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The Culture of Garden Roses

Garden roses are the ever-popular choice of many home gardeners across New York State. Roses are available in sizes ranging from 5- to 8-inch miniatures to climbers that may climb a trellis to a rooftop level of 10-15 feet.

Among the hardiest roses are the shrub or "species" roses that are native to the Northern hemisphere and include the sweetbrier, *Rosa eglanteria*, the Virginia rose, *R. virginiana*; *R. rugosa*, valued for its large abundant rose hips rich in vitamin C; and *R. wichuraiana*, one parent of most modern climbing roses.

The **miniatures**, or **Tom Thumb roses**, are natural small-growing plants requiring the same outdoor care as garden roses. They are used as edging plants, in flower borders, for rock gardens, and for container growing in a sunny window or under a fluorescent light indoors. Some are now grown from seed and are of interest to hobby gardeners who want to start their own.

The most common and most popular roses are the tall-growing, 3- to 5-foot, **ever-blooming hybrid teas**. They produce large, sometimes fragrant, blooms, usually one to a stem, a characteristic that makes them most desirable for cut flowers. **Floribundas** bear clusters of smaller blooms on smaller, more compact plants. They are ever-blooming and are useful where masses of blooms are valued for color in the landscape. **Grandiflora** roses have flowers that resemble hybrid teas, but are born in clusters on tall plants.

Hybrid perpetuals are among the many fragrant large-flowering roses that were so popular in the mid-1800s. They are grown on their own roots forming hardy tall (6-8') bushes that bloom profusely in June and only moderately, or little, over the summer. Their fragrance, flower size, and hardiness make them a desirable choice today.

Climbing roses include many kinds that grow long canes requiring trellises, fencing, or other means of support to which they must be tied. They include the ramblers; climbing hybrid teas, polyanthas, and floribundas; ever-blooming climbers; and trailing roses that creep on the ground along walks or over banks.

Rose plants purchased from nurseries or garden centers can be grown on their own roots or bud grafted onto a hardy rootstock. Most climbers, old-fashioned shrub roses, and miniatures are grown on their own hardy root systems. In fact, they can be started by cuttings by the amateur. Hybrid teas, floribundas, and grandifloras are sold as bud-grafted plants, for the root systems of these kinds are usually not hardy in northern climates.

Tree roses (plants budded on a standard about three feet in height) require special winter protection in New York State and are not satisfactory except in areas where winters are mild, such as Long Island.

Site: Select a site for the rose gardens where the plants will receive direct sunlight for at least six hours each day. Light shade in the afternoon is an advantage. Be sure, however, not to place the rose garden close to trees with matted surface roots, such as maples, elms, and poplars. This disadvantage can be partly corrected by cutting the tree roots along the edge of the rose bed several times a year. Although roses should not be planted in a place with no air circulation, they need some protection from high winds. Hedges, shrub borders, walls, or fences can provide this.

Soil Requirements: Any good garden soil mixed with peat or other organic matter and well fertilized can produce good roses. There is some preference for silty clay or clay loam; the lighter sands should be avoided. The optimum pH value of the soil for roses is between 5.5 and 6.5, which is slightly on the acid side. Very acid soil (with a pH lower than 5.0) or very alkaline soil (with a pH higher than 7.5) is unsuitable.

Drainage is of the greatest importance and must be provided on poorly drained heavy soils. A gentle slope helps to carry off surface water. For subsoil drainage you may use tile or fill trenches with rocks. Be sure such trenches have an outlet away from the rose garden. Relatively deep surface soil is a decided advantage, particularly if the subsoil is heavy clay.

Prepare the rose bed well by spading or tilling to a depth of 12 inches and working in well-rotted manure, if it is available. From eight to ten bushels for each 100 square feet of surface area is not too much. Peat, leaf mold, or compost is also a satisfactory form of organic matter.

Fertilizing: It is important to keep up the fertility of the rose bed. Apply commercial fertilizer of 5-10-10 or similar formula in the spring when four to six inches of new growth has been made. Spread the fertilizer over the surface of the bed at the rate of two pounds to 100 square feet, work it into the soil, and water it in. If the weather following fertilization is dry, additional water is needed. A second application can be made later in the season (June) if the plants are showing nutrient-deficiency symptoms, such as pale green or yellowing leaves. Do not exceed two pounds of 5-10-10 per 100 square feet at this time. In New York State, fertilizer applications should not be made after July 15, because it may delay the hardening of the wood before winter sets in.

Planting: In New York State, bare-root roses should be planted in the spring. Container-grown plants can be planted any time until early September. Plants received from reputable nurseries are packed so that they will stand a week or more from time of shipment without serious damage if kept cool (40˚-50˚ F). If you cannot set the plants soon after arrival, unpack them and heel them in to prevent drying from winds or sunlight. If the plants seem somewhat dry when unpacked, place the roots in water for a few hours or bury the plants in damp soil, tops and all, for several days.

Plant grafted rose plants with the union one inch below the soil surface. Dig the hole large enough to spread the roots in a natural manner, radiating from the stem like the fingers of a hand. Cover the roots with topsoil and tamp it firmly. Never plant when the soil is so wet that it can be pressed into balls that will crumble. After the soil is packed firmly about the root, water the plants thoroughly. If the weather is unseasonably warm in the spring when the plants are set out, mound soil around the plant to a height of eight to ten inches (three to four inches for miniatures) to prevent desiccation until the new growth starts.

