

# Growing Roses

► Growing roses can be a rewarding hobby, providing color and beauty for a gardener's landscape from spring through fall, depending on the cultivars a gardener chooses to grow. Growing roses can also be a challenge as roses are prone to attract various insects and diseases. Knowing how to plant and care for roses, however, gives the gardener the upper hand, making a spectacular rose garden a well-earned reality.

Roses are treasured by gardeners for a variety of reasons. For some, the wide palette of colors is the primary appeal; others appreciate roses that bloom throughout the season, while others admire a once-blooming rose that rewards with rosehips in the fall. Some roses perfume the air; others bloom reliably until frost but with little scent. Rose shows attract gardeners who pay careful attention to the quality and size of the bloom. With thousands of cultivars of roses to choose from, the home gardener should prioritize the attributes that matter most.

Gardeners should consider the following when selecting rose plants:

- Flower form, petals, foliage, and thorns
- Color
- Once-blooming or repeat-blooming
- Landscape planting or cut blooms
- Fragrance
- Growth habit (height, spread, need for support)
- Disease resistance
- Pruning requirements
- Suitability for Alabama climate
- Grafted or own-root

When you have selected your roses, the following general guidelines apply.

**Select a planting site** that receives a minimum of 6 hours of sunshine daily.

**Have a soil test performed** several weeks before planting to determine fertilizer and pH needs of the planting area.

**Plant roses** in a well-prepared bed of garden soil liberally mixed with organic matter (well-composted animal manure, peat moss, decayed leaves, alfalfa pellets, or milorganite) and modified according to soil-test recommendations.



**Water** established roses with at least 1 inch of water each week from rain or irrigation applied during the early morning hours. New plantings require additional watering, and established plants may require additional watering during times of heat stress.

**Regularly inspect** plants to prevent insect or disease damage, and treat as needed.

**Mulch** plants to conserve soil moisture and suppress weeds.

## Rose Classifications

Roses are classified in three main groupings: species roses; old garden, or heirloom, roses, which are rose classes in existence before 1867; and modern roses, which are rose classes developed after 1867.

## Species Roses

Species roses are often referred to as wild roses. They are typically single-petaled and bloom only once a season. Species roses range in size from small 18-inch bushes to sprawling 20-foot plants. The species rose category includes *Rosa banksiae* (Lady Banks Rose) and *Rosa laevigata* (the Cherokee Rose). The latter is sometimes regarded as invasive.

## Old Garden Roses

Old garden, or heirloom, roses include a wide range of roses in cultivation before 1867 including Alba, Bourbon, Boursault, Centifolia, China, Damask, Gallica, hybrid perpetual, Moss, Noisette, and Tea roses. There are many other old garden rose types but not all are well-suited to cultivation in the south.

**Bourbon** is one of the first repeat-blooming, or remontant, types of roses bred. 'Zéphrine Drouhin' is a classic southern favorite. It is very fragrant, nearly thornless with a climbing habit, and covered in pink blooms.

**China** is a popular variety noted for its remontant plants with relatively few thorns. Favorites include 'Mutabilis', the butterfly rose, whose five single petals transform from yellow to pink to bronze as they mature.

**Hybrid perpetual** blooms are full and spectacularly large. Hybrid perpetual roses bloom more frequently than do older shrub rose types. This type was most popular before the development of modern hybrid teas. If given proper care, hybrid perpetuals develop into large, vigorous bushes. Favorites include 'Paul Neyron' and 'Marchesa Boccella'.

**Noisette** roses were hybridized in South Carolina 200 years ago and ever since have demonstrated their suitability to southern conditions. Expansive, fragrant, and typically reblooming roses, 'Champney's Pink Cluster' and 'Perle d'Or' are popular pink and yellow cultivars.

**Tea** roses have gorgeous blooms that can be enjoyed through the group Cochet: 'Maman Cochet' and all of her red, yellow, pink, blush, and white offspring. Teas and climbing teas are considered old garden roses by the American Rose Society and are distinct from hybrid teas, which are categorized as modern roses.



