

Soil: The Forgotten Miracle

by Patrick Picard

Soil is the unsung hero of our natural world. We walk on it every day and yet seldom stop to think what a miracle it is. Below our feet billions of organisms, some microscopic, some much larger, are busy decomposing today's dead material, turning it into tomorrow's living nutrients. They are the most efficient recyclers on the planet, with next to nothing being wasted. For the last billion years the soil food web, as these organisms are referred to, has been making all life possible on this planet. The extent to which these bacteria, fungi, earthworms, etc. are active in our soil determines the fertility of our land. Without these organisms we would undoubtedly perish.

When left alone these soil organisms do their jobs beautifully, creating nutrient-rich soil from which we grow our food. But modern agricultural practices, deforestation and the use of chemical fertilizers and pesticides have rudely interrupted this natural cycle, creating a worldwide topsoil crisis. Currently, the U.S. is losing topsoil 10 times faster than nature can produce it. China and India are worse yet, losing their topsoil 30 to 40 times as fast. The majority of this soil washes into rivers, streams and lakes, making waterways prone to flooding and contamination from fertilizers and pesticides. According to Dr. David Pimentel, professor of ecology at Cornell University, "Soil erosion is second only to population growth as the biggest environmental problem the world faces."

So, what can we do? As homeowners, compost is the best way to put new life into the soil food web to rebuild our soil. Your food waste and garden clippings are the very things needed to regenerate the soil. Composting combines organic materials (such as food and garden waste) with animal fertilizers containing beneficial bacteria and soil containing microbes. As the soil food web breaks down the organic matter the by-product is nutrient-rich soil, (or "Black Gold" as it is now referred) which can go back onto your landscape to nourish your plants and trees.

Compost tea is another inexpensive and effective way to get life back into severely damaged soil. Compost tea is created from organic compost and is sprayed directly onto plants and soil so that specific microbes that can fight off disease causing pathogens. Soil experts can now tailor compost teas to combat specific diseases, refining the process even more. At Equinox, compost tea is our favorite resource for rebuilding and maintaining healthy soil.

Other ways to add nutrients back into the soil include using mulch, cover crops and nitrogen-fixing plants. Using forests as our model, mulch (in the form of wood chips, leaves, or bark,) creates a layer on top of the soil that keeps water in, adds nitrogen as it decomposes and suppresses weeds. Adding nitrogen-fixing plants into your landscape and cover crops (when possible) condition the soil with vital nutrients for beneficial organisms to thrive.

At Equinox we not only understand that healthy soil means a healthy garden, but we understand how critical it is for our planet. Now more than ever it is paramount that we continue to recognize the importance of the soil food web that we are so dependent upon. It's time the microscopic heroes in our soil are given back what they need in order to sustain life on this planet. Using compost, compost tea, mulch and other permaculture practices, we are proud to be a part of this effort.