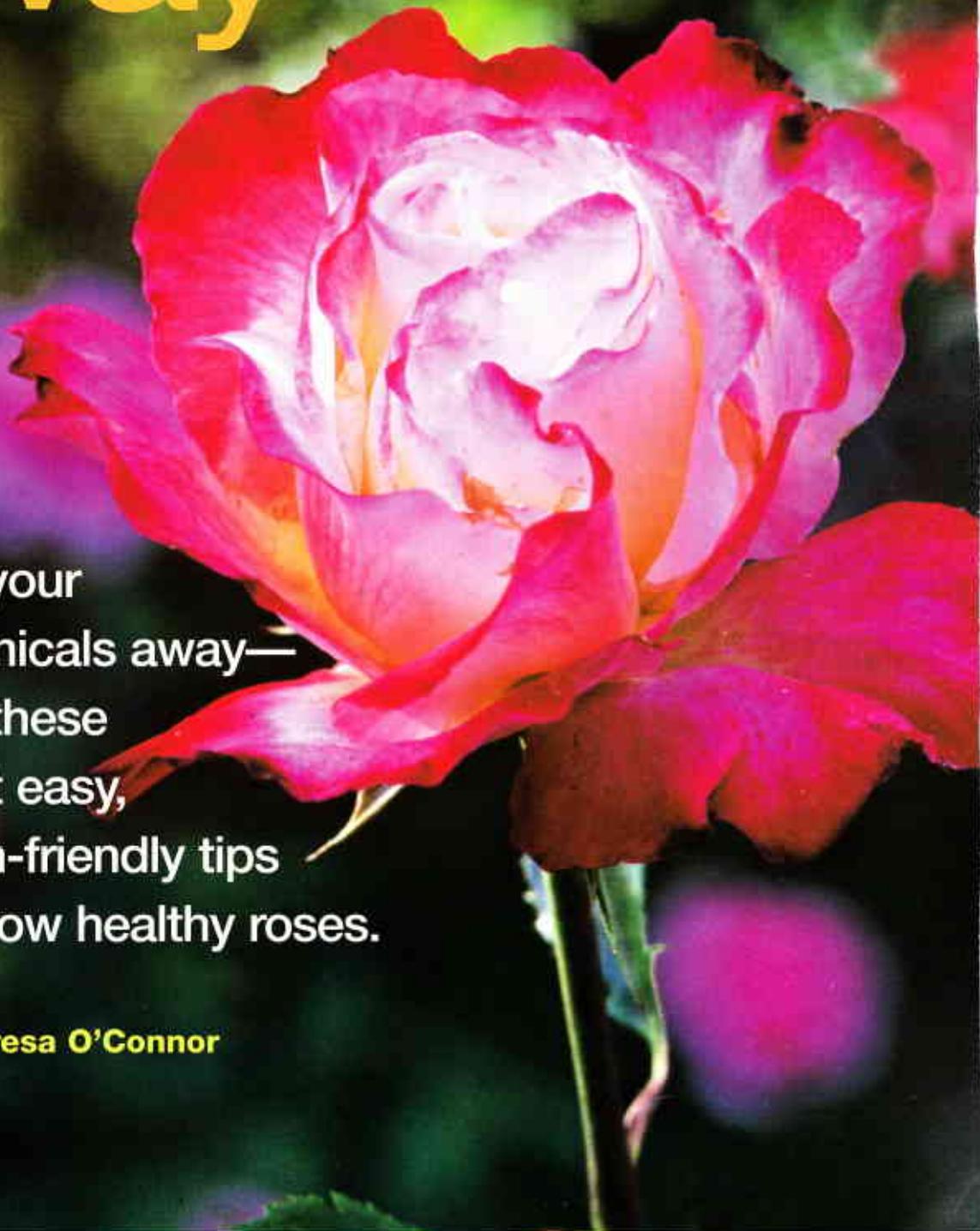


grow great roses, the organic way



Put your chemicals away—use these eight easy, earth-friendly tips to grow healthy roses.

