

Roses

Michigan State University Extension
Oakland County



A rose by any other name would smell just as sweet. Or would it? There is something special about roses. A dozen roses for your love seems somehow more special than a dozen of some other sweet smelling flower. Roses and rose gardens have been loved throughout history, their beauty praised. But that beauty may be difficult to achieve in your own rose garden. Roses are one of the most difficult ornamentals to grow successfully. Some basic general guidelines are set down here, along with descriptions of some of the most common insect and disease problems to which roses fall heir.

Planting

To begin with, don't put them just anywhere you need a bush. Roses are thorny and to be happy with them through the years, you will want them at least 5-6 feet away from walkways and drives. Rose bushes have been known to grab the clothing of people walking by, hardly behavior you will want to encourage. Give them plenty of room in the rose garden as well. Nine square feet per plant is recommended to insure adequate areas for spraying, covering, and cutting them. If the newly planted ones appear sparse with such spacing, remember you should plan for their mature size.

Roses grow best where they have full sunshine all day. They will grow satisfactorily if they have at least 6 hours of sun a day. If you must

plant roses where they are shaded part of the day and have a choice as to morning sun or afternoon sun, plant them where they have morning sun. If plants are shaded in the morning, their leaves remain wet with dew a few hours longer than if they were in the sun. Moisture on the leaves is favorable for the development of several leaf diseases.

Pruning

Prune roses annually to improve their appearance, to remove dead wood and to control the quantity and quality of flowers produced by the plants. If roses are not pruned, they soon grow into a bramble patch and the flowers are small and poor quality. Sometimes undesired shoots come from the rootstock (suckers). They should be removed as soon as they appear, or they are likely to dominate the plant. Rose pruning is not difficult. Use sharp tools. A fine-toothed saw is useful for cutting dead canes. All other pruning can be performed with pruning shears. Do not leave bare stubs when pruning. Cut just above a bud or the area between the bud and the end will either die leaving an unsightly stub. Make all cuts to a cane, to the point on the crown from which the pruned member originated, or to a strong outward-facing bud. Prune in early spring, just before growth starts. First remove the dead wood, be careful to cut an inch or so below the dark-colored areas. If no live buds are left, remove the entire branch

or cane. Next, cut out all weak growth and any canes or branches growing toward the center of the bush. If two branches cross, remove the weaker. Finally, shape the strong canes to a uniform height. Strong plants can be pruned to a height of 24 to 30 inches.

Winterizing

A typical Michigan winter, with its low temperatures and sudden temperature changes, can spell death for your roses. You can protect them against winter damage by following these suggestions:

- After the first killing frost and before the ground freezes, pile soil at least 6 inches high all around the base of each rose bush. To avoid injuring the roots while digging the soil, bring soil in from another part of the garden.
- Draw the rose canes together and tie them or place a specially made rose cylinder over each bush (or make your own from chicken wire). Cut the canes off even with the top of the cylinder and fill in around them with dry vermiculite, perlite, ground corn cobs, soil or other similar material.
- Cover the mounds or cylinders with evergreen branches or straw after the ground freezes. Leave this covering in place in the spring until the danger of frost is past.

Cutting

Sharp tools and a little know-how are essential for cutting roses. Use a sharp knife or shears to snip flowers. Breaking or twisting the flowers off the plant injures the remaining wood and may result in disease or insect infestation.

Cut rose flowers from established plant with stems only as long as necessary. Removing a lot of foliage robs the plant of its food-making apparatus and cuts down growth and flower yield. Leave at least 2 leaves between the cut and the main stem.

The best time to cut roses is in the early morning or late afternoon. Cut them just before the petals start to unfold. They will continue to open normally and will remain in good condition longer than roses cut after they are fully open.

Cut the stems at a slant and place the flower in warm water (110°F). To prevent growth of bacteria and fungi, use a preservative in the water.

Place container way from hot or cold drafts and out of the direct sunlight. Put in refrigerator at night to extend vase life.

Plant Protection - Insect Pests

Controlling insects on roses is a continuing chore that begins in the early spring and extends into fall. Foliage feeders and sucking insects can be controlled with an all-purpose rose spray. Such a spray should contain a contact insecticide.

Consider using an emulsified concentrate rather than a rose dust. A liquid covers better and is more effective. It also tends to stay on the plant longer than a dust. Dusts are less concentrated and they can be unsightly.

Foliage Feeders

The first pest to attack roses in the spring is the **leaf roller**. Three or four kinds of caterpillars (moth larvae) feed on rose foliage. They roll leaves around themselves and feed on them.

The **rose slug** is next on the scene. A sawfly larvae, a type of wasp, is about ¼ inch long, shiny green with a yellow head and slug-shaped. It feeds by stripping away leaf surfaces between the veins. In large numbers, rose slugs can skeletonize the foliage of an entire plant. Though the plant usually survives this injury, flower production and appearance suffer.

