

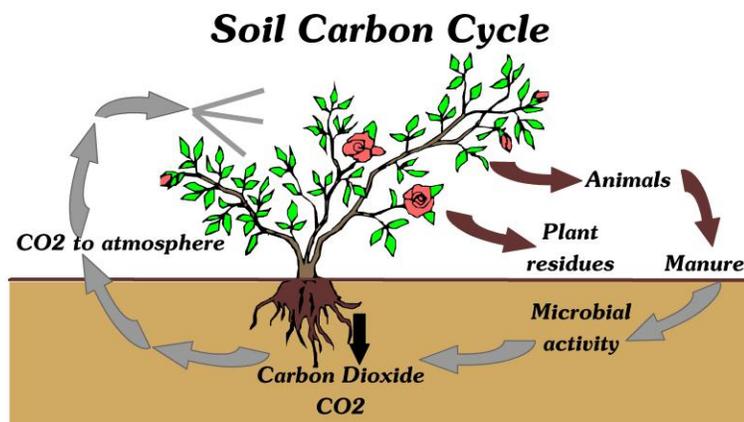


Three Gardening Facts You Need to Know

As gardeners, most of us know that it takes healthy soil to produce healthy plants. What many of us don't realize is that maintaining healthy soil requires *more* than periodic applications of fertilizers and water. The following are brief explanations of principles that can significantly improve your soil which in turn will result in improved plant health and vigor.

Fact #1- Plants and Soil Microorganisms need Carbon

The most influential element effecting plant health is CARBON. The carbon cycle describes the exchange of carbon between living organisms and the environment. Carbon in the form of carbon dioxide in the atmosphere is used by plants directly in photosynthesis. Plants also benefit indirectly from carbon in the soil, as carbon is utilized by microorganisms, especially those in the plant's root zone.



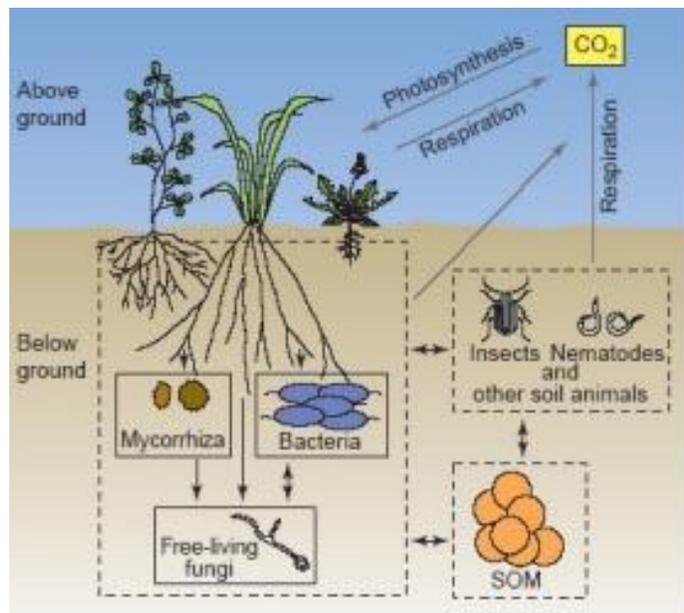
The carbon-digesting activities of soil microbes result in a process known as mineralization whereby carbon and other organic matter is metabolized by the microbes to create nutrient compounds in a form that plants can use. Carbon is constantly depleted from the soil by microorganisms and volatilization. It is not added back by the application of chemical fertilizers, since they do not contain carbon. Soil that is deficient in carbon quickly becomes “tired”, the population of beneficial microorganisms decreases and fertility declines. One indication of this

condition is the gradual decline of growth and vigor of established trees, shrubs and container plants. Another indication of carbon deficient soil is the inability of new plantings to survive and thrive.

The high concentration of carbon in Great Big Plants Liquid Organic Compost replenishes the carbon in your soil. Great Big Plants' liquid formulation carries the carbon directly to where it is needed most in the soil – at your plant's root zone. The specially selected carbon-releasing microbes accelerate the carbon cycle to your plants' benefit. This combination of liquid carbon and microbes is vital to the success of the carbon cycle in your garden.

Fact #2– Beneficial Microorganisms in Your Soil are Essential

Healthy soil requires a balanced, thriving microbial population. Every gram of healthy soil contains at least a million of these tiny one-celled organisms. There are many different species of microbes, each with its own role in the soil environment.



