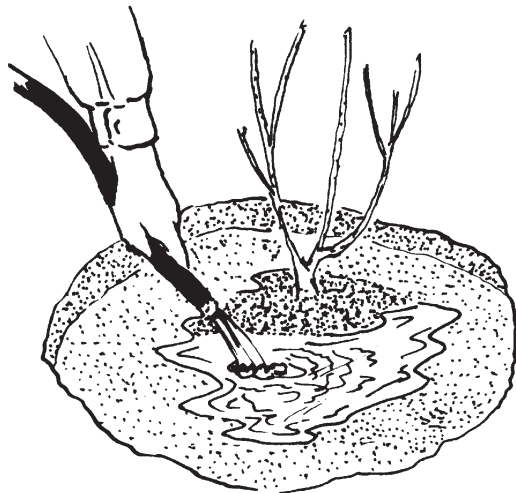


Figure 3b. Firm soil around roots. Then, water plant well.



Figure 3c. After planting, prune top to 8 inches above ground. Cover with soil to avoid drying out.

Soils and Fertilizers

Good soil preparation is the first requirement for success with roses. Time spent on this task will yield better and more roses. If the soil is properly prepared at the time of planting, no additional fertilizers are needed during the first 6 to 8 months after planting.

Almost any type of soil is satisfactory for roses. For best results, the soil should be loose, fertile, well drained, and moist. A silt or clay loam that has produced vegetables, flowers, or lawn is an excellent starting point, but soils that are either heavier or more open, such as sandy soil, are also acceptable.

To prepare soil for planting, dig the bed deeply—ideally 15 to 20 inches. Add some organic matter to the soil, such as well-rotted manure, garden compost, leaf mold, or peat. Spread a 1- to 2-inch layer (or more) of organic matter over the soil, and spade it in. Loosen a heavy clay soil by adding sand or other fine, inert materials. Such additions help to prevent packing and aid aeration and drainage.

If the planting area has poor drainage, excavate it to a depth of 20 to 24 inches and put in a 4- to 6-inch layer of coarse gravel, cinders, or rubble. In addition, install a tile drain to carry away excess water. When finished, fill the bed with prepared soil.

Fertilizers should be thoroughly spaded or worked through the upper 6 to 8 inches of soil. Apply fertilizer at the same time the soil is prepared for planting. Add super-phosphate or bonemeal at the rate of 5 to 10 pounds per 100 square feet and, if the original soil is nutrient poor, include a complete fertilizer such as 5-10-5 at the rate of 2 to 4 pounds per 100 square feet.

Roses prefer a slightly acid soil—that is one with a pH of 5.5 to 6.5. Soils that are more acidic than this will need lime. Your county Extension agent can provide soil sample cartons and information on how to obtain a soil test for available nutrients. Occasionally, soils are more alkaline than acidic. This condition requires that sulfur or some other material be

added. Again, the amount needed will depend on the results of a soil test.

Established plants need fertilizer in the spring when new growth is starting. Complete fertilizer such as 5-10-5 at the rate of 3 pounds per 100 square feet should be scattered evenly on the soil around the plants, cultivated in, and then watered. A second application at the rate of 1 to 2 pounds per 100 feet should be made in June following heavy bloom; a third application may be made in late August or early September. The last (third) application is based on the growth of the plants and whether they have had much water during the summer. If plants have grown satisfactorily, this fall fertilizer is not necessary. Also, the last dose of fertilizer should be applied not later than mid-September. If done after this, excessive new growth may occur. This growth will not have adequate time to mature or harden and may be injured by cold weather.

If manure, leaf mold, or other organic matter has been used as winter mulch protection, cultivate the decomposed material into the top soil when it is prepared in the spring. This organic matter helps to keep the soil loose while adding a little fertility.

Pruning

Roses generally are pruned in the spring after the danger of severe cold is past. The only pruning that may be done in the fall is to cut back approximately one-half of the longest shoots to prevent them from being whipped by the wind and the plants' being loosened from their soil. With any kind of rose, begin pruning by removing dead or injured branches. After this, roses should be pruned according to type (Figures 4 a, b, c, and d).

Roses from nurseries will have been pruned (at the nursery) to 12 to 18 inches, but it may be necessary to cut them back even further to live tissue; cut off torn or injured roots. After this, pruning should be done each succeeding spring although these annual prunings should not be as extreme as the first season's cutting.

Severe pruning will affect bloom production. Pruning back to 15 or 18 inches should be sufficient. Typically, pruning HP varieties to 20 to 30 inches, is enough.

Climbing Roses are pruned according to their kind and the effect that is desired of them. Large-flowering climbers are pruned in the spring, and since they are not as vigorous as ramblers, only a few of the oldest canes should

be removed or shortened to encourage new growth. Ramblers are the most vigorous of the climbing types and commonly the very oldest shoots are removed after flowering. This encourages new shoots for the following year. Miniature Roses require little or no pruning—only enough to keep them well formed. The same is true for Shrub or species roses. They are grown as large plants and pruned just enough to keep them attractive.



Figure 4a. Before pruning

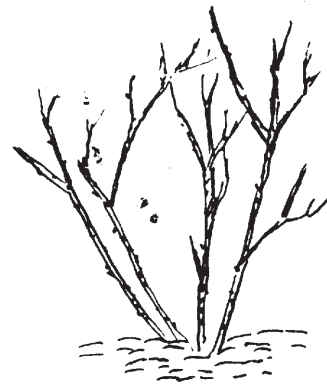


Figure 4b. Light pruning: Hybrid Tea, Hybrid Perpetual, and Floribunda.



