



Water, and Why!

by [Jolene Adams](#)

Di-hydrogen oxide is the most important inorganic chemical compound you can add to your rose garden. That's water folks - plain old water. And it is necessary for ALL life forms, even those that flourish in desert environments.

The rose, like the rosarian, is composed mostly of water. Remember all that stuff we learned when we were kids about how the human body is made up mostly of water, or how the human body is worth only 98 cents because its mostly water? Well, same thing for roses, except with inflation, the price has gone up while the value has gone down ... WAY down!

Rose bushes slurp up water from the soil or the planting medium they happen to grow in. This water will have various dissolved minerals and other substances in it. The water flows into the plant and is "pulled" upward by the pressure differential between the leaf surface and the rootlet that absorbed the water molecule. The light of the sun causes water in the leaf to evaporate (this is called transpiration ... humans perspire, plants transpire). This causes the leaf to have less internal pressure (kinda like a tire slowly going flat) than the stem and root of the plant. The water down at the root level flows "uphill" in order to restore the pressure in the leaves. Yow!! The minerals in the water feed the plant cells along the way (what the plant cells do with this largesse is another story, but I digress). The moisture vaporizing at the leaf surface also cools the plant, just like your sweat drying in the breeze cools you!

Rosarians keep harping on the theme "water, water, water." That's because a mature, average-sized rose bush can lose up to 5 gallons a day when it gets really hot or exceptionally dry! Roses should not be allowed to dehydrate; even in cold weather they need water. Cold can wick away moisture too!

Not enough water and your rose will begin wilting, dropping leaves, growing smaller leaves or shutting down in the bloom production function. Too much water (bad drainage!) shows up as leaves turning limp and yellow and falling off the bottom of the bush before they are old.

You can reduce the water bill by mulching your beds (but keep the mulch clean; no dropped leaves or spent blooms, please!), using underground water systems (soakers), drip irrigation which does not spray up into the air where water molecules can evaporate before entering the rose bush. You can also spray the leaves of your roses with an anti-transpirant (like Cloud Cover® or WiltPruf®). These compounds coat the leaf surface with a waxy substance that retards evaporation, but does not stop the rose from "breathing" through the very small holes (stomata) in its leaf surface that allow atmospheric gases to enter the surface cells.

You may have been told that the sun will burn the wet leaves because it gets focused by the water droplets and can set the leaf surface "on fire." Did any of you ever go out with a magnifying glass, when you were a kid, and try to set a leaf or a stick on fire? Hard, wasn't it? Had to get the sunlight positioned just so and then hold that glass steady for a long time to get even a rise in surface temperature. That is due to focal length and a lot of stuff physicists like to talk about, but rosarians just like to scare each other with. Folks, it is almost impossible to burn your rose's leaves by letting the sun shine through water droplets (Disclaimer goes here: your mileage may vary!).

Don't worry! You can do this ... after all, you ARE an adult! Just do your best to put about 5 - 7 gallons of water down at the roots level each week. Your roses will stand up and salute! Remember to water - morning, noon, night - whenever you can and copiously! Not enough water kills; too much water just costs money and makes a mess ...!