
ROSES

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Roses are one of the most popular garden flowers and roses can be grown in many northern climates if properly cared for. Roses can be categorized into two major groups: tender roses, commonly known as garden or hybrid tea roses, and hardy shrub roses.

The tender roses include hybrid teas, grandifloras, floribundas and miniature roses, all of which require winter protection. Hardy shrub roses include a number of different types of roses including rugosas, albas, bourbons, centifolias, damasks, gallicas, hybrid perpetuals and other hybrids which all have a varying degree of winter hardiness. Some roses are fully hardy to the tip of the stems, whereas others are known as 'crown-hardy' or 'dieback' types. Die-back roses can be killed back to the ground in the winter, but sprout new stems from below ground to provide a new flowering annual growth. It is important to distinguish between the major groups to determine how to overwinter them. Most shrub roses are grown on their 'own root', rather than being budded on understock, as most hybrid tea roses are. Some roses of all types are now grown on their own roots; and several roses of all types are grafted or budded. Shrub roses need little or no winter covering, but a deep mulch around the base of the plant throughout the year is beneficial.

Some hybrid tea roses may flower continuously, while others will have a short rest period before 'spurts' of bloom. Shrub roses vary in their bloom type. Some shrub roses will only bloom once a season, typically in early summer, and will not bloom again through the summer. Examples of this type would include 'Agnes', 'Lillian Gibson', and 'Harrison's Yellow'. Some shrub roses are considered recurrent, which means that they will bloom through out the summer, and in many cases will have a short period between bloom times. Ever-blooming shrub roses typically have flowers on them all summer long. Many shrub roses have the added benefit of producing beautiful hips at the end of the season, which can add interest to the autumn and winter garden.

Many new hardy shrub roses have been introduced in the last ten to 15 years from North America and Europe. Canada has introduced the Explorer roses, a group of cultivars, all named after North American

Explorers. This series exhibit qualities such as hardiness, disease resistance and extended bloom times and include the varieties 'Alexander Mackenzie', 'Champlain', and 'Martin Frobisher'. Varieties that are quite short in stature include 'Simon Fraser' and 'Frontenac', while others are quite tall and can be used as hardy climbers on fences, walls and trellises, including 'Henry Kelsey', 'John Cabot', and 'William Baffin'.

The Parkland Roses originate from the Winnipeg area of Canada. They have flowers similar to hybrid tea roses and have recurrent bloom. Popular varieties include 'Adelaide Hoodless', 'Cuthbert Grant', 'Morden Centennial', 'Morden Cardinette', 'Morden Amorete', 'Hope for Humanity' and 'Winnipeg Parks'. Additional varieties include 'Morden Blush', with blush pink hybrid tea type flowers, and 'Morden Sunrise', a newer cultivar with bicolor flowers of yellow and orange. The Parkland series are susceptible to black spot in humid climates and may require preventive disease spraying.

The rose breeding of Dr. Griffith Buck at Iowa State University has produced the Buck series of roses. These roses are known for their large hybrid tea type flowers and upright growth habit. Two hardy varieties include 'Carefree Beauty' and 'Prairie Princess'. Recently, an additional series known as Flower Carpet, from Europe, has swept the country with five different colored cultivars of low, ground cover type shrub roses.

The rose breeding program at Bailey Nurseries has produced a new series of hardy shrub roses called Easy Elegance™, exhibiting an exciting combination of hardiness and recurrent bloom. Cultivars include a beautiful red 'Mystic Fairy'™ and 'Macy's Pride'™, with lemon yellow buds that open to creamy white. More cultivars are expected yearly from this program. There will also be new cultivars released yearly from the hardy shrub rose breeding program at the University of Minnesota. Table 1 lists several varieties in each of the above rose series, with the description and attributes of each variety.

Planting

Roses can be purchased as either dormant plants, bare-root plants, or container-grown plants. Dormant

plants are typically sold by size, and a #1 bare root rose is the largest and best quality rose plant available. Typically #1 grade plants will transplant quickly and provide abundant bloom the first year after planting. Roses available as dormant, barefoot plants are marketed in retail stores with the roots packed in peat or shingle toe and plastic. Dormant packaged plants that have new long sprouts should be avoided, as they deplete the plant's food reserve before it is planted. Plants should have at least three strong canes. They should have moist peat moss or shingle toe around their roots and be wrapped in waterproof material. Container grown plants can come in sizes ranging as small as a number one container to as large as a number five container. They can be transplanted anytime throughout the growing season. Choose plants that are well shaped and disease free.

