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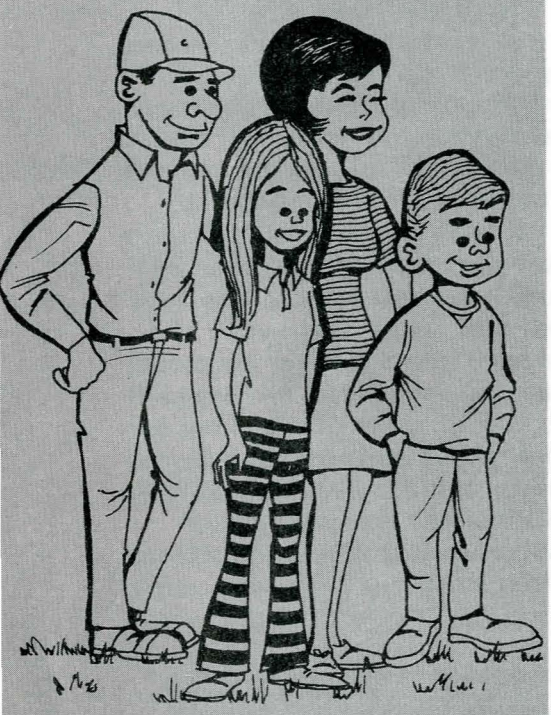
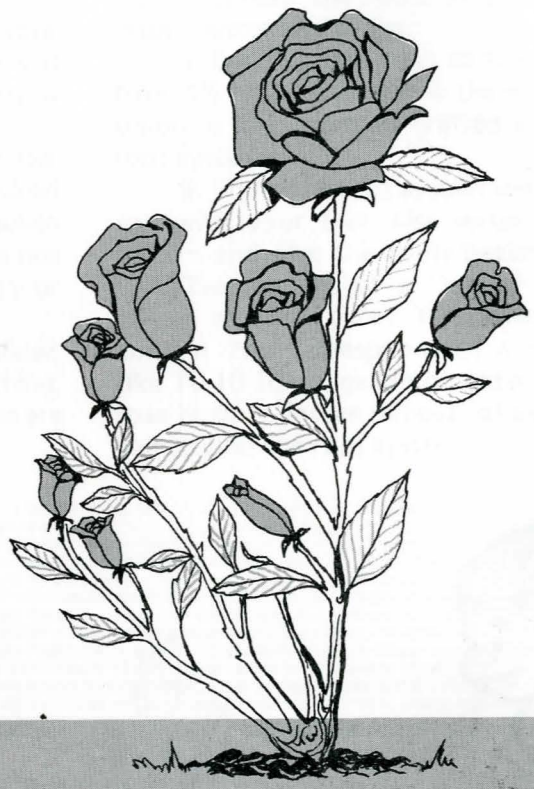
Roses





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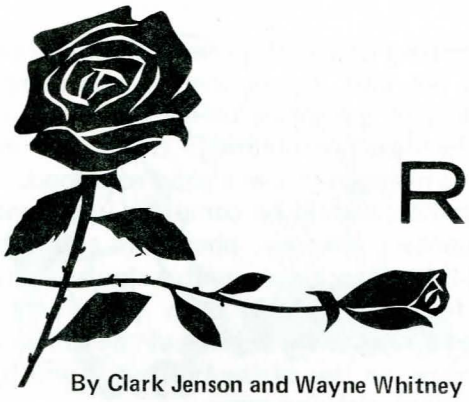


ROSES

By Clark Jenson and Wayne Whitney
Extension Horticulturists

Roses are easy to grow. They thrive on any soil that will grow a good garden.

The most common rose types are hybrid teas, floribundas, grandifloras and climbers.

Varietal selection, site and planting are factors to consider in planning a rose garden.

The type you select will vary with your personal likes and dislikes.

Roses thrive best under sunny conditions, so in selecting a planting site the amount of sun exposure will be important. Roses thrive well on exposure to the morning sun.

Do not remove the winter protection from your roses until all danger of frost has passed. If the soil is removed and the plant begins to grow too early, a late freeze could cause serious injury.

If you are using rose cones for winter protection on your roses, these should be checked frequently in early spring, especially on days when the sun begins to warm the soil. If ventilation is not provided for the roses during warm days, injury or possibly death may result to the rose bush.

Pruning, spraying and fertilizing are three basic considerations in rose growing. Weeding, mulching, water, debudding and removal of faded blooms are part of routine chores.

