



Rose Planting & Care

Site Preparation

Single rows of roses require beds at least 3 feet wide; double rows need 4 to 5 feet. For convenience, it is preferable to not have more than two rows. **Well prepared beds pay big returns in rose enjoyment!**

Dig a hole about 18 inches deep by 2 feet in diameter for each bush. Incorporate a generous amount of organic material (peat moss or garden compost) with the native soil and 1 cup of dolomite lime. Mix thoroughly. If the soil is not well drained, consider growing roses in raised beds--roses need plenty of water, but the soil has to drain well. They don't like wet feet.

Timing and Planting

Plant bare root roses from November through March when the soil is not frozen. Potted roses may be planted at almost any time.

Select good quality rose bushes which have not dried out in storage or shipment. Store bare root roses in a cool place if they are not to be planted immediately. Keep them moist. Soak roots briefly before planting. Potted roses may be held indefinitely before planting, provided usual watering and feeding continue. Bare root roses should be pruned back slightly before planting, cutting back to strong buds. Potted roses need to be pruned when planted. Dig a hole at least 18 inches deep in a prepared bed, mound up the soil in the middle, and arrange the roots over this mound so that the bud union (where the rose is grafted to the root) is level with the bed. Cover the roots with some soil, firm the soil around the roots and water thoroughly. When the soil has settled, finish filling the hole and mound soil over the canes to conserve moisture. (Note: **This is important** when planting in the early spring. Don't let the rose canes dry out before the roots get a chance to grow and supply moisture to the canes!) When new growth has started, remove the excess soil over the bud union so that it is exposed near the level of the bed.

Location and Watering

Roses grow best in a sunny location; six hours daily is considered a minimum for lots of blooms. Try to select a location where there will be sun for at least half the day, not too near large trees or hedges. Morning sun with afternoon shade is preferable. Avoid planting in excessively sandy or clayey soils. Roses do best in relatively fine textured, but well drained, soils.

Roses require at least one inch of water per week during the growing months. Slow soaking is best. Avoid overhead watering in the evening as it contributes to mildew and other diseases.

Fertilization

Hybrid Teas, Grandifloras, Floribundas, and Climbers

Apply 1/2 cup of 10-20-20 per bush, three times per year. First application in late March or early April; second application in May; third application in late June or early July.

Miniatures

First application in early April using 1 tablespoon of 10-20-20 scattered around each plant and

scratched in lightly. For the second application in early June use a soluble 20-20-20 fertilizer such as Rapid-Gro, mixed according to the directions on the package; use 1 cup of this solution around the base of each plant. The third application early in July is the same as the second.

Old Garden Roses

Most Old Garden Roses don't need much fertilizer. Once in the early spring with a general all purpose 20-20-20 will hold them for the year.

Pruning

Why You Should Prune

The main purposes of pruning are:

1. To improve the appearance of the bush,
2. To stimulate growth,
3. Control over-wintering bugs and diseases, and
4. To control the quality and quantity of blooms.

Tall, thin canes produce more but smaller blooms. Fewer, thicker canes result in fewer but larger and better quality blooms. Light pruning is not recommended for most hybrid teas because tall, spindly bushes result. Moderate pruning means removal of 1/2 - 2/3 of the existing bush, while hard pruning leaves only 3-4 canes 8 to 12 inches long.

Bushes are always improved and never killed by pruning. Unpruned roses bloom on small cane tips, go to seed, and become dormant. Poor or "incorrect" pruning is better than no pruning at all. The general rule is to prune strong-growing bushes moderately and weak growers severely.

When to Prune

Fall pruning is normally done around Thanksgiving. Bushes should be cut back to about half their original height and leaves should be removed. This will prevent winter winds from whipping the bushes and loosening the root systems. Removing the leaves is done for hygienic reasons because insect eggs and fungal spores overwinter on leaves. It is a good practice to mound soil or mulch 6 to 8 inches deep around the plant to protect it from winter damage.

Spring pruning is usually done during the second week of March. First remove the mounding material to expose the lower plant and canes. Then follow directions below on "How to prune."

How to Prune

1. Take out all dead wood.
2. Take out all crossed or twiggy growth.
3. Keep the center open for good air circulation.
4. Cut all canes to white or pale green pith. Any brown coloration in the pith indicates a dead or dying cane, in which case the cane should be pruned to a lower bud eye, clear to the crown if necessary, in order to find live pith.

5. Cut approximately 1/4 to 1/2 inch above a bud, on a downward slant, away from the bud. Cut to an outside bud to make the plants grow wider. Cut to an inside bud for more upright growth on a plant that has a tendency to sprawl.
6. Use **sharp** tools for cutting. Use a keyhole saw or lopper to cut thick, woody, old canes.
7. Cut canes at uneven heights for a longer blooming period and better appearance.
8. Select from 3 to 6 strong basal shoots from previous year's growth. Remove all other growth. Then prune those canes left.

Accomplish as many chores as possible just after pruning before the bushes have sprouted. Remove mulch from the bud union, weed, and clean up the rose garden. This prevents breaking off the new shoots when doing these things later.