Hybrid tea and shrub roses prefer a location with a minimum of eight hours of direct sunlight daily. They perform best in soils that are well drained, fertile, and have a pH of 6.0 to 7.0. Hybrid tea roses are typically planted in beds, whereas shrub roses are used in foundation plantings and landscapes mixed with woody plants, perennials and annuals.

Plant dormant roses in early spring. Plant all budded roses with the bud union, a swollen knob between the root and top, one inch below the surface of the ground. The hole should be large enough to permit spreading out the roots without bunching them. Spread the roots in the hole and pack soil under, around, and over them. After planting, water the plant thoroughly.

Once the dormant bare root rose is planted and watered, mound the base of the plant with six inches of soil as shown in Figure 1. Keep the mound moist and leave it in place for about ten days, or until growth has started. When growth has started, remove the mound carefully, preferably on a cool and humid day rather than on a hot and windy day.

Containerized roses can be planted throughout the growing season. However, if they are leafed out, do not plant them in early spring until all danger from frost has passed. Plant containerized roses in the same manner in which any containerized shrub would be planted. Remove the container carefully without disturbing the soil ball. If the root ball is root bound, gently loosen or cut the roots circling around the soil ball. Place the intact root ball in the hole and backfill the hole with soil; water the plant thoroughly. It is not necessary to mound actively growing roses.

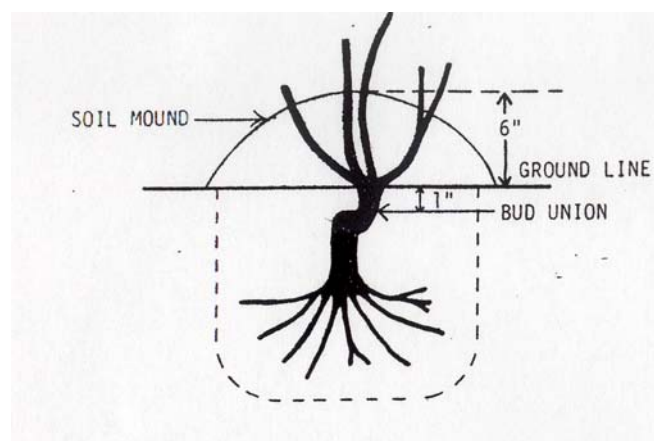


Figure 1. A properly planted bare root hybrid tea rose bush.

Watering

A constant moisture supply is vital to successful rose culture. Starting in early spring, roses require a minimum of one inch of water per week, depending on weather conditions. It is best applied in one deep watering. Sandy soils will require more frequent watering than heavier soil types. Overhead watering is desirable in early spring before growth starts. This type of watering will prevent the canes from desiccation. After growth has begun, apply the water directly to the soil with a soaker hose, or water early in the day so foliage will dry before evening. Air movement through the foliage is desirable to keep it dry. Wet foliage is very susceptible to diseases.

Fertilization

Roses are heavy bloomers and fast growers; therefore, they require adequate and regular fertilization. Applying well-rotted manure to rose beds in early spring is one method of fertilizing roses. This rotted manure adds both nutrients and organic matter to the soil. Dehydrated manure, bone meal, and soybean meal are also good soil additives. Because these materials decompose slowly, supplement them with a slow release fertilizer or with one of the many available rose fertilizers. A fertilizer with a chemical analysis similar to a soluble 10-10-10 or preferably a 50% slow release 18-18-8 is desirable. Keep all manure and fertilizers at least six inches away from the canes.

Fertilize hybrid tea roses once monthly until August 1st, following the fertilizer manufacturer's directions. One application of a slow release is usually adequate per year. Shrub roses may require less fertilization. Careless use of fertilizer can be injurious to plants. A

thorough watering before and after fertilization is recommended.