by Teresa O'Connor

Since antiquity, roses have been prized around the world for their beauty. Yet these lovely flowers can be picky in the garden, suffering from annoying pests and pathogens. Frustrated gardeners sometimes find themselves reaching for chemicals or pulling the plants out completely. Want to grow healthy roses without gallons of commercial sprays? Consider these eight earth-friendly tips:

Choose resistant roses

Start right by selecting roses suited for your area. Before planting, study your climate, zone, soil type, and other conditions. A rose that grows well in one region may perform poorly in others. Your local cooperative extension office, garden center, or rose club can provide recommendations.

Hybrid teas are the most popular roses, but also the most disease-prone. In humid climates, plant disease-resistant varieties such as the vivid pink 'Keepsake' or apricot blend 'Just Joey'. Or try the striking 'Voodoo' with orange, yellow, and peach tones. Hybrid teas are especially vulnerable to winter cold, but cold-winter gardeners do have some good options: the classic red 'Mister Lincoln', deep pink 'Electron', or 'Double Delight', with creamy white petals edged in red. They grow in both arid, high-altitude climates and moist conditions.

Rugosa and hybrid rugosa roses are among the easiest to grow. They are disease-resistant, heat-tolerant, and cold-hardy, and they even like ocean air. To avoid chemical damage to foliage, don't spray them with pesticides, fungicides, or other chemicals. Some of the prettiest are the aromatic white 'Blanc Double de Coubert', magenta 'Hansa', and silvery pink 'Frau Dagmar Hastrup' ('Fru Dagmar Hartopp'). Canadian Rose Society members like the fragrant double pink 'Thérèse Bugnet'. This extremely cold-hardy rose (hardy to USDA Zone 3) grows in warmer Southern gardens as well.

Other shrub roses offer low-maintenance options. 'The Fairy' has good resistance against fungal diseases, and grows in much of the United States and parts of Canada. 'Carefree Beauty' lives up to its name, growing in hot, dry gardens as well as cool, humid ones.

In Florida, choose roses grafted onto disease-resistant 'Fortuniana' rootstock, as others won't survive.

To grow beautiful roses without gallons of harsh chemicals, start by choosing cultivars suited for your climate. *Rosa 'Double Delight'* (opposite), for example, is a favorite of cold-winter gardeners.



Rosa 'Just Joey'



Rosa 'Electron'



Rosa 'Voodoo'



Rosa 'Mr. Lincoln'



Rosa 'Frau Dagmar Hastrup'



Rosa 'Blanc Double de Coubert'



Rosa 'Thérèse Bugnet'



Shrub roses are pretty, low-maintenance plants that look right at home in a mixed perennial border.

Pick the right spot

If you plant your roses in the right spot, they'll be healthier and more resistant to pests and diseases. Roses need six hours of direct sunlight daily, although they do better with some afternoon shade in hot climates. Note the plant's mature size before you dig, and allow enough space for the roses to spread out and up without crowding each other. Adequate air circulation discourages diseases and contributes to plant health.

Roses require excellent drainage to prevent root rot and other ailments. If you have heavy clay soil that drains slowly, consider planting roses in raised beds.

Plant in good soil

Healthy soil prevents many problems. Roses grow best in slightly acidic soil (pH of 6.2 to 6.8). They'll grow in alkaline soils, too, but they're more likely to suffer from micronutrient deficiencies as pH increases. Make soil more acidic by adding elemental sulfur. (Follow package instructions.)

Fertilize roses before and during the growing season, stopping two months before the first frost. Avoid over-fertilizing roses with high-nitrogen fertilizers. They will over-stimulate stem and leaf growth and attract aphids that attack young rose shoots. Instead, use balanced organic

fertilizers that release nutrients slowly. Add compost, too, because it adds beneficial microorganisms that improve soil.