## Modern Roses

Modern roses are those that follow the introduction of 'La France' in 1867. The first hybrid tea, 'La France', was a cross between the old garden tea and hybrid perpetual. Modern roses are grouped primarily according to their flowering habit: hybrid tea, floribunda, grandiflora, polyantha, shrub, miniature, miniflora, and Earth Kind.

**Hybrid teas** usually have a single bloom that develops on a robust stem. Flowers of hybrid teas are most often used as cut flowers. Hybrid teas are a cross between the heirloom tea rose and cultivars in the group hybrid perpetuals. Hybrid teas are continuous bloomers from April until frost, often having notable fragrance. Probably the most famous hybrid tea is 'Peace', a large-flowered yellow rose with petals edged in pink. The rose was developed by the famous French nursery Meilland in the late 1930s. Cuttings of the plant were shipped from France to safety before the country was occupied. 'Peace' received the American Rose Society Award in 1946. The most popular hybrid tea rose is 'Veteran's Honor'. Hybrid teas are distinguished by stiff upright stems that support their large blooms.

**Floribundas** are usually smaller plants with smaller blooms that tend to flower in clusters. Floribundas tolerate more neglect than any kind of rose except shrub roses. For color throughout the summer, floribundas may be used in flower borders and mass plantings and as informal hedges. Examples include 'Julia Child' and 'French Lace'. Floribundas are repeat bloomers, and many types are notably fragrant.

**Grandifloras** resemble hybrid teas in their hardiness and type of bloom. The grandifloras have a larger bush but more abundant, somewhat smaller blooms than the hybrid teas. Examples are 'Queen Elizabeth' and 'Gold Medal'.

**Polyantha** flowers are borne in large clusters, and the individual flowers are smaller than grandifloras. Polyanthas are closely related to climbing roses. They are excellent for borders with perennials or for mass plantings.

**Miniature** roses are smaller in bush, foliage, and bloom size, ranging from 10 to 24 inches in height. They are well-suited for containers, typically own-root, and are extremely hardy. Examples are 'Joy', 'Fairhope', and 'Irresistible'.

**Miniflora** roses are larger in plant and bloom size than miniatures but smaller than hybrid tea or floribunda roses. Examples are 'Tiffany Lynn', 'Whirlaway', and 'Autumn Splendor'.

**Earth Kind** is a special label to distinguish roses that grow in a landscape with minimal care. These roses require no special spraying programs and minimal fertilizer and water. They perform well in varying soil types and have superior heat and drought tolerance. Examples are 'Carefree Beauty', 'Caldwell Pink', and 'Cecile Brunner'.

## Popular Rose Forms (Old Garden and Modern)

**Climber** roses are usually trained on trellises, posts, or some other type of support and may require heavy annual pruning to keep them manageable. Under ideal growing conditions, the flowers are rather large and may be useful for cutting. Most varieties bloom best when the canes are trained horizontally.

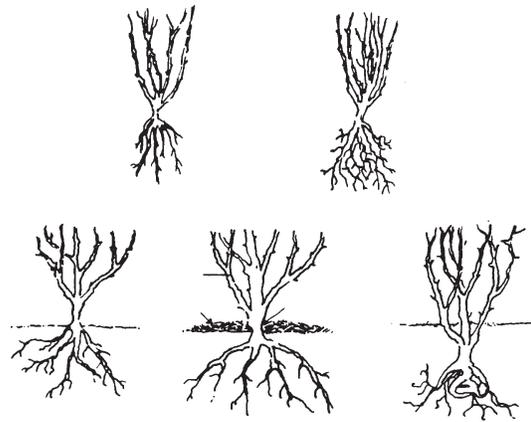
**Shrub rose** (old garden and modern) is a catch-all group for roses that do not fit into a specific class and is the most diverse of all classes. Shrub roses typically have a sprawling habit and are popular in landscape settings. The Knockout rose is widely planted because it does not require deadheading to retain a neat appearance. Another popular modern shrub rose is the English roses series from breeder David Austin. English roses are bred to look like heirloom roses but with modern disease resistance. Most shrub roses are pruned in early spring with an overall trim.