Steps in Planting a Dormant, Bare-root Rose

1. Cut ¼ to ½ inch off the end of the large roots.
2. Place the rose bushes in a pail of water and soak for several hours before planting.
3. Dig the hole large enough to accommodate the roots when spread in a normal position. The hole should be from 18 to 24 inches deep.
4. Mix compost, peat moss or other organic material into the soil in the bottom of the hole.
5. Form a cone of soil in the center of the hole to support the root system.
6. Cut off broken or severely injured roots and canes with sharp shears.
7. Spread the roots in a natural position to insure better anchorage.
8. Set the rose bush so the bud union will be from 1½ to 2 inches below the soil surface. The bud union is the enlarged grafted area just above the root system.
9. Cover the root system with soil and firm the soil with your feet. Use water to settle the root system and give the roots better contact with the soil. Two gallons of a "starter solution" may be added at this time. A starter solution should contain two tablespoons of a complete fertilizer like 10-10-10 per gallon of water. Pull gently on the rose bush to insure removal of air pockets from the soil around the root system.

10. Prune the canes back to six to eight inches above the ground at planting time. Remove the cane at a strong bud pointing away from the center. Remove weak wood and leave only the largest, strongest canes. Make all cuts at an angle and remove all broken or dead portions of roots. New cuts may be sprayed or painted with a pruning paint to prevent disease or insect invasion. Leave no more than three or four heavy canes per bush.

11. Place an eight- to ten-inch mound of soil over the canes to prevent their drying out. This soil may be removed gently after growth is started. If, when you are beginning to remove the soil from the rose bush and new growth has extended into the soil mound, it would be desirable to remove the soil gently with water from a garden watering hose. Do this gradually and preferably on cloudy days.

12. Planting distance between bushes will vary with the type of rose. Hybrid teas, floribundas and grandifloras may be placed from two to three feet apart. Climbing roses should be five to six feet apart.

Steps for Planting Container Roses

1. Mix compost, peat moss or other organic material into the planting area.
2. Dig a hole one foot wider and one foot deeper than the container.
3. Fill the hole with the soil mixture so the graft bud union is from 1½ to 2 inches below ground level.
4. Remove the flaps from the bottom of the container.
5. Place the container in the hole and slit the side of it.
6. Remove the container without disturbing the ball of soil and fill the hole half full, tamping gently but firmly around the ball of soil.
7. Water thoroughly.
8. Fill the hole to ground level without tamping.
9. Again water thoroughly.
10. Mulch the soil surface with organic materials which will not mat.

Fertilizing

Roses need from one to three fertilizer applications per year. Hybrid teas and floribundas should be given 3 applications, one early in the spring, usually after you have pruned and just as the bush begins to leaf out. The second feeding should be in early June or when the roses are beginning to flower. The third should be in August.

The climbing rose will thrive with only a single application per year. Apply one cut of a complete fertilizer early in the spring before the leaves come out. A fertilizer containing twice as much phosphate as nitrogen makes a good rose food.

The fertilizer should be complete, which means it should contain nitrogen, phosphate and potash. Use a 5-10-5 fertilizer or one with a similar analysis.

When fertilizing a rose bush make sure the fertilizer is applied to the surface of the soil around the bush, never on top of the bush so it will come in direct contact with the canes.

Watering

Water your roses at the rate of one inch of rainfall per week. The ideal way is to soak the soil and keep the foliage dry. Diseases are encouraged if the foliage is moist. Frequent light sprinklings do more harm than good.

A canvas soaker hose or a plastic soaker hose turned upside down using low pressure are two of the best devices for watering roses. Laid on the rose bed, it will allow moisture to soak to a depth of at least two to three feet.

A common garden hose will do a good job if, as the water comes from the hose, you allow it to spread on a shingle or board to reduce the force of the water before it reaches the soil.

A watering wand or other hand watering device may be used. If these are employed, it would be best to water the roses early in the evening so the foliage could dry before nightfall. If dry weather persists and collection of dust as well as spray residue occurs on the leaves, it may be desirable in some cases to syringe the foilage in order to provide a condition for a more effective spray program as well as a better appearance of the foliage itself.

Cultivation and Mulching

After an early cultivation, a mulch of peat moss, bark chips or compost will eliminate the need for further cultivation. A mulch may be a two- to four-inch layer of organic material over the soil. This will keep the soil cool and retain moisture.

A mulch will also aid in keeping the rose bed clean from weeds and help maintain a neat, attractive appearance.

How to Cut Roses

Whether you are collecting cut flowers or removing faded ones, make cuts carefully.

Hybrid tea roses should be cut just above a five-leaflet leaf to obtain strong new growth and stimulate further blooming.

Place them in a container of water immediately after they are cut.

Flowers should be cut in the bud stage just as the petals begin to unfurl.

