

Organic Matter in Soil

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The golden rule of gardening says, "If you treat your soil well, it will treat your plants well." Healthy, fertile soil is a mixture of water, air, minerals, and organic matter. In soil, organic matter consists of plant and animal material that is in the process of decomposing. When it has fully decomposed it is called humus. This humus is important for soil structure because it holds individual mineral particles together in clusters. Ideal soil has a granular, crumbly structure that allows water to drain through it, and allows oxygen and carbon dioxide to move freely between spaces within the soil and the air above.

Successful gardening depends on good soil. One of the best ways to improve soil fertility is to add organic matter. It helps soil hold important plant nutrients. By adding organic matter to sandy soil, you improve the ability of the soil to retain water. In a clay soil, humus will loosen the soil to make it more crumbly. You can increase the organic matter in your garden by adding compost or applying mulch.

Application of organic matter to the soil adds carbon, which promotes the growth of beneficial bacteria, which increases the likelihood of hearty plants. Another benefit is when crops grow and demand more nutrients, added organic matter can be used as plant food. Remember that every time you disturb soil by turning or tilling, oxygen also is added to the soil. This increases microbial activity, which feeds on organic matter. Therefore, soil disturbance can decrease the soil's organic matter reserves and should be kept to a minimum.

Adding compost to your soil is easy. Simply save your organic waste from the kitchen and yard. Then you have several methods to choose from. You can purchase or construct a home composter, start a pile or a compost bin. Check out instructions on composting on line or give us a call at (863) 402-6545 for more information. Whatever the method, composting adds much needed nutrients to your soil, helps your plants to grow up healthier and more beautiful and costs your little or nothing.

Scientists have been researching the benefits of organic material for decades. They have found that plant deficiency diseases usually are less severe in soils that are well supplied with organic matter. This not only increases the vigor of the plants, but various soil microorganisms become more active in the presence of an abundance of organic matter. For example, certain kinds of fungi that live in decaying organic matter have been found to kill harmful nematodes.

Healthy, productive soil has a good proportion of organic matter in it. You can successfully increase the quality of your soil by regularly adding organic matter. Caring for the soil is an ongoing process and is essential for successful backyard conservation.

For more information on nutrient management and other Backyard Conservation practices, visit the Natural Resources Conservation Service online at www.nrcs.usda.gov. Or call 1-888-LANDCARE (toll free) for a free colorful Backyard Conservation booklet and tip sheets.