## Buying Rose Plants

Rose plants should be purchased from reputable sources, whether through a local garden center or online. Get the best quality plants you can find—cheap, inferior rose plants will not be worth the trouble or expense of planting and care.

Roses are sold in many forms, each with its own advantages and drawbacks. Many modern roses are sold in local garden centers in plastic bags in bare-root form with canes pruned quite short. Buy plants that have green growth and no signs of disease, and avoid waxed canes as they are not suitable for growth in Alabama heat.

Rose plants are also available locally in containers ranging from a quart to several gallons. Bare-root plants or small potted sizes called bands are also available online or from catalogs. Plants should always be free of signs of disease. Plants shipped from out of state should be accompanied by agricultural inspection paperwork indicating that the product was found to be disease-free before shipment.



Spread roots over a mound of soil to assure proper drainage for plants. Apply water when filling soil around mound.

## Planting Bare-Root Roses

Before planting, remove the wrappings and place the roots in a bucket of warm water, where they may remain for up to 24 hours before planting. This process helps them begin taking up water. Bushes to be planted should not be left out in the open overnight when freezing weather is expected. The combination of freezing temperatures and drying wind is especially lethal to roses. If planting must be delayed for a few days, place them in a cool, dark area or heel them in by making a trench and covering the roots with organic material. Before planting, prune off any damaged stems or roots of bare-root roses. Hybrid teas, floribundas, grandifloras, and climbers should have the tops pruned back to 12 to 15 inches.

Spread the roots over a mound of soil to ensure proper drainage. Apply water when filling soil around the mound.



When ready to plant, mix two parts soil with one part organic material such as leaf or manure compost, peat moss, or composted pine bark. Mix fertilizer and lime into the bed according to soil test recommendations. Avoid poorly drained soils, since roses will not survive wet feet conditions. Eliminate hardpans by deep tilling or spading. Prepare the bed at least 6 inches deeper than the depth at which you plan to plant the roses. To prevent the spread of disease through poor air movement and impaired sunlight, plant roses at least 3 feet apart.

Set plants in the hole on top of a mound made of the soil mix so that the first root closest to the main stem is just below ground level after the soil settles. If you are not sure about the ground level, lay a stick across the hole to determine ground level. Place soil around the roots, firm the soil by hand, and water thoroughly.

## Planting Potted Roses

Remove the plastic or paper-mache container, being sure to keep the root ball intact. Dig a hole twice the diameter of the root ball and 6 inches deeper than the depth at which you plan to plant the roses. Place soil in the hole around the root ball. Water thoroughly immediately to firm the soil around the roots. Do not tamp the soil after watering, but ensure that all organic material and soil are thoroughly soaked and no air pockets remain.

## Mulching

Mulches aid in controlling weeds, conserving moisture, and adding fertility. Some effective mulching materials are pine straw, ground corncobs, pine bark, and well-rotted compost. Apply mulches to a depth of 3 inches soon after planting but avoiding the immediate vicinity of the plant base. Reapply organic mulches annually, and remove mulch from prior seasons if there is evidence of disease or pests.

## Watering

Roses need large amounts of water. Occasional watering may be necessary even when rainfall is plentiful. Water early in the morning, and avoid wetting the foliage as this will promote disease. Soak the soil thoroughly to a depth of 8 to 10 inches, using a soaker hose or directing a small, slow-moving stream of water around the bases of the plants. In clay soil, this can usually be accomplished with 1 inch of water applied weekly.