Many plant roots and microbes form special interactive relationships. In the area around plant roots, known as the root zone, exudates containing food for microbes are released by the plant, encouraging prolific microbial growth. In turn, the microbes mineralize nutrients from soil organic matter (SOM) and help the roots absorb the nutrients.

Certain kinds of soil microbes capture nitrogen from the air and change it into food for plants. Some microbes change certain nitrogen materials in the soil into forms easily used by plants. Other microbes lock up and store nitrogen surpluses, and then release them slowly as needed by the plants. There are even microbes which attack and eat nematodes (very small worms that eat plant roots). These microbes are primarily found in soils high in

organic matter. Health producing vitamins and disease fighting antibiotics are produced by microbes and plants in a healthy soil.

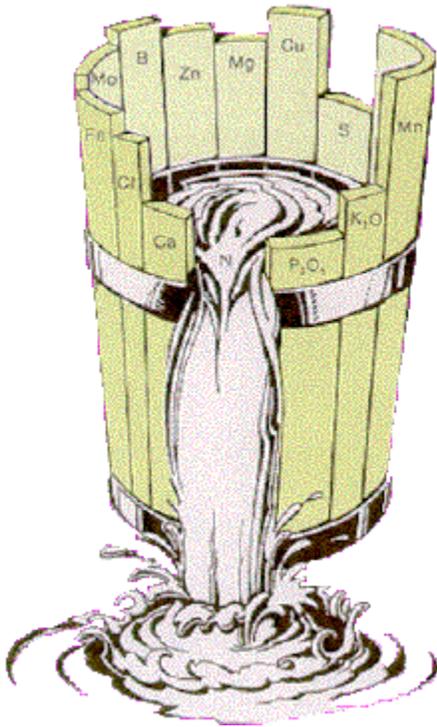
Skilled gardeners can learn to judge if their soil's microbes are healthy and plentiful or not. If earthworms are abundant in the soil, you are assured that the soil microbes are also present and healthy. Conversely, if repeated applications of fertilizer yield limited or unsatisfactory results, it can be an indication of insufficient microbial activity in the soil.

Soil microbes multiply at a fast rate whenever the right kinds of foods are made available to them. Practically all beneficial, helpful soil microbes feed on organic matter in one form or other. By building up the organic matter of the soil and replenishing minerals and micronutrients, the gardener and nature join hands to produce abundant, healthy plant life. Unfortunately, the opposite is also true. Soil that is overworked or otherwise deprived of its supply of humus, minerals and micronutrients will experience a fall-off in the beneficial microbe population and/or a microbe population that is out of balance. When this happens, soil quality declines and plants will ultimately suffer.

Great Big Plants Organic Liquid Compost is teeming with beneficial microbes, providing your soil and your plants the healthy microbial activity needed for easy nutrient uptake, disease and pest resistance, and vigorous plant growth overall.

Fact #3 – The Law of the Minimum affects Your Plants

Justus von Liebig's (1803-1873) Law of the Minimum states: "Growth is proportional to the amount of the most limiting nutrient, whichever nutrient it may be. Likewise a **plant's growth is restricted by the lack of a single element**, even though there may be sufficient quantities of all other essential nutrients."



This principle compares the growth of a plant with the amount of water a barrel can hold, where the boards of the barrel equal the essential nutrients. The barrel can be filled up only as high as the shortest board allows. Repair the too-short boards - that is, add the essential nutrients required by plants back into the soil and the plants can grow to their maximum potential. Any plant that has been rooted in the same soil for an extended period time without additions of micronutrients and minerals (which are missing from all popular fertilizers) may suffer from a deficiency causing less than optimal growth.

Great Big Plants protects your plants from the Law of the Minimum by adding back into your soil the micronutrients, minerals and elements that your plants need for maximum health and growth.

The Great Big Plants family of natural and organic liquid compost products is formulated to replenish your garden soil with beneficial microbes, carbon, minerals and micronutrients. Please try Great Big Plants, Great Big Tomatoes, Great Big Roses and Great Big Potted Plants today. We know you will be happy with the results.

About Great Big Plants, LLC

Great Big Plants, LLC is owned by parent company BioScientific, Inc. For almost twenty years, BioScientific, Inc. has been manufacturing and supplying soil and plant fertility products to the commercial agricultural industry. BioSci's products have been relied upon year after year by some of America's top food growing companies, farmers, and ornamental growers. Developed from these tried and true formulations, Great Big Plants Organic Liquid Compost was created to offer home gardeners the same quality products for use in their own gardens.