Disease and Insect Control

Garden roses perform best with a routine spray or dusting program. Dusting or spraying is usually recommended every ten to 14 days and after rain. Most shrub roses do not need this type of routine, but may need some spraying on occasion. Disease problems are most prevalent during periods of wet weather. Use spray materials that contain an insecticide, miticide, and fungicide to control insects, diseases such as black spot and powdery mildew, and red spider mites. Some shrub roses do not require continuous spraying; however, good IPM should be practiced.

Weed Control

To be effective, hand hoeing or cultivation must be started early in the season. Cultivation should be frequent, but shallow. A summer mulch such as grass clippings, pine needles, wood chips, cocoa bean mulch or shredded bark helps eliminate hand hoeing. Place the mulch two to three inches deep around the plant. A mulch also conserves moisture and cools and conditions the soil. Leave mulches in place permanently, as they eventually will decompose and become part of the soil.

Winter Protection

It is important to know the hardiness of each shrub rose cultivar to determine its proper winter protection. Some cultivars require no winter covering, and others will benefit from a light covering of marsh hay, straw or leaves. Some roses will die back to the crown, and others can be alive to the tip.

Hybrid tea roses need winter protection in Hardiness Zones 3 and 4. Roses must be protected not only against low temperatures, but also against fluctuating temperatures. The methods described below provide effective winter protection for hybrid tea roses. At the time of covering or shortly before, spray all roses with a fungicide to prevent disease organisms from overwintering on plants. Also protect roses from rodents by applying rodent bait before covering them.

The Minnesota Tip Method

1. Shortly after the middle of October, make a trench extending out from the base of the plant. Make it deep enough to accommodate the entire plant. More than one plant can be laid down in a large trench.

2. Tie the canes together in a bundle with string and loosen the roots with a garden fork so that the plant can be gently tipped into the trench.
3. Cover the plant with the soil from the trench.
4. Mark the base of the plant to facilitate locating the root system when plants are lifted in the spring.
5. In early November, cover the plant with a three to five-inch layer of leaves. One week later, add a one-foot layer of marsh hay or straw.
6. In the spring, approximately April 1, remove all covering in stages as it thaws out. When the ground has thawed, carefully raise the plants, replace the soil around the plants, and water them thoroughly if the soil is dry. To keep the buds and canes moist, place a lawn sprinkler on dormant roses for short periods several times per day until buds break.

Mounding

1. About mid-October, tie the canes together with string.
2. Mound the base of each plant with six to eight inches of soil. Place wire netting or fencing around the entire bed. Fill this enclosure with about two to three feet of leaves. Cover the leaves with marsh hay or straw to prevent them from blowing away. Do not cover leaves with plastic, tarpaper, or waterproof covering.
3. About April 15, remove the mulch and soil mound. Water the plants thoroughly if the ground is dry.

Spring Pruning

Prune out all dead wood in early spring. Shape and cut back some of the tall canes, except on climbing or pillar roses, to maintain the plants at a uniform height. Cut about ¼ inch above an outgrowing leaf bud at a 45-degree angle to help insure the plant will be well shaped.