Pest Control

Unwelcome Guests

Problem/Symptom	Cause	Solution
Leaves curl, rosebuds and foliage wither or become distorted in shape. A clear, sticky substance that attracts ants appears on foliage.	Aphids, semitransparent insects 1/8 inch long that cluster on new growth and flower buds. They suck the juice from the plant and secrete the sticky substance. Aphids can carry and spread diseases.	Aphids may be knocked off plants with a stream of water. In severe infestations, spray with an insecticide or an insecticidal soap.
Small, rounded holes appear in leaves. Eventually, the entire leaf surface between the veins disappears.	Rose slugs, the larvae of sawfly wasps. The slug is light green with a dark brown head and up to 1/2 inch long. Some species have shiny bodies; others are covered with hair. Rose slugs generally feed on the undersides of leaves; they do not eat buds and flowers.	Spray with an insecticide and make sure the insecticide covers the undersides of leaves.
Buds do not open, or flowers are deformed. Petals have brownish yellow streaks and small dark spots or bumps. White and pastel roses are particularly susceptible.	Thrips, tiny orange insects with elongated bodies. Thrips feed at the bases of rosebuds and on the petals of open flowers. They seem to be attracted to light-colored blossoms.	To discourage thrips from attacking, spray plants with a systemic insecticide just before the buds open. If signs of thrip damage appear, remove and destroy infected flowers and buds. Spray infected plants with an insecticide. If the infestation is severe, repeat applications may be necessary.

<p>Roses fail to blossom or existing buds suddenly turn black and die. The foliage and the stem surrounding affected buds may also blacken and die.</p>	<p>Rose midge, a fly larva that is white and 1/12 inch long. The larvae feed in clusters at the bases of rosebuds.</p>	<p>Prune off and destroy all infested plant parts. Spray plants with an insecticide and apply a systemic insecticide to the ground around the plants where the larvae pupate.</p>
<p>Holes appear in flowers and then in leaves. Light-colored flowers are especially susceptible.</p>	<p>Japanese beetles, shiny copper-and-green, hard-shelled insects up to 1/2 inch long. Beetles move from flower to flower, consuming the petals before they eat the leaves. They seem to be attracted to light-colored blooms.</p>	<p>Pick beetles off plants by hand and destroy them. Spray the plants with an insecticide. In late summer and in spring, treat the ground around affected roses with a grub-controlling insecticide or with milky spore. In the fall, rake up fallen leaves; adult beetles spend the winter in plant debris.</p>
<p>Leaves become dry and have a full bronze sheen. Tiny specks may be visible on the undersides of the leaves. Eventually, thin webbing appears on the foliage.</p>	<p>Spider mites, nearly microscopic pests that may be red, black, yellow or green. To confirm their presence, shake a leaf over a piece of white paper; the mites will be visible moving against the white background. Mites proliferate in hot, dry weather.</p>	<p>Knock adults off plants with a strong stream of water. Spray with a miticide three times, three days apart. Use different miticides; mites may build up resistance to a single miticide. Mites produce new generations in a few days, so repeat treatments will be necessary.</p>
<p>Small circles or ovals appear in leaf margins.</p>	<p>Leafcutter bees, which are shiny black, blue or purple bees. The bees do not eat the foliage; they use leaf material to build their nests.</p>	<p>Prune out canes that have damaged foliage. Since leafcutter bees are pollinators of several crops, the use of chemicals to destroy the bees is not recommended.</p>
<p>Round or oval masses appear on stems and canes. Foliage wilts, turns yellow and drops from the plant. Growth is stunted and flowers are not produced.</p>	<p>Rose scales, 1/8-inch, white, gray or brown insects with crusty shells. Scales usually appear in clusters.</p>	<p>Prune out and destroy heavily infested canes. Spray plants with an insecticide. To prevent scale infestation, spray plants with horticultural oil in early spring.</p>
<p>Holes appear in unopened rosebuds. Leaves and stems may also have holes or may be chewed off.</p>	<p>Caterpillars, the larvae of moths and butterflies. Most are yellow or green and up to 1 inch long. Some, such as budworms, attack only the flowers; others eat the leaves and stems.</p>	<p>Spray with <i>Bacillus thuringiensis</i>, called Bt, a bacterium fatal to caterpillars but harmless to plants and other animals. If caterpillars return to your garden every spring, Bt can be sprayed in anticipation of the problem.</p>

Upper surfaces of leaves are covered with small yellow specks. Leaves may curl.	Leafhoppers, which are triangular, white or light yellow insects 1/8 to 5/8 inch long. They feed on the undersides of leaves and suck the sap from the foliage. Leafhoppers can carry and spread diseases.	Spray with an insecticide or insecticidal soap. In the fall, rake up leaves and remove weeds that can harbor leafhopper eggs through the winter.
Growing tips, foliage and canes wilt. Swollen areas up to 1 inch long appear on canes.	Borers, moth larvae that are white or yellow worms up to 1 inch long. Borers enter the canes through wounds and through pruned stem tips.	Cut off the affected area. Make the cut below the swelling on the cane to be sure you remove the borer. To prevent borers from entering canes, apply shellac or white glue to the exposed tips after pruning.
Overnight roses are chewed and trampled. Buds and blooms are damaged the most.	Deer	See " Deer Control Methods " Word Doc for help.

Other Problems

Problem/Symptom	Cause	Solution
Round growths about 2 inches in diameter appear at the base of the plant. The growths are light green when young and turn brown and woody as they age. Plant growth is stunted, foliage is abnormally small and few buds are produced.	Crown gall, a disease caused by bacteria that live in the soil. The bacteria enter a plant through the roots or through wounds at the root area. The bacteria cause abnormal cell growth, which produces the galls.	There are no chemical controls for crown gall. Small galls may be pruned out with a sharp knife or pruning shears. Disinfect tools with alcohol or household bleach after each cut. In severe cases, remove the plant and the soil surrounding the roots to prevent the bacteria from spreading.
Leaves or mottled or streaked with yellow or the develop a pattern of yellow netting. Plant growth slows.	Mosaic, a virus disease that is often transmitted by aphids and other insects. Although the virus does not affect flowers, it detracts from the overall appearance of the plant.	There are no chemical controls or cures. In mild cases, symptoms often disappear by themselves. In severe cases, infected plants should be removed to prevent the virus from spreading.