

Encouraging Earthworms

Earthworms

Earthworms belong to the phylum *Annelida*, segmented worms. They are valued by gardeners, agriculturists and horticulturists.

Earthworms help to break down organic materials such as dead plant material and manure, creating new topsoil. Earthworms' greatest contribution to soil health is the production of natural fertilizer; this is accomplished through their excreting their weight in waste products every day.

pH

Earthworms prefer a neutral-pH soil at 6.5 to 7.5. However, they can tolerate a pH between 5 and 8. Lime can be added to the soil to help maintain the pH balance. A soil test can be done to find the pH of the soil and specific mineral deficiencies.

Temperature

Earthworms do not like extremes of temperature. Soil temperatures above 21EC. or below 4EC. will discourage earthworm activity.

Prolonged exposure to temperatures above 35E C. will kill them. Earthworms may move deeper into the soil to escape extreme temperatures. Optimal temperatures are between 10E C. and 16E C.

Moisture

In waterlogged soil, oxygen is driven out of the large pore spaces. Without oxygen, earthworms cannot breathe. Earthworms will die when exposed to excessive waterlogging. To avoid suffocation, they move to the

surface when the soil is saturated. When soils dry out, an earthworm's skin dries in the soil. If soils are dry, earthworms may move to deeper soil layers, die, or revert to a hibernation condition called diapause.

Maintaining moisture levels that are ideal for optimum plant growth in a landscape or garden will also be ideal for earthworm activity. Moisture levels can be maintained by applying compost or vermicast, a by-product produced by earthworms. Using deep-rooting plants such as red clover or chicory helps to retain moisture during dry spells and encourages the earthworms to remain active.

Food

Providing a food source in the form of organic matter is also important for earthworms. Mulching grass clippings into the lawn, putting down a layer of organic mulch in beds, applying compost to the soil and turning under a green manure are all excellent ways to feed earthworms.

Benefits

Earthworms do many things for the soil. They improve the physical structure of the soil, improve drainage and aeration, enhance soil fertility, and improve root penetration.

Earthworms also recycle nutrients into the soil. Earthworms create valuable nutrients necessary for fertile soil. Earthworms are nature's farmers, plowing the soil and fertilizing at the same time.

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