Type	Name	Classification	Flower Type	Flower Color	Fragrance	Bloom Cycle	Height	Shape	Disease Resistance	Hardiness Zone
Table 1. Descriptions and attributes of several rose varieties.										
Explorer Roses	'Alexander McKenzie'	shrub	double	red blend		recurrent	5-6'	upright		3-7
	'Captain Samuel Holland'	shrub	double	medium red	slight	everblooming	6'	climber	yes	3-7
	'Champlain'	hybrid kordesii	double	dark red	yes	everblooming	3'	pillar	yes	3-7
	'Charles Albanel'	hybrid rugosa	double	medium red		recurrent	1-2'	low, spreading	yes	3-7
	'David Thompson'	hybrid rugosa	double	medium red	yes	recurrent	3-4'		yes	3-7
	'Frontenac'	shrub	double	deep pink	slight	recurrent	2-3'	upright	yes	3-7
	'George Vancouver'	shrub	double	medium red		recurrent	2-3'		yes	3-7
	'Henry Hudson'	hybrid rugosa	double	white	yes	recurrent	1.5-3'		yes	3-7
	'Henry Kelsey'	hybrid kordesii	double	medium red	yes	recurrent	6-7'	climber	yes	3-7
	'J.P. Connell'	shrub	double	medium yellow	yes	recurrent	3-5'		yes	3-7
	'Jens Munk'	hybrid rugosa	double	medium pink	yes	recurrent	4-6'	climber	yes	3-7
	'John Cabot'	hybrid kordesii	double	medium red	yes	recurrent	5-9'			3-7
	'John Davis'	hybrid kordesii	double	medium pink	yes	recurrent	6-8'	trailing		3-7
	'John Franklin'	shrub	double	medium red	yes	recurrent	3-4'		yes	3-7
	'Lambert Closse'	shrub	double	medium pink		recurrent	2.5'	compact		3-7
	'Marie-Victorin'	hybrid kordesii	double	pink		recurrent	4-4.5'		yes	3-7
	'Martin Frobisher'	hybrid rugosa	double	light pink	yes	recurrent	5-6'		yes	3-7
	'Royal Edward'	shrub	semi-double	medium pink	slight	recurrent	18"+	trailing	yes	3-7
	'Simon Fraser'	shrub	semi-double	medium pink	slight	recurrent	2-2.5'		yes	3-7
	'William Baffin'	hybrid kordesii	semi-double	deep pink		recurrent	8-10'	upright		3-7
Parkland Roses	'William Booth'	hybrid kordesii	single	medium red		everblooming	4-5'	trailing	yes	3-7
	'Adelaide Hoodless'	shrub	semi-double	deep pink		recurrent	2-3.5'		no	3-7
	'Cuthbert Grant'	shrub	semi-double	dark red		recurrent	3'		yes	3-7
	'Hope for Humanity'	shrub	double	dark red	yes	everblooming	3-4'		yes	3-7
	'Morden Blush'	shrub	double	blush pink	yes	recurrent	2-3'		yes	3-7
	'Morden Centennial'	shrub	double	medium pink	slight	recurrent	3-5'		yes	3-7
	'Morden Fireglow'	shrub	double	orange red		recurrent	1.5-3'		yes	3-7
	'Morden Snow Beauty'	shrub	semi-double	white		everblooming	2.5-3'		yes	3-7
	'Morden Sunrise'	shrub	semi-double	orange/yellow		everblooming	2-3'		yes	3-7
	'Prairie Joy'	shrub	double	medium pink	yes	recurrent	5'	upright	yes	3-7
	'Winnipeg Parks'	shrub	semi-double	deep pink	slight	everblooming	2-3'		yes	3-7
Rugosa Roses	'Agnes'	hybrid rugosa	double	yellow	yes	June only	4-6'	rambler/climber	yes	5-7
	'Belle Poitvine'	hybrid rugosa	semi-double	medium pink	yes	recurrent	4-5'		yes	3-7
	'Blanc Double de Coubert'	hybrid rugosa	double	white	yes	recurrent	5-7'		yes	3-7
	'Dwarf Pavement'	hybrid rugosa	semi-double	light pink	yes	recurrent	2-2.5'	ground cover	yes	3-7
	'Grootendorst Supreme'	hybrid rugosa	double	dark red		recurrent	3-5'		yes	4-7
	'Foxy Pavement'	hybrid rugosa	semi-double	deep pink	yes	recurrent	2.5-4'		yes	3-7
	'Hansa'	hybrid rugosa	double	medium red	yes	recurrent	4-6'		yes	3-7
	'Magnifica'	hybrid rugosa	double	mauve blend	yes	recurrent	4-6'		yes	4-7
	'Marie Bugnet'	hybrid rugosa	double	white	yes	recurrent	3'	rounded	yes	3-7
	'Pink Grootendorst'	hybrid rugosa	double	medium pink	yes	recurrent	3'		yes	4-7
	'Purple Pavement'	hybrid rugosa	semi-double	mauve	yes	recurrent	3'	mounded	yes	4-7
	'Rosa rugosa'	rugosa	single	mauve or white	yes	recurrent	4-6'		yes	2-7
	'Sir Thomas Lipton'	hybrid rugosa	double	white	yes	recurrent	6-8'	upright	yes	3-7
	'Snow Pavement'	hybrid rugosa	semi-double	white	yes	recurrent	2.5-3'		yes	3-7
	'Theresa Bugnet'	hybrid rugosa	double	medium pink	yes	recurrent	5-6'		yes	3-7