## Fertilizing

Test your soil before applying fertilizer. Your local Extension agent can provide soil testing information and advise on adjusting the pH or correcting any nutritional disorders. The elements most often lacking in soils of existing rose beds are nitrogen and potassium. Avoid excessive phosphorous because it will burn the feeder roots. The amount of fertilizer to use should be based on soil test results. Many rose types are heavy feeders during their blooming season.



For most rose buds, cuts should be made below the third true leaf. For occasional longer stems, stems may be cut above the first true leaf above the break. First year plants should be cut higher (at or near the first true leaf) to allow more leaves to remain on the plant and produce food.

## Pruning Modern Roses

Pruning modern roses, especially hybrid tea roses, improves the size, quality, and color of blooms. As soon as the danger of frost is over, get ready to prune. Select three to five vigorous, disease-free canes to be left to produce flowers. The amount of pruning varies with the variety of rose; however, the first pruning should remove dead, damaged, or weak growth.

Pruning can also regulate the number of flowers produced. Leave longer canes if more flowers are desired. If large, show-type blooms are desired, cut back to a few canes and head the remaining ones back to 12 to 14 inches above the ground. Prune bush roses (grandifloras, hybrid teas, floribundas) in early spring when buds begin to swell, after the last frost. Mid-February is a good rule of thumb, but timing will vary depending on your location in the state.



## Pruning Hybrid Teas, Miniatures, and Minifloras

Remove canes killed by cold, diseases, and insects first. Next, remove all suckers growing below the graft union. Cut all the remaining canes back to 15 to 18 inches above ground or to a bud 1 inch below any damaged part of the cane. Be aware of any cold damage or disease cankers. Cold damage will appear as a browning of the stem and, most often, a brown pith or center of the cane. Make cuts  $\frac{1}{4}$  inch above a bud and at a 45-degree angle. On most varieties, cut to an outside bud to encourage growth away from the center of the bush. Open the centers of hybrid teas, floribundas, and grandifloras to allow more light into the plant.

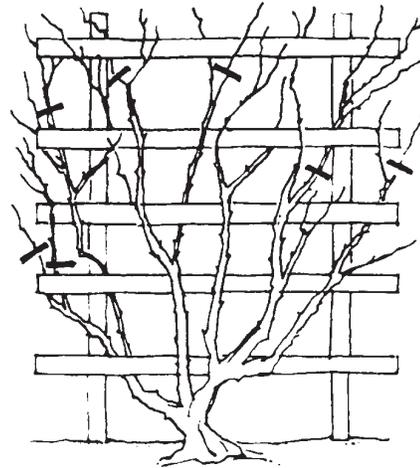
Varieties that tend to spread will grow more erect if the canes are cut back to an inside bud. Do not cut until plants are well established. Growth can also be controlled by rubbing off new and weak shoots not needed for blooms. Only two or three of the strongest buds per cane should remain.

## Pruning Floribundas, Grandifloras, Shrubs, and Old Garden Roses

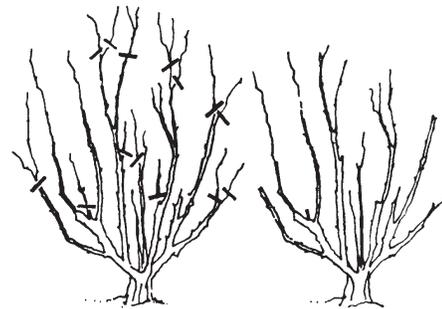
Do not prune these roses as heavily as hybrid teas. These roses often grow to a considerable height and produce more blooms. When pruning, cut the cane back an inch below any diseased or dead wood so that only healthy, green growth remains. Remove the entire branch if it is badly diseased or dead. Leave only three to five strong, healthy canes. Next, remove any canes having weak growth or those growing toward the center of the plant.

## Pruning Climbing Roses

For many modern cultivars, new canes that have developed should be left since these will produce flowers the next year. Some varieties of climbers will continue to bloom throughout the growing season. These varieties produce new canes from old canes rather than from the base of the plant. Not all climbing roses are the same—it is important that the care and maintenance be based on the cultivar type, not just its growth habit. Old garden rose or modern? Single blooming or reblooming? These are the factors that determine pruning requirements.