Figure 4c. Moderate pruning



Figure 4d. Severe pruning

Selection of Plants

Propagation of rose plants is a specialized business, and it is best to obtain plants from a reliable nursery or plant dealer. In general, roses are grown in the field for 2 years and then are dug to be offered for sale that fall or to be placed in controlled storage for sale the following spring. It is wise when purchasing to insist on number 1 grade, dormant, 2-year-old, field-grown plants. These plants each have three or more strong, long canes. The medium, or number 1½ grade, has two or more heavy canes and the number 2 grade has two or more canes of which one is heavy. Cultivars vary in size and vigor. Use caution when buying plants that have been exposed to a hot, dry salesroom for any length of time, and avoid plants with bark or canes that are shriveled and dry.

Time of Planting

Establish roses in the fall when soil and air conditions are most favorable for planting. In the spring, soil is frequently so wet it is not possible to work it conveniently and to plant the roses when they arrive. Also, fall plants generally have not been stored for an extended period. When buying roses at other times, you should be aware that, unless the plants have been stored under the best storage conditions, they may have lost some of their vitality.

Fall planting is most easily done after the plants are dormant, but before freezing weather arrives. In Maryland, this is usually during November. Spring planting of dormant, bare-rooted plants should be done as early as possible, preferably from March to mid-April. If the weather is very cool, mound soil around the base of the canes (as with fall planting) to insulate the plant.

New plants should be installed immediately or deeply heeled-in and completely covered with soil until they are planted in a permanent location. Most roses are planted at least 2 feet apart. Plant vigorous-growing kinds 2 ½ to 3

feet apart. Miniature roses are planted 8 to 15 inches apart, depending on the effect that is desired. Climbing Roses on fences should be spaced 4 to 6 feet apart. Again, however, the size of the beds and the effect desired may influence the planting distance.

Holes should be dug large enough to accommodate all the roots without cramping and deep enough that the bud union (swollen area on the stem) is at or slightly below the soil. If a single hole is being dug for a plant in an area that has not been spaded and worked over, the hole should be approximately 18 inches in diameter and 12 inches deep so the root system may spread in a normal pattern. The plant should be set in place with well-prepared soil around the roots. Firm the soil around the plant, and then water it. Watering is especially important in the fall when the soil may be somewhat dry.

For fall-planted roses, mound the soil 6 to 10 inches deep around the base of the canes for winter protection. In the colder sections of Maryland, if planting is not to be done until December, this soil mound should be supplemented with a leaf or straw mulch. In the spring, the canes of newly planted roses may be covered with moist burlap, newspaper, or other material to keep them from drying out until the roots become established. Whatever material is used, it should be removed as soon as the buds start to grow.

Potted roses are available at nurseries throughout the spring and summer. These plants are good for filling vacant spaces in beds or in cases where it had not been possible to plant early in the season. Pot-grown roses are better for late planting than dormant plants; potted roses may be planted even if they are in full bloom.

Summer Care

During the growing season—April to October—roses should have ample water. Water roses thoroughly when their soil is dry; a light surface sprinkling is of little value. It is

important, however, to keep the foliage dry. Wet foliage favors the spread of disease. If water is applied with a hose, be careful not to use strong pressure. It will compact the soil.

Cultivation during the summer should be frequent enough to control weeds and keep the soil loose. Mulch is helpful for reducing summer care. A mulch 2 to 3 inches deep of peat, leaf mold, shredded bark, weathered wood chips, or similar material is satisfactory.

Old flowers should be removed from plants to encourage new blooms. Cut them off just above the upper five-leaflet leaf. By doing this, very few leaves are removed. When flowers are wanted as cut blooms, cut them leaving one or two five-leaflet leaves on that particular stem. Healthy, active buds are left for new growth and more bloom.

Winter Protection

The HT, HP, Grandiflora, and Miniature Roses need protection during the winter when temperatures fall below 10 °F. This means that in certain areas of Maryland, it is desirable to give the plants some form of winter protection. It is standard practice to mound soil around the plants to a depth of at least 8 inches (Figure 5). Later, after the soil is frozen, a coarse mulch of straw, leaves, tops of annuals or perennials, branches of discarded Christmas trees, or some

other material will give additional protection. This second protection may not be necessary in milder sections of Maryland.

Winter protection should be applied in late November or early December when plants have become dormant and most of the leaves have fallen. The material must be removed early in the spring before bud growth has started.

Vigorous-growing plants should be trimmed back to approximately 30 inches at the time winter protection is applied.

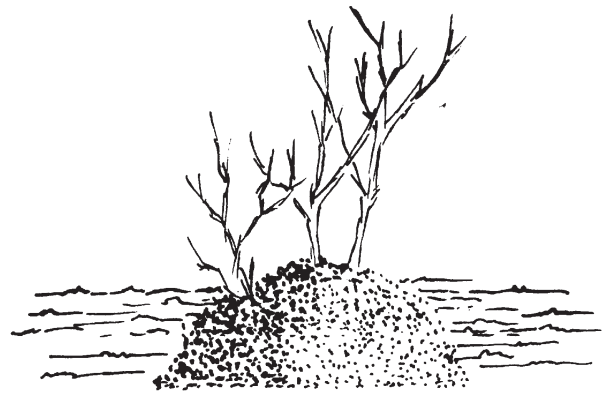


Figure 5. Mound soil 8 inches high around the plants for winter protection.