

Miller Compost



Importance of Humus In The Garden

In general terms, "Humus" refers to the organic component of soil. The formation of humus begins when the organic residues of decaying plants and animals come into contact with microbial life in the soil. The carbon compounds contained within the residues were synthesized by the plant or animal when it was alive, now become protein and energy for the various bacteria, fungi, and actinomycetes (filamentous or rod-shaped bacteria) involved in the decay process.

Using humification of organic matter, microbes dismantle most of the sugars, starches, proteins, cellulose, and other carbon compounds to utilize them for their own metabolism. Much of the nutrient energy assimilated into the bodies of microbes is re-used by other microbes when they die. Some is mineralized back into plant food and some is changed into more biologically resistant compounds that accumulate as components of humus.

Humus is essentially a massive storage battery containing energy that was originally derived from the sun. This energy becomes available to many different populations of various soil organisms that perform different functions in the soil such as cycling nutrients and changing them into a form that is usable by plants. Eventually the plants die and slowly decay in the soil where the whole process is repeated.

Colloidal refers to the attraction certain soil particles have for cations which are positively charged ions of soil nutrients. Colloids are very small and carry a net-negative electromagnetic charge that can hold cation nutrients in a way that makes them accessible to plant roots. This is called cation exchange. It has been found that humus has a far greater cation exchange capacity than mineral soil as its particles are smaller and therefore have a greater overall surface area. This results in a far greater capacity of humus to hold plant nutrients.

One method of maintaining the humus in soil is an annual addition of compost made from yard trimmings. Since composting yard trimmings is essentially accelerating a natural process, applying compost to a garden may be looked at as an environmentally and biologically sustainable method of maintaining a soil's health and fertility. A healthy soil breeds healthy, stronger plants which are much more resistant to disease and require less fertilizer.

For more information please call us toll free at
1.800.465.5914 or visit www.millercompost.ca