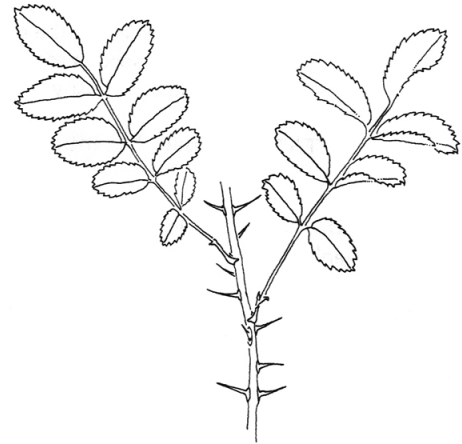


Plant Health Care Recommendations for Rose

The rose is the most popular garden plant in the world, as well as the most important cut flower. There are such a wide variety of roses available that any garden with sufficient sun should be able to grow roses. Although there are between 150 and 200 species of wild roses in the Northern Hemisphere, selection and hybridization have given rise to over 20,000 cultivars.

Fossil specimens indicate that roses grew in Colorado and Oregon more than 30 million years ago. The rose is considered the oldest cultivated garden shrub. There is evidence that roses were first cultivated 4,000 - 5,000 years ago in northern Africa. The Romans appreciated roses and they were widely cultivated in gardens of that period.

The most common classifications of modern roses are hybrid tea, floribunda, grandiflora, climber, miniature and tree roses. Descriptions of the rose types are as follows.



Hybrid Teas - The popular garden roses. Produced by the interbreeding of hybrid perpetual with tea rose cultivars. Modern hybrid teas can bloom continuously for months when given proper care. However, most varieties are susceptible to attack by numerous diseases and insects.

Floribundas - Most have smaller flowers than hybrid teas, but produce more flowers on each stem. Floribundas are excellent for providing masses of color in the landscape. This group will tolerate more neglect than most roses.

Grandifloras - Similar to the floribundas, these produce flowers in profusion. These are vigorous roses that produce larger, but fewer flowers than the floribundas.

Climbers - This group sends out long shoots or canes which can be trained over fences, arbors or trellises. A diverse group, the climbers vary greatly in bloom and pest resistance.

Miniatures - The plants in this group range in height from 3 - 18 inches and have tiny flowers. They are particularly suitable as potted plants and in rock gardens.

Tree Roses - Often called “standards” tree roses are produced by grafting a hybrid tea or other rose onto a strong, tall stem. Many have trunks three feet tall. Usually the trunk must be supported with a stake.

Culture of roses is not difficult, but to be successful it is necessary to follow certain guidelines.

Light: Roses grow best where they have full sunshine all day. However, where summers are hot, flowers will last longer when roses are located where they will receive partial afternoon shade. Six hours of direct sun each day is considered the minimum for roses to flower well. Locations that receive early morning sun will dry more quickly and have fewer disease problems.

Soil: Roses require a well-drained soil to prevent cankers and root diseases. Working the soil deeply and incorporating organic matter (peat moss, compost, manure, etc.) provides this. Raised beds are often used in areas with heavy, clay soils. Roses require fertilization, which should be based on a soil nutrient analysis. Mulching around roses with wood chips, pine straw, peat moss or other organic material is highly beneficial.

Pest Management

Roses are considered high maintenance plants primarily because of the many diseases, insects and mites that attack these plants. The major rose pests are the following.

Black spot - The most important disease of roses, black spot is a fungus disease of the foliage. Young leaves are the most susceptible to attack, particularly during spring rainy periods. Infected leaves turn yellow and fall prematurely. Susceptible varieties are usually completely defoliated by mid-summer. This causes blooming to stop and the plants become more susceptible to canker diseases. Spray treatments during the spring and summer are necessary with all but the most resistant varieties. Pruning and sanitation are also essential elements of black spot control.

