

## Roots

When talking with a friend about landscapes, I mentioned that plants can fail when they get overwatered. This friend is a biologist, but not a botanist. He thought plants were somehow like gold fish, who continue to eat until they die. He assumed plants would take up water as long as it was provided.

Anyone who has grown a houseplant has heard at some point, “Plants do not like wet feet.” While purists may cringe at the statement, it is true.

Wet feet are roots submerged in too much water. A potted philodendron sitting in water will soon look miserable. This is true for houseplants and landscape plants, too.

Have you seen rainfall or irrigation water sitting in turgid pools on soil surfaces because the drainage is poor? You might already know that landscape plants often die from something akin to drowning. This can also happen when an unsuspecting gardener sees a wilting shrub and decides to irrigate, and irrigate, and irrigate. When the roots of many plants sit too long in water, they stop being able to use the water at all. Too much water is almost the same as not enough.

True desert plants go through intense dry periods, then get all their water in a deluge.

That water cannot stand for long, however.

We rarely see roots since they have evolved to be covered up with soil. As a result, we scarcely think about them. We pay attention when the roots of a tree are accused of heaving up a sidewalk, but in general, they are down there, in the background, doing whatever it is they do.

What they do is bring the necessary raw materials from the soil to the rest of the plant so growth can occur. Water, minerals, fertilizer, even carbon dioxide, are all carried through roots. They also anchor plants to the earth. When you think about winds that can blow 60 miles an hour, you know you want a healthy, robust root system attached to all the landscape plants.

How do you do that? Soil must be fertile enough to provide essential nutrients. This can be by using fertilizer, compost, companion plants, living mulches. What you use for a healthy plant will help build a healthy root system.

You certainly do not want them drowning in a muddy soup, because roots need air. When flooded, they gasp for air.

But when soil is too dry, the plant will desiccate, then die. Another curious root fact is that roots cannot grow through dry soil.



Let me mention a final aspect of roots. When roots are so bound up that they are almost in a single giant knot, they are unable to obtain water and nutrients. They are designed to spread out.

When spending money on a plant, you absolutely want one that is healthy-looking, with the right size, shape and color of leaves, and no signs of insects or disease symptoms. Remember, though, that there is another world to check inside the soil, where the roots are.

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