Type	Name	Classification	Flower Type	Flower Color	Fragrance	Bloom Cycle	Height	Shape	Disease Resistance	Hardiness Zone
Table 1 (Continued). Descriptions and attributes of several rose varieties.										
Buck Roses	'Topaz Jewel'	hybrid rugosa	double	medium yellow	yes	recurrent	3-5'	dense shrub	yes	4-7
	'Aunt Honey'	shrub	double	medium pink		recurrent	3-4.5'			5-7
	'Carefree Beauty'	shrub	semi-double	medium pink		everblooming	3'			5-7
	'Country Dancer'	shrub	double	deep pink		everblooming	2-3'	compact		5-7
	'Hi, Neighbor'	grandiflora	double	medium red		everblooming	3.5-4'			5-7
	'Honeysweet'	shrub	double	orange pink	yes	everblooming	3-4'	upright		5-7
	'Prairie Harvest'	shrub	double	light yellow		recurrent	3-4'			5-7
	'Prairie Sunrise'	shrub	double	apricot blend	yes	recurrent	3'			5-7
	'Winter Sunset'	shrub	double	yellow blend		everblooming	3'			5-7
Miscellaneous	'Austrian Copper'	species	single	copper/orange		June only	6-8'	upright		5-7
	'Blushing Knockout'	shrub	double	light pink		everblooming	3'	rounded	yes	4-7
	'Bonica'	shrub	double	medium pink		everblooming	3-4'	arching		4-7
	'Cambridge'	shrub	single	medium pink		everblooming	2'	rounded	yes	4-7
	'Carefree Delight'	shrub	single	pink blend		everblooming	2.5-5'	rounded	yes	4-7
	'Carefree Sunshine'	shrub	single	medium yellow		everblooming	3.5-4'			4-7
	'Carefree Wonder'	shrub	double	pink blend		everblooming	2.5-4'	compact		4-7
	'Chuckles'	floribunda	single	deep pink		everblooming	2'			5-7
	'Knockout'	shrub	single	red blend		everblooming	3'	rounded	yes	4-7
	'Madison'	shrub	double	mauve blend		everblooming	24-30"	rounded	yes	4-7
	'Nearly Wild'	shrub	single	medium pink		everblooming	2-3'	low, rounded		4-9
	'Persian Yellow'	species	double	medium yellow		June only	6'			4-7
	'Pink Knockout'	shrub	single	pink		everblooming	3-4'	low, rounded	yes	4-7
	'Ramblin' Red'	pillar	double	medium red		everblooming	6-10'	climber	yes	3-7
Flower Carpet	'Coral Flower Carpet'	shrub	single	coral pink		recurrent	2'	ground cover	yes	5-9
	'Pink Flower Carpet'	shrub	semi-double	deep pink		recurrent	2'	ground cover	yes	5-9
	'Red Flower Carpet'	shrub	semi-double	medium red		recurrent	2'	ground cover	yes	5-9
	'Sunshine Flower Carpet'	shrub	double	deep yellow		recurrent	2'	ground cover	yes	5-9
	'White Flower Carpet'	floribunda	double	light pink		recurrent	2'	ground cover	yes	5-9
Easy Elegance	'Garden Art Macy's Pride'	shrub	double	white		recurrent	5'	upright	yes	4-7
	'Garden Art Orange Impressionist'	shrub	double	orange		everblooming	3'	upright	yes	5-9
	'Garden Art Salmon Impressionist'	shrub	double	pink/salmon		everblooming	3'	upright	yes	5-9
	'Garden Jubilee Firecracker'	shrub	single	medium red		recurrent	2'	compact	yes	4-7
	'Garden Jubilee Funny Face'	shrub	semi-double	pink blend		everblooming	3'	upright rounded	yes	4-9
	'Garden Jubilee Hot Wonder'	shrub	double	medium red		everblooming	3'	upright	yes	4-9
	'Garden Path Mystic Fairy'	shrub	double	red		everblooming	3'	compact	yes	4-9
	'Garden Path Pink Gnome'	shrub	double	pink		everblooming	1'	spreading	yes	4-9
	'Lifestyle Garden My Hero'	shrub	double	medium red		everblooming	3'	compact	yes	4-7