

## Soil moisture problems

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Soil moisture problems are usually related to soil drainage. Poor drainage can be the result of the soil type or the grade. Excessively drained soil fails to retain moisture. Plants must tolerate dry conditions or be given additional water.

Clay soils drain poorly. That is, once clay soils are saturated, they retain moisture longer than other soil types. Plant roots growing in clay can be injured by excessive soil moisture during wet weather or by excessive irrigation.

Soil modification in the planting hole will not have long-term benefits. Water from the surrounding area will more easily enter modified soil, flooding the root system. Improving clay soils is difficult and usually not worth the effort.

Sandy soils drain very well but retain little moisture for plant growth. Adding organic matter will improve the water-holding capacity of sands for a while, but the organic matter will decompose over time and the soil will again hold less moisture. As with clay, it may be easier in the long run to select plants that will adapt to the growing conditions on the site rather than try to change them.

Drainage problems can be related to the grade or slope of the site. Both dry and wet situations can occur.

Plants on the top of a berm or slope may suffer from dryness. Water will soak into the soil at increasingly slower rates as the surface layer becomes saturated. If water is applied faster than the soil will absorb it, the excess runs off the hill and does not benefit the plant.

Wet spots occur in low areas where water collects from surrounding higher ground. A similar situation occurs when a tree or shrub has a planting well around it. If the surrounding lawn is watered too often, the water may run into the planting well and drown the plant.

Wet areas can occur where downspouts from the eavestrough empty. Often this is near the base of a plant, which is injured by the excessive amounts of water. Plants growing in mulched beds or planted in slight depressions will be most seriously affected. Such injury usually occurs only during prolonged wet weather or when the combination of irrigation and rain is too much for the plant.

Dry areas often occur near buildings, particularly under overhangs. Plants in these areas are often sheltered from the rain and so experience very dry soil.