On new bushes that have just been planted or bushes that are weak, it may be desirable to cut shorter stems than you would from well-established bushes. Leaves as well as stems aid in the maintenance of the rose bush and removal of excess portions of these may have a tendency to weaken the bush.

Conditioning. Roses to be used as cut flowers need to be conditioned by making a slantwise cut at the end of each stem and by removing thorns along the stem. This will allow greater surface for absorption of water. Leaves below the water line should also be stripped from the stem because soft green foliage decays when submerged for any length of time.

Place the freshly cut stems in a container of warm water. This water should be as warm as your hand can stand. The freshly cut rose stems will take up large amounts of this warm water if allowed to remain in the water till it cools to room temperature. Next put roses in a container of cold water with crushed ice and place in the refrigerator or a cool, dark room six to ten hours. This conditioning will add to their lasting qualities.

Pruning

Major pruning should be in spring after winter protection has been removed and when new growth begins. The amount of wood removed in spring purning will generally depend on the amount of winterkill of the canes. After growth begins on hybrid teas, floribundas and grandifloras, the amount of live wood on each cane is generally from six to ten inches.

When pruning dead wood in spring, new growth can be encouraged in whatever direction you wish by selecting a bud on the side of the cane you wish new growth to develop. A vase shape is desirable.

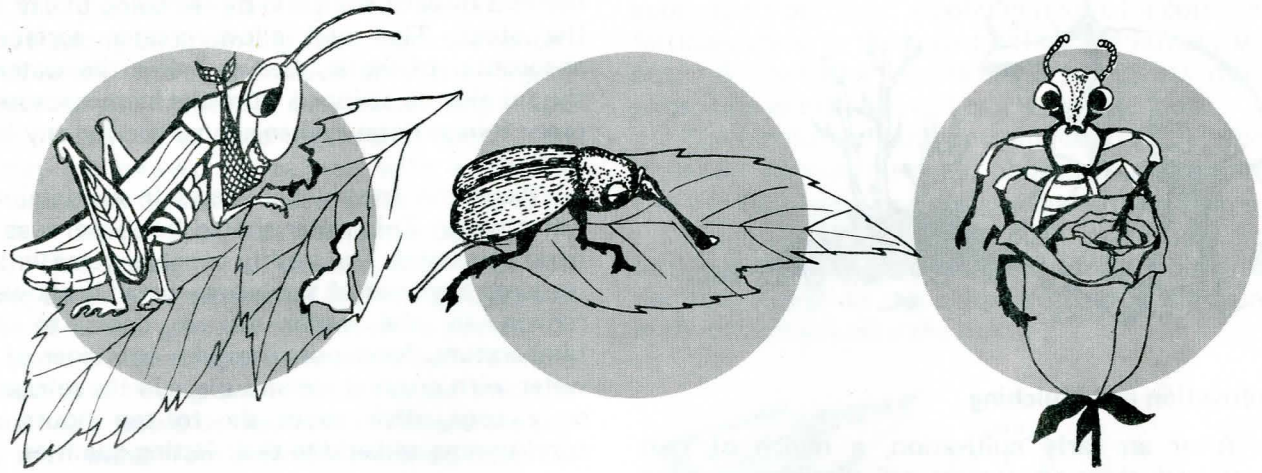
If more than one shoot originates on a hybrid tea at a single point on the cane, only one should be allowed to remain. This will provide a stronger cane that will produce larger flowers. Use these same principles when cutting roses or removing faded blooms.

For winter protection of hybrid teas and floribunda roses, tall canes should be tied together. This will give protection from ice, wind and snow, which may cause them to break.

Climbing roses are usually pruned immediately after blooming. Select new canes from this year's growth which will produce next year's flowering wood. Flowers are produced on current season's growth from wood one year old or older. Cut back old canes either to the ground level or to a strong new shoot near the ground which can be used for next year's flower-producing wood.

The number of canes left on each bush will depend on its health and vigor. All canes should be replaced in a three- to four-year rotation, requiring an annual maintenance removal of six to eight canes.

All cuts ½ inch and larger in diameter should be treated with a wound dressing paint.



Systemic Insecticides

Systemic insecticides are used in the soil or sprayed on foliage of plants. The chemicals are absorbed into the "system" of plants, making them toxic to several kinds of sucking insects and mites. The use is primarily for control of aphids and mites but control of other insects is possible.

Systemics available for use on roses are:

Di-Syston (disolfoton) 1% or 2% granules: Sold under several trade names, also available in combination with rose fertilizers. Use only in the soil. Spread granules evenly around plants and work into the top inch of soil. Use the amounts recommended by the manufacturer on the label. Overdosage may cause some "burn" to plants. Should be effective for 4 weeks.

