# EXHIBIT 9

#### dummies

★ Home & Garden F Gardening Protecting Roses from Winter Damage

## **Protecting Roses from Winter Damage**

Generally, if you live where winter temperatures predictably reach 10 degrees F (–12 degrees C), many of the most popular roses — such as hybrid teas, floribundas, grandifloras, and climbers — need some kind of protection to survive the winter. Miniature roses and shrubs are generally somewhat hardier, with many shrub and species roses being hardier still. Luckily, protecting roses is not a difficult task. You can do it by covering the base of the plant with soil.

#### Bundling up for a cold winter

A rose properly prepared for cold weather is said to be *hardened off.* Most roses harden off by themselves during the gradual onset of fall and winter. During this time, the plant's cell walls thicken as they prepare for dormancy. In many rose varieties, this process manifests itself by the canes taking on a purplish cast. Unfortunately, purple canes indicate the onset of dormancy only and don't give much of an indication as to whether the variety is hardier than varieties that harden off without turning purple.

The better care your roses receive throughout the growing season, the better chance they stand to get through the winter unscathed, or at least without too much damage. If the plant suffers from lack of water or nutrients or was devastated by disease during the summer and fall, it will be in a weakened state when winter arrives.



The key to hardening off a rose is to make sure that the plant stops growing and becomes fully dormant before the onset of the coldest weather. You can encourage full dormancy in two ways:

- Stop fertilizing six weeks before the first frost. Late applications of nitrogen fertilizers can keep a rose growing longer into fall or winter than is safe. If you don't know the average date of your first frost, ask someone at your nursery or call your local cooperative extension office. Also, cut back on watering, but don't ever let your roses go into winter completely dry.
- Let hips develop. Instead of cutting off (deadheading) the spent flowers from late fall bloom, let the spent flowers go to seed. That is, let the hips or the seed pods develop fully. Not everyone believes that this increases dormancy because many old roses develop hips in midsummer but then keep on growing quite nicely into fall. And there is no solid research proving that letting the hips develop promotes dormancy. However, most plants slow down their vegetative growth while their seeds mature. Roses are no different. If the roses slow down, the slowing should combine with other factors (such as less fertilizer and no pruning) to increase dormancy.

### **Keeping roses cold**

Whether or not a rose plant is damaged by cold is more than a matter of how low the temperatures get. Strong winter winds can dry out canes, and, because the ground is frozen, the plant has no way to resupply the canes with water. In addition, fluctuating temperatures — which can cause plants to freeze and thaw, refreeze, and thaw again (it hurts just to think about it!) — can kill a cane in a snap or rip a miniature rose right out of the ground.

When you winter-protect a rose, insulate the plant not only from the coldest temperatures but also from drying winds and unusually warm weather that may cause the plant to thaw prematurely.

Follow these steps for the easiest way to winter-protect roses:

1. Keep your plants are well-watered.

Fall rains usually do the job, but if the weather has been dry, water deeply (to a depth of at least 18 inches) after the first frost but before the ground freezes.

- 2. In early to mid fall, when the nights are getting regularly frosty, mound several spadefuls of soil over the base of the plant, extending the soil up at least a foot above the bud union.
- x To make things easier, cut the canes back to 3 or 4 feet high and tie them together with string. Don't worry about the part of the canes above the mound; you're going to prune ther back the back by the back of the solution of the canes above the mound; you're going to prune ther back to dig around your roses' tender roots. And Get A Free Book
  - 3. When the ground is thoroughly frozen, cover the mound with a thick layer at least a foot of mulch, such as straw, leaves, or compost.

Doing so ensures that the ground stays frozen and all of the plant is protected. If any leaves are left on the plant, pull them off. Besides harboring disease, leaves can increase drying. To keep the protective material in place in windy areas, enclose the rose with a cylinder of wire mesh and fill it with mulch or soil. Some gardeners prefer to simply wrap the top of the rose with a thick layer of newspapers, fill the inside with leaves or straw, and tie the whole thing together with string. You can also buy various types of Styrofoam or plastic cones that fit neatly over the top of the plant and which you can then fill with whatever insulating material you like.

4. When the ground begins to thaw in the spring, gently start removing the soil from the base of the plant.

Don't get started too early, however; a sudden cold snap can be brutal. Watch for the yellow blooms of the forsythia. Once they are in bloom, it's usually okay to remove the mound of soil. Remove the soil carefully, because you may find that growth is beginning — look for buds that are swollen and beginning to stretch. Those new buds are very easy to break off, which is why working carefully around the plant is important. Applying a gentle stream of water to wash away the soil is often better than using your hands.

#### **Protecting climbers and tree roses**

Because climbing roses and tree roses are more upright and thus more exposed to cold and wind, they need special protection. If the rose is tied to a trellis or fence and the canes are not very flexible, untie the canes and wrap them with insulating material and then retie them to the trellis. If you need to cut the canes back a bit to make the job easier, go ahead. Also, cover the base of the plant with at least a foot of soil, as described in the previous section. You may also be able to detach the canes from the trellis, lay the whole plant down (staking the canes in place if necessary), and cover it with soil and/or mulch. When the weather warms in spring, gently remove the covering and retie the rose to the trellis.

Dig up tree roses and store them for winter in a cool garage or basement. Or dig only one side of the tree roses' roots so that it can lie on its side, secure it in place with stakes, and cover the whole thing with soil and mulch. Figure 1 shows you one of the best ways to protect a climbing rose.

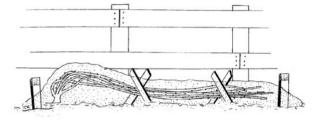


Figure 1: Winter-protect a tree rose by uprooting one side of the plant so that you can lean it over and bury it.

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