Hybrid teas, vigorous floribundas, and hybrid perpetuals should be spaced three feet apart; climbers, about five feet apart. Adequate spacing ensures good air circulation, which helps to reduce disease problems. Planting roses in groups ease the job of spraying.

At the time of planting, prune back the canes of vigorous plants. Paint pruned stems with tree-wound dressing to prevent borers from entering canes. Continue to water newly planted bushes thoroughly until they are established.

Mulching: Mulching with bark chips or other loose material, such as pine needles, wood chips, grass clippings, or sawdust, helps to retain moisture and keep down weeds. Some organic materials, especially the woody types, may cause a temporary nitrogen deficiency, evidenced by yellowing of the rose leaves. Application of a nitrogenous fertilizer will counteract the condition. The mulch should be at least two inches thick.

Pruning: How to prune climbing, pillar, and rambler roses depend a great deal on the growth habit of the particular variety. Most ramblers and some climbing and pillar types send up prolific canes each spring. These canes are removed after they flower. Do not break or bruise the new canes in the pruning process, for they carry next year's bloom.

On other climbers where new canes are not so numerous or where two-, three- or four-year-old canes seem to bloom regularly, only the older and less-vigorous canes should be removed.

Climbing roses bloom more prolifically when the canes are trained horizontally along a trellis or the rails of a fence.

Pillar roses are trained vertically and bloom along their upright stem.

All other types are pruned in the spring after danger from winter injury is past. Remove all winter-killed canes. It is also advisable to cut out weak and spindly growth that is smaller than a lead pencil in diameter, provided there are two or three more- vigorous canes left. Prune back the remaining canes to a point below which no winter injury is evident. The remaining canes should be "vase shaped" with no branches crossing the center. The use of white glue to cover cut canes will prevent borers from entering.

During the summer little pruning is needed. In cutting flowers, leave at least two nodes at the base of each flowering shoot. Remove all faded blossoms.

Just before the plants are mounded with earth for winter protection, shorten the vigorous canes so that they will not whip about in the wind. After a few years, experience will tell you the average amount of winter kill to expect, and you can cut the canes back to that point in the fall.

Propagation: Most varieties of roses can be propagated from cuttings taken during the summer. The most successful cuttings, however, are taken form the most vigorous rose bushes. The less vigorous or weaker varieties will not do reliably well on their own roots.

Take summer cuttings in July after flowers have fallen. Cut the faded flower just above the first five-leaflet leaf and make the second cut six to eight inches farther down. The cutting should have at least four leaf nodes. Remove all but the top two leaves and dip the cutting in a rooting hormone.

Plant the cutting in loose sandy soil where it is protected from afternoon sun and invert a jar over it. In a month or two when new growth starts, remove the jar. It will be three seasons before the plant adds much color to your garden.

Diseases and Insects: A good preventive measure against injurious diseases and insects is the regular use of the "all-purpose" sprays or dusts containing combinations of fungicides and insecticides. Always ***Read the Pesticide Label*** for information on how to use the compound, the pests against which it is effective and special precautions.

The two most serious diseases attacking rose foliage are black spot (*Diplocarpon rosae*) and powdery mildew (*Sphaerotheca pannosa* var. *rosae*). These diseases can infect the canes and reside in the lesions over the winter. Black spot disease can be recognized by the black colored spots with fringed margins on the leaves; the leaves turn yellow and drop off. Recognize powdery mildew by the curling of young leaves, purple to black discoloration of leaves, and white mold on leaves, buds, and canes.

The following cultural practices can reduce the severity of but not eliminate these two diseases: Plant resistant varieties. Prune lower on canes to reduce the number of over-wintering lesions. Destroy or discard fallen leaves and prunings. Space and locate plants to encourage rapid drying of leaf surfaces.

Many insects feed on roses. Japanese beetles, rose chafers, and several caterpillars chew rose leaves. Other insects, such as aphids, thrips, leafhoppers, and rose midges, can seriously weaken rose plants or damage buds by feeding on plant juices.

Check with Cornell Cooperative Extension - Suffolk County for information on current insect and disease control recommendations.

Winter Protection: In New York State winter protection is necessary for garden roses. No better method has been devised than mounding soil around the base of each plant to a height of 10 or 12 inches. Do this in late fall after the first hard frost. If plants are spaced far enough apart, bring the soil from between the plants and heap it about the plants. Care should be taken not to expose or injure roots. Where roses are planted close together, soil must be secured from another location. Level or remove the mounded soil in late March or April when danger of serious freezing weather (20˚ F.) has passed.

In regions where climbers suffer winter kill, lay the canes on the ground and mound soil over the base of the plants. It may be necessary to hold down the canes at the base with stakes. Cover the canes lying on the ground with earth or some mulching material. If the plants are next to lawn areas, laying canes in the grass is a good practice.

Either dig and bury rose trees in a trench over winter or leave them in place and wrap them with sheaves of straw kept in place with burlap. Be sure to protect the bud union, which is three to five feet above the soil level.

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The American Rose Society https://rose.org/ has information on local rose society chapters.

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