Use mulch to improve soil structure, conserve water, control weeds, keep roots cooler in hot weather, and reduce the spread of disease spores. Early in the growing season, apply 2 to 3 inches of organic material such as compost, shredded leaves, or fine wood chips. Leave a couple of inches between rose stems and mulch.



1 BLACK SPOT

Description: Fungal disease that occurs in damp conditions.

Symptoms: Circular dark brown or black spots with fringed edges on leaves and stems. Leaves may turn yellow and drop off.

Prevention and control: Choose resistant varieties, plant roses in sunny locations with good air flow, and avoid wetting foliage late in the day. Remove fallen leaves and infected canes promptly. Mulch to help prevent spread of spores. A solution made of 1 tablespoon of baking soda and 1 tablespoon of

Water regularly

Roses need 1 to 2 inches of water weekly. Too little water can lead to sunburned rose canes and defoliation. Too much can lead to root diseases and nutritional deficiencies. Avoid wetting foliage whenever possible; wet leaves may encourage fungal diseases. Consider drip irrigation systems and soaker hoses that deliver water straight to the roots without wetting foliage. If you use a sprinkler, water early so the plant dries during the day.

You'll have an easier time keeping your rose garden healthy if it includes a variety of diverse plants.

Consider planting annuals, herbs, fruits, and even vegetables near your roses.

4 common rose diseases and what to do about them

vegetable oil per gallon of water may help. Use sparingly, and don't apply in bright sun. Avoid spraying flowers and soil because it can distort blossoms and affect soil pH.

2 CROWN GALL

Description: Bacterial disease that affects roots and/or stems of several woody plants, including roses.

Symptoms: Large, distorted growths appear near the plant's crown or on roots.

They eventually cause death.

Prevention and control: Before you buy a plant, inspect it for early swelling. Avoid wounding the plant, especially near soil line.

Provide winter protection so bark won't crack. Once the plant is infected, disease is difficult to control. Remove infected plants and replace soil. If problem is severe, grow non-susceptible plants in this spot for three to four years. Always sterilize cutting

tools with bleach and water if used on infected plants.

3 POWDERY MILDEW

Description: Fungal disease that spreads by airborne spores, which survive winter on leaves and leaf buds.

Symptoms: White or gray powdery coating on leaves, shoots, and flower buds. Leaves may drop; buds may not open.

Prevention and control: Plant disease-resistant roses in sunny locations with good air flow. Remove diseased leaves and flowers during and after growing season. Washing foliage occasionally in mid-morning may disrupt daily spore-releasing cycle. Allow foliage to dry before evening. Baking-soda solution (see black spot) may also help.

4 RUST

Description: Fungal disease that's spread by wind and water and thrives in cool, moist conditions. Survives

winter on leaves and stems.

Symptoms: Bright orange pustules on stalks, branches, and leaf undersides early in season. Later, leaf pustules may turn yellow-green and eventually black.

Prevention and control:

Rust is difficult to control, so prevention is your best bet. Select resistant roses and avoid overhead watering late in the day; instead, use drip irrigation or soaker hoses.

Mulching may prevent spores from spreading. Destroy infested plant material and prune back diseased stalks promptly. In fall, remove fallen leaves and debris. If problem is severe, try wettable sulfur (diluted 1 ounce of sulfur to 1 gallon of water) applied to both sides of leaves. Spray early in the day, and avoid applications during hot weather. Sulfur may leave a yellow residue on foliage.

*To attract more
beneficial insects
to your garden,
avoid pesticides—
many chemicals
kill both friends
and foes.*

Check soil moisture regularly. Sandy soils require more irrigation than heavy clay soils, which retain moisture better.

Give ongoing support

Good sanitary practices reduce pathogens and pests. Remove diseased leaves, shoots, and flowers regularly. After pruning a diseased plant, clean clippers with a solution made up of nine parts water to one part bleach. Check your roses often and tackle problems early—it's harder to help a plant bounce back once the problem becomes severe.