The **rose chafer** is an elongated gray or fawn-colored beetle that resembles the familiar June bug. About ½ inch long, it has long spiny legs.

It skeletonizes leaves, and may destroy whole flowers by feeding on the petals.

The **Japanese beetle** is easy to recognize. Its body is metallic green with white stripes down the sides, and its hard wing covers are a coppery brown. The Japanese beetle also skeletonizes leaves and feeds on flowers.

Sucking Insects

At least 4 species of **aphids** attack roses. Both winged and wingless forms suck plant juices from stems and buds, but they will also go into flowers and onto foliage when populations build up. As a result of their feeding, flowers may be deformed.

Bronzing of leaves and the presence of fine webbing are signs of **spider mites** at work. These nearly microscopic pests feed on the juices inside the leaves. As they feed, they extract the green coloring matter, chlorophyll, from the foliage. If you think you have a mite problem, shake a few leaves over a piece of white paper. This will shake a few mites loose and you'll be able to see them running around on the paper. Mites usually lurk on the undersides of leaves, so make sure any chemical control is applied to the undersides as well as the tops of leaves.

Thrips damage rose plants in 2 ways; they rasp away at the undersurface of the leaves, and they suck plant juices. Injured leaves become streaked with silver. The feeding of these tiny creatures, no more than 1/16 inch long, can also cause bud blasting and distortion of buds and petals.

The **raspberry cane borer** will also attack roses. Signs of borer damage include drooping petals and stem tip and wilting leaves. By the time damage begins to show, the borer is well inside the cane where you can't touch it. The standard treatment is to try to prune the critter out. Applying a systemic insecticide will kill it, but only after the damage is done.

Rose Leafhoppers

Rose **leafhoppers** are tiny, greenish-yellow

insects that suck the liquid out of leaf cells. Like mites, they leave the foliage spotted with white. The adult leafhoppers will jump off a leaf when disturbed. The immature, wingless forms will try to move rapidly away.

Disease Problems

Do you look at your roses and see spots? It could be your eyes, but it's more likely a rose disease. Spots are the first symptom of several rose diseases:

Black Spot

The most conspicuous disease of roses is black spot. Black spot usually attacks the lower leaves of the plant first. Dark brown spots become larger and nearly black as the disease progresses and green leaves turn yellow. Eventually the leaves fall off.

Severe defoliation, time and again, weakens the plant and makes it susceptible to other problems. The size and number of blossoms will also be affected. The spores of the disease-causing fungus must have moisture available to germinate and penetrate the leaf. Therefore, black spot is more of a problem in a wet year than in a dry one, or in a part of the garden where the foliage is slow to dry after watering, rain or dewfall.

The fungus overwinters on fallen leaves so a fall cleanup is advised. This will probably not eliminate the disease. One spot on one leaf can supply enough spores to infect the whole neighborhood.

A preventive spray program beginning around mid-June is recommended. A number of chemicals can be used against black spot but Benomyl is the most effective. Captan, maneb, mancozeb, Polyram and zineb will also give control. Most are available in both spray and dust form. Both sprays and dusts will do a good job if they're applied properly.

Apply sprays to both the upper and lower leaf surfaces until the material drips off. With dusts, too, be sure to cover both sides of the

leaves thoroughly. Some chemicals will be effective for 2 to 3 weeks, depending on environmental conditions.

You can reduce black spot problems by planting disease resistant varieties. These varieties get the disease, but are not devastated by it. As yet there are no immune varieties.

Powdery Mildew

White powdery growths on young foliage and buds indicate the powdery mildew fungus is at work on your roses. Buds may be deformed or destroyed and leaves misshapen, and dwarfed. Because it directly affects flower quality, powdery mildew is the number one disease problem of commercial rose growers in Michigan.

Unlike black spot, powdery mildew does not need free water to infect a plant. All it needs to function is humidity in the air. Therefore, good air circulation around plants is important in limiting the disease. Roses planted in a wet area with little air movement are especially likely to develop powdery mildew.

To control this disease, Benomyl, Karathane, Actidione PM, sulphur dust or folpet are recommended. The best defense against powdery mildew, however, is resistant varieties planted in carefully chosen sites.

Consider using an emulsified concentrate rather than a rose dust. A liquid covers better and is more effective. It also tends to stay on the plant longer than a dust. Dusts are less concentrated and they can be unsightly.

Rose Mosaic

Rose Mosaic is the most common of the virus caused rose ailments. The leaves of an infected plant become variegated with light-colored lines, bands, rings and blotches.

Once a plant is infected with this virus, it is infected for life. There is no cure. That doesn't mean infected plants have to be destroyed right away, though. They may grow well for a

long time. You need to replace them only when they begin to deteriorate.