Soil systemic insecticides should be watered into the soil immediately in order to get the best results.

Cygon (dimethoate): Sold as emulsifiable concentrates under the trade name "Cygon" and other names. Cygon is a foliar systemic. The emulsifiable concentrate is mixed with water according to label directions. Repeat sprays as necessary.

Caution: Read labels carefully before using. Some plants may be sensitive to systemics—these will be noted on the labels. Do not exceed recommended dilutions and application amounts.

Di-Syston is a highly toxic chemical. Cygon is moderately high in toxicity. Handle with caution so exposure to skin is avoided. Dispose of empty containers immediately and always store in a safe place.

If you have come in contact with the sprays during the spray operation, it would be advisable to wash thoroughly with soap and water and to change clothing.

Insects

Insects need not be a problem because they can be controlled easily and effectively with frequent applications of proper chemicals.

Two types of insects injure your roses. One group sucks sap from the plant and the other group actually eats a portion of the plant.

Sapsucking Insects: Contact poisons control many of the sapsucking insects such as red spiders and leafhoppers. These insects pierce the surface of the leaf and suck the juices from the plant. Because they do not eat any of the exterior part of the leaf, they require a poison that will kill them on contact.

Leaf-Eating Insects: Insects like the grasshopper that eat the rose foliage can be controlled with stomach-poison insecticides.

For insect control, apply chemicals frequently. Sprays should be applied every seven to ten days and dusts should be applied at five to seven day intervals.

Warm, dry weather may lengthen the intervals in your spray schedule. Cool damp weather may require you to increase your spray schedule frequency. If it looks like rain, spray your roses. The rain will not wash all the chemical off the foliage and it will provide protection when it is needed. A follow-up spray after a heavy rain may prove beneficial. In extremely dry weather a good flushing of the rose bush with water may be beneficial.

Insecticides, miticides and fungicides may be applied in one spray. Use a spreader sticker or one teaspoon of a household detergent per gallon of spray solution. Apply sprays or dusts from the underside as well as the top of the bush so both the bottom and top surface of the leaf receive complete coverage.

Insecticides suggested for control of aphids:

Material	Amount to 1 gallon water
Malathion, 25% w.p.	2 tbsp.
Diazinon, 25% w.p.	2 tbsp.

Insecticides suggested for control of leaf-hoppers, which are sucking insects, and all chewing insects:

Material	Amount to 1 gallon water
Sevin, 50% w.p.	2 level tbsp.
Methoxychlor, 25% w.p.	2 level tbsp.

Chemicals for control of spider mites:

Material	Amount to 1 gallon water
Aramite, 15% w.p.	1 level tbsp.
Dimite, 25% E.C.	2 tsp.
Chlorobenzilate, 25% E.C.	2 tsp.
Diazinon, 25% w.p.	2 level tbsp.
Kelthane, 18% E.C.	2 tsp.

Fungicides for disease prevention:

Material	Amount to 1 gallon water
Phaltan (folpet), 75% w.p.	2 level tbsp.
Zineb	2 tbsp.
Actidione PM	2 tbsp.

A suggested all-purpose spray mixture for roses to prevent black spot disease and insects:

Material	Amount to 1 gallon water
Phaltan (folpet), 75% w.p.	2 level tbsp.
plus	
Sevin, 50% w.p.	2 level tbsp.
plus	
Diazinon, 25% w.p.	2 level tbsp.

w.p. = wettable powder
E.C. = emulsifiable concentrate

Spraying or Dusting

Spraying or dusting is a must if roses are to continue producing beautiful flowers. Spraying usually provides better insect and disease control than dusts because of the better coverage obtained.

Roses are plagued by many diseases and insects. These may be controlled with one spray containing a fungicide, insecticide and miticide. This spray should be applied frequently in a regular schedule. Spraying for only one of the three pests will require two to three times the number of applications.

Apply chemicals through a sprayer in a fine mist. Adjust your sprayer nozzle for complete coverage to the underside as well as the top of the foliage. A commerical spreader sticker or one teaspoon of a household detergent should be added to each gallon of spray.

The number of applications will depend upon the weather. Usually, roses should be sprayed every seven to ten days or dusted every five to seven days. Frequent spraying or dusting will be required in damp rainy weather.

Never spray rose plants when the temperature is above 80°.

Diseases

Rose diseases are controlled with fungicides. Black spot, mildew and rust are the most harmful rose diseases.

Black Spot: This disease makes irregular black spots with feathery margins on the leaves. When a number of spots occur on the leaf, it may yellow and drop. Defoliation may result from severe infestation.