Encourage diversity

A garden filled with nothing but roses may look beautiful, but you'll have an easier time keeping your rose garden healthy if it includes a variety of diverse plants. Consider planting annuals, herbs, fruits, and even vegetables near your roses. Many rosarians swear by garlic and other members of the allium family; sprays containing garlic extracts have insecticidal properties. French marigolds (*Tagetes patula*) and African marigolds (*Tagetes erecta*) secrete a root substance that kills some nematodes. By increasing your plant diversity,



1 APHIDS

Description: Tiny sucking insects that feed on plant sap. Often found clustered on young plant growth, especially on plants overfertilized with nitrogen.

Symptoms: Leaves may turn black with sooty mold.

Prevention and control: Spray with a strong stream of water early in the day or rub off small quantities. Insecticidal soap may help. Avoid high-nitrogen fertilizers. Encourage natural predators like parasitic wasps and lady beetles. Ants sometimes feed

4 common rose pests and how to prevent them

on honeydew excreted by aphids and may prevent beneficial insects from eating aphids, so control ants with environmentally friendly baits and sticky barriers.

2 THRIPS

Description: Small, thin, yellow-brown or black insects that attack rose flowers, both as winged adults and as larvae.

Symptoms: Cause damaged or deformed petals with brown edges. Thrips often favor fragrant, light-colored, or white roses.

Prevention and control:

Thrip problems are worse when several rose bushes are planted together. Encourage plant diversity in your rose garden, and plant roses away from weedy areas. Remove spent blossoms promptly. Most thrips are difficult to

control effectively with insecticides, because the pests are protected by plant parts. Neem oil, insecticidal soaps, or narrow-range oil may provide relief if applied early, and they're less toxic to beneficial insects. Some natural predators, such as minute pirate bugs and predaceous mites, help control certain thrip species. A strong spray of water will knock thrips off plants.

3 LEAUTTER BEES

Description: Small bees that use leaf material to line their nests.

Symptoms: These bees cut semicircular holes in leaves. They cause no serious damage to plants, other than aesthetic problems.

Prevention and control:

Leafcutter bees are important crop pollinators, especially of

alfalfa. There aren't any effective controls, so it's best to remove damaged leaves and tolerate a little damage.

4 SPIDER MITES

Description: Tiny mites that bruise plant cells with their mouthparts and suck the sap.

Symptoms: Leaves are stippled or yellow, often with webbing, and may dry up and fall off.

Prevention and control:

Spider mites are most prevalent in hot, dry conditions and when natural enemies have been killed by insecticides. Provide roses with plenty of water and periodically wash leaves with water early in the day. If infestation is severe, try insecticidal soap, neem oil, or horticultural oil.



Combine roses with a variety of other plants for a beautiful garden that attracts beneficial insects.

you'll attract beneficial insects and reduce the risk of pests and diseases on roses.

Include beneficial insects

Not all insects are pests. Lady beetles, green lacewings, and parasitic wasps are friends of roses and natural predators of rose pests such as aphids. Look for lady beetles in garden centers or purchase them from mailorder companies. Before releasing them in the early evening, mist your garden and beetles, then place beetles on the canes at the base of plants. To attract more beneficial insects to your garden, avoid pesticides—many chemicals kill both friends and foes.

Consider less-toxic pesticides

Even the best rose gardens will have pest or disease problems once in a while. If your roses need help, try less-toxic protection from insecticidal soap, horticultural oil, and

neem oil. These products only mildly affect beneficial insects. (Always read labels carefully before using.) Some gardeners swear by a homemade garlic-and-cayenne spray to keep pests away. If you can stand the smell, give it a try. Sometimes you may not need chemicals at all—a strong stream of water with your hose can reduce aphids, spider mites, and other pests on your roses.

Will these ideas eliminate all your rose problems? Probably not. But you'll be surprised how easily you can grow beautiful roses without chemical sprays, especially when you select the right roses, apply good gardening practices, and tolerate a little imperfection. ☘

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See Resource Guide on page 80 for more information.

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