The virus may be transmitted from infected plants to healthy ones by way of pruning equipment. To prevent this, clean tools between plants with rubbing alcohol or a 10% chlorine bleach solution. If you use alcohol, dip the cutting edges in it and then flame the alcohol off with a match. When you replace virus infected plants, buy only certified virus free stock.

Crown Gall

Large, knobby growths on the roots or main stem of a rose plant are the symptoms of crown gall. On old plants, this bacterial disease may appear even on the rose canes. The base of the plant is the usual site, however. The bacteria cause the galls to develop and enter the plant through a wound or some natural opening in the tissues. A plant can usually live for years with galls on the roots. Galls on the main stem, however, will cause the plant to decline.

There is no cure for crown gall. Growths on branches or roots may be pruned out, but severely infected plants should be replaced. Be sure to examine new plants carefully before buying and planting them. Avoid any with unusual lumps on the canes, roots or stems.

** See the table at the end of this publication for help in diagnosing plant problems.*

Choosing

When it comes to selecting the correct rose for your landscape plants, your nurseryman's or seed catalog's description of characteristics and growth needs are your best guides. There are several basic kinds of roses, with many varieties in each type.

Tree Roses: Hybrid tea or floribunda varieties are grafted on top of a long stem or "standard." Tree roses generally need support and are susceptible to winter injury. They make

interesting accent plants. To avoid winter injury, wrap the top with burlap and protect stems with burlap and evergreen boughs.

Climbing: Roses: Climbing roses produce vigorous canes up to 20 feet long. They need a support structure to keep them upright and produce showers of clustered roses.

Hybrid Tea Roses: The most outstanding flower performance is found on grafted, hybrid varieties that come in a wide range of colors. Most are fragrant. These plants are semi-hardy and require winter protection. They are susceptible to aphids and black spot. The plants grow 2 to 5 feet tall. The blooms are borne on single-flower stems and make excellent cut flowers. This group has also been called a monthly rose because it does not bloom continually.

Grandiflora Roses: Grandiflora roses grow 3 to 5 feet tall and bear five to seven blooms in a candelabra-like arrangement on each long stem. They make excellent cut flowers and bloom more frequently than the hybrid teas. Grandifloras must be monitored for insects and disease, and they require winter protection.

Floribunda Roses: Floribunda roses refer to a shorter rose bush with large clusters of flowers. Floribundas are very hardy and require less care. The flowers may be single or double, and the shrub ranges from 1-1/2 to 2-1/2 feet tall. Included in this group are other classifications of roses. The Polyanthas are low-growing continuous blooming roses with flower clusters at the tips of the plant. Shrub roses are a miscellaneous group of wild rose cultivars that are vigorous, hardy, dense bushes, resistant to most common rose diseases and insects. Heritage roses are a classification of old roses developed in the 19th century.

Miniature Roses: Dainty little rose plants are replicas of their larger relatives. Flowers are small and plants range from 6 to 12 inches in height. Leaves and even thorns are perfect

miniatures. Plants are bushy and most are quite hardy. They are useful for low edging and in rock gardens. Many varieties are available from specialists in many colors and blends.

Own Root Roses: In recent years, roses grown on their own roots (not grafted onto rootstock) added another attribute to the list to be considered when buying a rose bush. Since These roses are not grafted, they are usually winter hardy.

Diagnosing Plant Problems

Problem	Causes
WHOLE PLANT	
When planted, fails to grow or grows very slowly.	Dead or damaged before planted. Roots dried out before planted. Freeze injury before planted. Canes dried out after planted. Poor soil drainage.
LEAVES	
Upper leaves distorted with powdery white deposit that cannot be wiped off.	Powdery mildew
Dark brown spots with yellow zones on lower to middle foliage, develops rapidly	Black spot
Yellow steaks, blotches, usually only on some leaves	Rose mosaic
Brownish leaf margins	Spray injury, lack of potassium

Light green upper leaves, with yellow lower leaves	Lack of nitrogen
Grayish or yellowish fine speckling of leaves (fine webs and leaf drop)	Red spider mites
STEMS	
Wilting and dying back of stem tips	Borers, June-July, insufficient water, excessive fertilizer
Brown or black blotches on stems	Stem canker
Greenish, soft bodied insects, usually at stem tip	Aphids
Wart-like growth at base of stem	Crown gall
Wild shoots from below ground line	Sucker growth from understock
Tip and upper stem with distorted foliage, tip may die, flowers open abnormally	Rose midge, June and September



Distributed by MSU Extension-Oakland County, 1200 N. Telegraph Road, Pontiac, MI 48341, 248/858-0881, www.msue.msu.edu/oakland, Charlene Molnar, Horticulture Advisor, May 2012.

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