After each flowering, prune climbing roses back as shown. Prune weak, diseased, or dead stems back anytime they are observed. Do not allow climbers to become overgrown, with thick, dense growth of branches.



Floribundas and grandifloras should be opened up so as to allow more light in to the plant.

## Controlling Pests

Pest control is a requirement for all rose gardeners. Insects, diseases, and nematodes can quickly make a beautiful plant unsightly and unhealthy. The following sections give general information about common rose pest problems. For more specific treatment recommendations, contact your local Extension agent.

## Insects

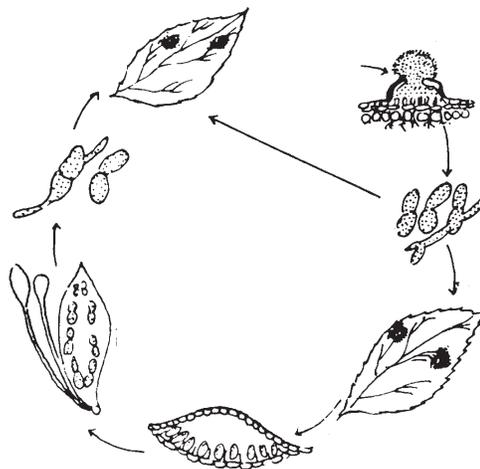
**Aphids** can appear in early spring on the first buds, stems, and leaves. Occasionally they may become a pest during the summer but usually appear in heavier numbers again in the fall. Smaller or deformed blooms may result from aphids sucking the plant juices and stunting the plants. Heavy infestations of aphids result in the secretion of honeydew from their bodies. Honeydew makes leaves sticky and shiny and provides a starting place for sooty mold. Begin treatment when aphids build up on plants early in the spring. Inspect plants regularly. Treat in the fall to reduce the number of aphids that may produce overwintering eggs.

**Caterpillars** including corn earworms, armyworms, rose slugs, and other caterpillars may feed on blossoms, buds, and leaves. Rose slugs, also called rose sawfly larva, are a particularly virulent pest in early spring. Rather than using insecticides as a preventive, it is best to use insecticides only when larvae and caterpillars are seen on the plant. Removing caterpillars by hand is an alternative to using chemicals.

**Spider mites** attack the undersides of leaves. Infested leaves develop a yellow flecking or stippling, turn brown, curl, and drop off. In severe infestations, webbing is present. Spider mites are extremely small and can be examined closely only by using a microscope or hand lens.

Some spider mites are green with two spots; others are red. Spider mites increase in number as the temperature increases, and they often reach the most damaging levels during midsummer. To control spider mites, keep the rose bed and surrounding areas free of weeds. Direct insecticidal soap to the undersides of leaves in the cooler morning or evening hours. Hot, dry weather is ideal for an infestation of spider mites.

**Thrips** are tiny yellow or straw-colored insects that injure rose petals. Thrips rasp slits in petals and cause blooms to become brown-flecked in appearance. Blooms damaged by thrips often fail to open properly. Shake an infested flower over a sheet of paper or pull back petals of blooms to see these tiny insects. Be sure to destroy all old blossoms. Thrips can be managed by introducing beneficial insects such as lacewings. Pesticides may be necessary as a last step in managing thrips.



Life Cycle Of Black Spot Disease.

## Diseases

Because of Alabama's long growing season, high annual rainfall, high temperatures, heavy dews, and relatively mild winters, roses are subject to prolonged attack by several plant diseases. Control measures are available for some but not all of these, making careful choice of cultivars even more important. The American Rose Society lists cultivar guidelines on its website as does The Heritage Rose Foundation.