A number of fungicides, including Phaltan, Captan and Zineb, will provide protection from this disease.

Mildew: Mildew appears as white to grey powder on the leaf. This can be harmful but is usually less serious than black spot. Sulfur, Phaltan, Mildex, Karathane or Actidione PM provide control.

Rust: Shows symptoms of orange or yellow pustules on leaves and stems of roses. Spray with Actidione PM or Zineb.

Winter Protection

If you enjoy your roses, protect them during the winter. Following a few simple steps may mean keeping them alive.

A common form of winter injury to roses results from drying out of plant tissues. Low temperatures can also cause damage to canes by freezing. In both cases, adequate winter protection by mulching can reduce the extent of winter injury.

Mound with Soil. After freezing temperatures have defoliated the plant, place a mound of soil about eight to ten inches high over the crown of the rose bush. First, clean up all the leaves and rubbish around the plant. Use a soil free from weed seeds. This soil should be taken from an area other than the rose bed itself because digging in the rose bed may injure established root systems.

After mounding, soak the rose bed thoroughly. After the soil is frozen, mulch may be placed over the mound for additional protection.

Provide protection with a mulch, such as evergreen boughs or prairie hay. Avoid materials that hold water or shut off air circulation, such as leaves or grass clippings.

Winter Protection for Climbers

Climbing roses should be mounded like the hybrid teas and floribundas. The difference in the winter care will involve protecting the long canes.

Anything you can do to protect these canes from the winter will help keep them alive. Climbers may be wrapped with burlap, heavy paper or other materials that will give them protection from the wind and sun.

The long canes may be removed from the trellis or supported and wrapped together. A small trench dug in the soil may prove more satisfactory. The canes may be removed from their support, laid in the shallow trench and covered with three to four inches of soil.

After the soil freezes, a clean mulch may be added. This will keep the sun from thawing the soil too early in the spring. Mulch with a clean material that does not hold water. Avoid using leaves and grass or other fine materials that will pack. Evergreen boughs make excellent mulches for roses. You may use your discarded Christmas tree to good advantage. Cut the branches from the tree and place over the rose mounds. Many materials used for winter mulching of roses will attract mice. When wrapping climbing roses with burlap or when mulching brush-type roses, it may be desirable to add a mouse repellent.

TREE ROSES

The culture of tree roses is similar to bare root or container roses. The major differences are in staking and providing winter protection.

Staking and Planting

Drive a long stake 1 to 1½ inches wide and 4 to 6 feet long into the soil in the bottom of the hole dug to plant the tree rose. This stake should be driven into the hole prior to planting in order to prevent root injury. Heavy bamboo stakes are accessible and are an excellent support for staking tree roses.

Plant the tree rose so the stem or trunk is 1½ to 2 inches from the stake. Cut off the stake so it is just below the branches of the tree rose.

Complete the planting process as it is listed for container or bare-root roses.

Use ladies nylon hose, a soft cord or cloth strips or prepared plastic ties and tie the tree rose securely to the stake.

Tie the trunk to the support in at least three areas between the ground and the top of the stake.

Do not pull the trunk any closer to the stake than 1 to 1½ inches.

Winter Protection

One method of providing winter protection for tree roses is to lay the tree down and cover it with soil. This may be accomplished by loosening the root system on one side of the plant and laying it down to ground level on the opposite side of where the roots were cut.

After it has been laid down, it should be covered with six to eight inches of soil. The tree rose must be maintained in a straight position when applying winter protection. It may be helpful if you place a stake at the crown or root end of the tree rose so you will know where to locate it the following spring.

MINIATURE ROSES

Miniature roses can be very versatile in their use because of their small size. They will require less space than other types. They require planting sites similar to hybrid tea roses but need less space than other types. Be careful not to place them too close to larger plants that will cause shade later in the growing season.

Spacing of miniature roses will vary from 12 to 16 inches. Climbing miniatures should be planted from 18 to 24 inches apart.

Most plants received from nurseries are potted plants. The ball of soil should be planted ½ inch deeper than it was originally. Protection may be required due to extreme changes in weather exposure.

Miniature roses require a considerably less amount of fertilizer than standard varieties. Do not mound miniature roses for winter protection as heavily as you would a standard rose as they tend to smother more easily.

Miniature roses are shallow rooted and may require a more frequent application of water than larger plants. Mulching of miniature roses may prove beneficial in moisture conservation under these shallow rooted plants.

A similar spray schedule may be followed for miniatures as is recommended for larger roses.

ROSE NOTES

Spraying or Dusting Schedule:

Date	*Chemicals Used*	*Remarks*	*Date*	*Chemicals Used*	*Remarks*