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EC64-1206 Roses

Clark Jenson

Wayne Whitney

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Roses

UNIVERSITY OF NEBRASKA COLLEGE OF AGRICULTURE AND HOME ECONOMICS
THE AGRICULTURAL EXPERIMENT STATION
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ROSES
By Clark Jenson and Wayne Whitney

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, 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.

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.

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

Planting

Steps in planting a dormant, bare-root rose:

1. Soak rose bushes in a pail of water for several hours before planting.

2. 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.

3. Mix compost, peat moss, or other organic material into the soil in the bottom of the hole.

4. Form a cone of soil in the center of the hole to support the root system.

5. Cut off broken or severely injured roots and canes with a sharp shears.
6. Spread the roots in a natural position to insure better anchorage.

7. Set the rose bush so the bud union will be from 1 1/2 to 2 inches below the soil surface. The bud union is the enlarged grafted area just above the root system.

8. 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.

9. 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.

10. 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.

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

**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 cup 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.

**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 is one of the best devices for watering roses. Laid in 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.
Cultivating and Mulching

After an early cultivation a mulch of peat moss, ground corn cobs, 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 will also 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 rose 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.

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

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

When pruning the dead wood in the spring, new growth can be encouraged in whatever direction you wish by selecting a bud on the side of the cane you wish the 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, the 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 1/2 inch and larger in diameter should be treated with a wound dressing paint.

**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 commercial 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.
Diseases

Rose diseases are controlled with fungicides. Black spot and mildew 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, or Karathane will provide control.

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 leaf hoppers. 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 the 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.
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 that both the bottom and the top surface of the leaf receives complete coverage.

Insecticides suggested for control of aphids:

<table>
<thead>
<tr>
<th>Material</th>
<th>Amount to 1 gallon water</th>
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</thead>
<tbody>
<tr>
<td>Malathion, 25% wettable powder</td>
<td>2 tablespoons</td>
</tr>
<tr>
<td>Diazinon, 25% wettable powder</td>
<td>2 tablespoons</td>
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</tbody>
</table>

Insecticides suggested for control of leafhoppers, which are sucking insects, and all chewing insects:

<table>
<thead>
<tr>
<th>Material</th>
<th>Amount to 1 gallon water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sevin, 50% wettable powder</td>
<td>2 level tablespoons</td>
</tr>
<tr>
<td>DDT, 50% wettable powder</td>
<td>2 level tablespoons</td>
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</tbody>
</table>

Chemicals for control of spider mites:

<table>
<thead>
<tr>
<th>Material</th>
<th>Amount to 1 gallon water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aramite, 15% wettable powder</td>
<td>1 level tablespoon</td>
</tr>
<tr>
<td>Dimite, 25% emulsifiable concentrate</td>
<td>2 teaspoons</td>
</tr>
<tr>
<td>Chlorobenzilate, 25% emulsifiable concentrate</td>
<td>2 teaspoons</td>
</tr>
<tr>
<td>Diazinon, 25% wettable powder</td>
<td>2 level tablespoons</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Material</th>
<th>Amount to 1 gallon water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phaltan (folpet), 75% wettable powder plus</td>
<td>2 level tablespoons</td>
</tr>
<tr>
<td>Sevin, 50% wettable powder plus</td>
<td>2 level tablespoons</td>
</tr>
<tr>
<td>Diazinon, 25% wettable powder</td>
<td>2 level tablespoons</td>
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If mites become a primary problem include one of the materials suggested for their control in the mixture, or use 2 tablespoons of wettable sulfur to each gallon of spray. Sulfur will also help control mildew.

**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.
Spraying or Dusting Schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Chemicals Used</th>
<th>Remarks</th>
<th>Date</th>
<th>Chemicals Used</th>
<th>Remarks</th>
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