**Black spot** (*Diplocarpon rosae*) is one of the more damaging diseases in Alabama. Symptoms consist of circular black spots with jagged margins appearing on the leaves. Frequently, the spots are surrounded by a yellow halo. Infected leaves turn yellow and fall prematurely. When the attack is severe and allowed to continue, repeated defoliation will occur, resulting in a weakened plant. The fungal spores are spread primarily by splashing rain or water. Black spot thrives during hot, humid summers.

After choosing disease-resistant cultivars, sanitation is the most important step in controlling both black spot and powdery mildew (discussed below). Remove and dispose of leaves (either attached or on the ground) that appear to be infected. Continue this practice throughout the flowering season. Because the fungus overwinters on diseased leaves and canes, this practice should be intensified near the end of the growing season. Sometimes it is necessary to prune canes severely in the spring before new growth. In addition, remove and replace mulch beneath diseased plants. Regularly applying both systemic and contact fungicide will also help control the disease. When spring pruning is completed, apply a fungicide to the rose canes and surrounding ground area.

**Crown gall** (*Agrobacterium tumefaciens*) causes a gradual decline of the rose bush. The bacterium that causes this disease is usually introduced into an area through contaminated nursery stock. Once present, it can survive for several years, even in the absence of a host plant. The bacterium enters the plant through wounds made during planting, cultivating, or grafting, as well as those made from chewing insects and rodents. Galls are spherical, woody growths with rough surfaces and may exceed 6 inches in diameter. Crown gall reduces plant vitality, causes stunting, and inhibits blossom development. Aboveground symptoms are like those caused by nematodes.

There are no effective chemical controls for existing crown gall infections. Diseased plants should be removed and destroyed. Infested areas may be replanted after fumigation or solarization. Transplants should be free of galls and handled carefully to avoid root injury. Use root dips when planting susceptible plants.

**Powdery mildew** (*Sphaerotheca pannose*) is a fungal disease that occurs in Alabama during the spring and fall. It is less of a problem during the midsummer months when black spot is at its worst. Frequent rains and temperatures above 80 degrees inhibit powdery mildew. The presence of the powdery mildew fungus is confirmed by the white powdery masses of spores on young leaves, shoots, and buds. Symptoms consist of distorted foliage and stunted shoots. Powdery mildew spores spread easily by wind. Under conditions of relatively high humidity, these spores germinate, and infection occurs.



Sanitation is the first step in controlling both black spot and powdery mildew. Remove and dispose of leaves (either attached or on the ground) that appear to be infected. This practice should be continued throughout the flowering season. Because the fungus overwinters on diseased leaves and canes, this practice should be intensified near the end of the growing season. Dormant spray treatments using lime-sulfur can be effective for control. Sometimes it is necessary to prune canes severely in the spring prior to new growth. In addition, remove and replace mulch beneath diseased plants. Preventative treatments of chlorothalonil, sulfur, or copper-based fungicides also provide good control of black spot and powdery mildew.

**Rose rosette disease** (RRD) is characterized by red witches'-broom-like growths, hyper-thorny canes, and blighted cane-end growth. RRD is caused by the *Rose rosette virus*, of the genus *Emaravirus*. The disease is transmitted by the eriophyid mite, *Phyllocoptes fructiphilus*. The virus is not soilborne, but if infected root pieces remain in the soil after infected plants are removed, they could potentially infect new plants.

Eriophyid mites are microscopic mites, so small that they can be transported by wind. RRD is transmitted by the mite feeding on infected roses and then traveling via wind, clothing, or landscape tools to a healthy plant, where the mites feed and introduce the virus. The disease moves easily to any new rose plant it can find. For that reason, it is important for gardeners to inspect mass landscape plantings particularly carefully for signs of disease.

The mites hide in buds, on open flowers and sepals, or at the base of shoots and leaf axils during the winter. The virus appears on emerging foliage in the spring as red growth soon followed by the disfiguring appearances of witches' brooms, flattened canes, and blighted leaves. Once diagnosed, the entire RRD-infected plant should be destroyed, including the roots. To avoid the spread of the disease, bag and dispose of all clippings, and if possible, shroud or bag the entire plant at the base of the cane before removing it. It is not recommended to replant roses in the same area.

