

Check Your Garden for Organic Matter

Poor soil quality can be the source of many plant problems in the typical home garden. But how do you tell if you have poor quality soil? If your garden soil suffers any of the following symptoms, it may need some help. Do any of these symptoms sound familiar?

- Your soil is dried and cracked in summer.
- Digging holes in the soil is difficult whether it is wet or dry.
- Plants wilt in hot weather, even with added water.
- Leaves turn yellow and have brown, dead sections on them, particularly on the south side of the shrub.
- Tomatoes and peppers get blossom-end rot, even if fertilized with calcium.
- Water tends to pool on the surface and drains slowly, or runs off the surface.

Many of these symptoms stem from a lack of organic matter in your soil. There are some easy ways to determine if your soil needs an infusion of compost.

Look at the color or shade of your soil. Is your soil dark or light? Soils with adequate organic matter content will be dark in color, both because they have more humus, which is dark in color, and because they hold more water.

Look for puddling and standing water. Soils rich in organic matter content and with good tilth allow water to percolate below the surface.

Rub some soil between your fingers. The soil will appear to contain "crumbs" composed of mineral and organic particles. The crumbs are examples of aggregation, and are the result of sticky substances released by soil organisms such as earthworms and bacteria, after feeding on organic matter. Aggregation, a result of organic activity, is desirable because it generates soil structure.

Use your nose. Soils with adequate organic matter content will have the rich smell of earth. Soils that have poor air circulation, a result of reduced organic matter content, may smell sour or stinky.

Adding organic matter to your garden soil helps improve the ability of the soil to accept and store water. Amending your soil often means that you can reduce the amount of water a newly planted garden requires. If you apply an organic mulch on the soil surface, evaporation will be further reduced, compared with bare soil.

Organic matter increases the activity and the number of soil organisms. Over time, a well-amended soil will supply more of the nutrients your plants require, thereby reducing fertilizer requirements.

Make compost in your backyard or use fresh organic materials from your yard. Because organic amendments are bulky and heavy and expensive to transport, look for suitable source amendments close to home. You might be able to arrange for bulk deliveries of these materials with a landscape supply or trucking company. If you need only half a "load" consider splitting a load with a neighbor.

This article adapted from Cooperative State Research, Education and Extension Service, USDA. Please contact the Farm Advisor's office at cdcalaveras@ucdavis.edu or 754-6477 with your agricultural questions.