Powdery Mildew - This fungus disease is a major foliage pest of roses. The disease also attacks the buds, flowers, and stems. Infection can occur at any time during the growing season when humidity is high and temperatures are warm. Many new rose cultivars show resistance to powdery mildew, although few retain a high level of protection. Spray treatment are highly effective against this disease.

Rust, Cankers, Blights, Anthracnose, Crown gall, Mosaic virus - Roses are subject to such a wide variety of diseases that it is essential to routinely monitor for symptoms and preventively apply treatments. Cultural practices that reduce stress and promote vigor will reduce the effects of diseases.

Japanese Beetle - Adult beetles feed on the foliage, buds and flowers. This species is a problem in the eastern half of North America. Damage to the foliage will often totally defoliate roses. The beetles tunnel into and destroy buds; they completely consume flower petals.

Spider Mites - Several species of these tiny pests commonly damage rose foliage. They often build up to very high numbers before they are detected. The two-spotted spider mite is a pest of many other garden plants and has the potential to spread rapidly.

Thrips - Flower thrips are common problems on roses. Thrips damage the petals, causing a brown streaking.

Rose chafer, Rose leaf beetle, leafhoppers, rose slugs (sawflies), aphids, scales, midges, leaf-cutter bees, stem borers.

Recommended Monitoring for Rose

Timing	Treatment
Winter	Inspect plants for deer and rodent damage. Apply deer repellents as needed. Inspect and adjust mulch to reduce winter injury and rodent damage.
Late Winter	Collect soil samples for nutrient and pH analysis. Sample roots for <i>Phytophthora</i> if plants exhibit decline. Apply horticultural oil to suppress mites and scale. Corrective prune plants to reduce size, improve shape and eliminate dead, dying and diseased stems.
Early Spring	Apply first fungicide spray treatment to suppress black spot, rust, and other diseases. Inspect and excavate mulch from root collars. Add additional mulch as needed. Apply fungicide soil treatment on plants with <i>Phytophthora</i> root rot.
Mid Spring	Apply second fungicide spray treatment to suppress black spot rust, powdery mildew, and other diseases. Apply fertilizers and soil amendments to adjust pH, as needed based on soil test results. Monitor for spider mites, aphids, rose slugs, leafhoppers and scales. Apply treatments as necessary. Prune off all old flower heads.

Recommended Monitoring for Rose

Timing	Treatment
Late Spring	Apply third fungicide spray treatment to suppress black spot, rust, powdery mildew and other diseases Monitor for spider mites, aphids, rose slugs, leafhoppers, and scales. Treat as needed. Monitor irrigation and soil moisture levels to reduce moisture stress and prevent root disease. Prune off all old flower heads. Prune off all old flower heads.
Early Summer	Continue fungicide spray treatments every 14 days to maintain a high level of disease control on susceptible varieties. Monitor for Japanese beetles, chafers, leaf beetles, thrips, spider mites, aphids, rose slugs, leafhoppers, and scales. Treat as needed. Monitor irrigation and soil moisture levels to reduce moisture stress and prevent root disease. Prune off all old flower heads. Prune off all old flower heads.
Mid Summer	Continue fungicide spray treatments every 14 days to maintain a leafhoppers, and scales. Treat as needed. Monitor irrigation and soil moisture levels to reduce moisture stress and prevent root disease. Prune off all old flower heads. Prune off all old flower heads.
Late Summer	Continue fungicide spray treatments every 14 days to maintain a high level of disease control on susceptible varieties. Monitor for Japanese beetles, chafers, leaf beetles, thrips, spider mites, aphids, rose slugs, leafhoppers, and scales. Treat as needed. Monitor irrigation and soil moisture levels to reduce moisture stress and prevent root disease. Prune off all old flower heads. Prune off all old flower heads.
Fall	Apply fertilizer and soil treatments as needed to adjust pH and supply nutrients. Remove any mulch from root collar and stem to reduce risk of disease and rodent injury. Apply repellents if browse is evident. Prune off all old flower heads.