Keep in mind that new cane growth can have a reddish appearance resembling RRD. Similarly, herbicide drift can cause cane blight or disfiguration; therefore, gardeners should have a little patience before diagnosing RRD because of these similarities but also should not wait until full-blown infestation before removing afflicted bushes. Red growth that does not quickly turn to green or distinctive witches' brooms growths are almost certain indicators of the disease.

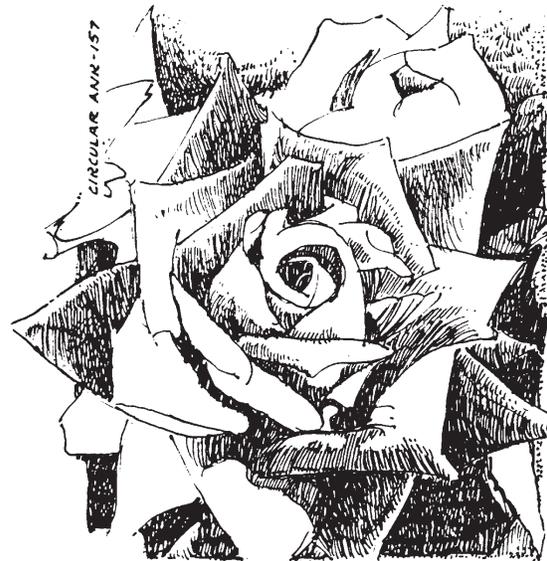
**Stem canker and cane blight (*Botrytis blight*)** may be caused by one of several fungi. These fungi, however, usually attack weakened or damaged plants. Infection may indicate the presence of a more serious problem such as crown gall or low soil fertility. Symptoms may consist of dark brown to black, sunken lesions on canes. Terminal stems die when canes are completely girdled.

Follow sanitation practices suggested for black spot and powdery mildew. Fungicides that are effective in controlling black spot will also control most stem and cane diseases. A regular spray program throughout the growing season is advisable.



## Nematodes

Nematodes are microscopic, wormlike animals. Several species are parasitic to the roots of roses. Symptoms of nematode injury vary with plant type and age, kind of nematode, and degree of infestation. They include lack of vigor, premature leaf fall, yellow foliage, stunting, and twig and branch dieback. Roots infected by the root-knot nematode (*Meloidogyne sp.*) have obvious galls (usually less than ¼ inch in diameter). Other nematodes that may damage roses include lesion, spiral, and stunt nematodes. Roots attacked by these nematodes are usually rough, discolored, decayed, and without galls. Nematode damage is often mistaken for lack of fertilizer or poor soil conditions. Aboveground symptoms are similar to those caused by crown gall. When purchasing roses, inspect roots for nematode damage. Avoid moving soil from known nematode-infested areas in your yard to healthy areas. If you live in an area with sandy soils or an area otherwise susceptible to nematode infestation, consider purchasing plants grafted onto *Fortuniana* rootstock, which is resistant to nematodes.



Revised by **Lucy Edwards**, *Regional Extension Agent*, Home Grounds, Gardens, and Home Pests, **Bethany O'Rear**, *Regional Extension Agent*, Home Grounds, Gardens, and Home Pests, **Katharine Musso**, TES Administrative Support, and **Rita Moore**, Extension Master Gardener. Originally written by **J. Raymond Kessler**, Professor Emeritus, and **Dave Williams**, Professor Emeritus. Other former authors and revisers include **Bridget Behe**, former *Extension Horticulturist*, **Patricia Cobb**, former *Extension Entomologist*, **Austin Hagan**, Professor Emeritus, **Kim Sheffer**, former *Horticulturist*; **Ron Shumack**, former *Extension Horticulturist*, and **George Stritikus**, former *Extension Agent*.

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New July 2021, ANR-0157

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