Vermi-Compost

Vermicompost is the product of composting utilizing various species of worms, usually red wigglers, white worms, and earthworms to create a heterogeneous mixture of decomposing vegetable or food waste (excluding meat, dairy, fats, or oils), bedding materials, and vermicast. Vermicast, also known as worm castings, worm humus or worm manure, is the end-product of the breakdown of organic matter by species of earthworm. Vermicomposting is widely used for on-site institutional processing of food waste, such as in hospitals and shopping malls. This type of composting is sometimes suggested as a feasible indoor home composting method. Vermicomposting has gained popularity in both these industrial and domestic settings because, as compared to conventional composting, it provides a way to compost organic materials more quickly (as defined by a higher rate of carbon-to-nitrogen ratio increase) and to attain products that have lower salinity levels that are therefore more beneficial to plant mediums.

The earthworm species (or **composting worms**) most often used are red wigglers (*Eisenia fetida* or *Eisenia andrei*). Red wigglers are recommended by most vermiculture experts, as they have some of the best appetites and breed very quickly.

Containing water-soluble nutrients, vermicompost is a nutrient-rich organic fertilizer and soil conditioner in a form that is relatively easy for plants to absorb. Worm castings are sometimes used as an organic fertilizer because the earthworms grind and uniformly mix minerals in simple forms, plants need only minimal effort to obtain them. The worms' digestive systems also add beneficial microbes to help create a "living" soil environment for plants.

Vermicompost in conjunction with 10% castings has been shown to cause up to a 1.7 times growth in plant mass over plants grown without.

The benefits of Vermicomposting with worms

In addition to increased nutrient levels, worm castings contain millions of microbes which help break down nutrients already present in the soil into plant available forms. As the worms deposit their castings, their mucous is a beneficial component absent from compost produced by hot or cold composting. The mucous component slows the release of nutrients preventing them from washing away with the first watering. Worm compost is usually too rich for use alone as a seed starter. It is useful as a top dressing and as an addition to potting mixes at a rate of one part castings to 4 parts mix. Your plants will love it.

Available in 2 kg and 25kg bags.

Vermi-Compost

Uses of Vermicompost

Vermicompost is generally recommended as an additive to soil, or other matrices such as cocopeat, as a tilth improver, supplying humus and nutrients. It provides a rich *growing medium*, or a porous, absorbent material that holds moisture and soluble minerals, providing the support and nutrients in which plants can flourish, although it is rarely used alone, being primarily mixed with soil, sand, grit, bark chips, vermiculite, perlite, or clay granules to produce loam. In the case of large areas like gardens and vegetable beds, Compost can be tilled directly into the soil or mixed in the planting pots using digging forks and trowels to boost the level of organic matter and the overall fertility of the soil. Compost that is ready to be used as an additive is dark brown or even black with an earthy smell.

Generally, direct seeding into compost is not recommended due to the speed with which it may dry and the possible presence of phytotoxins that may inhibit germination, and the possible tie up of nitrogen by incompletely decomposed lignin. It is very common to see blends of 20–30% compost used for transplanting seedlings at cotyledon stage or later.

Composting can destroy pathogens or unwanted seeds. Unwanted living plants (or weeds) can be discouraged by covering with mulch/compost. The "microbial pesticides" in compost may include thermophiles and mesophiles; however certain composting detritivores such as black soldier fly larvae and redworms, also reduce many pathogens. Thermophilic (high-temperature) composting is well known to destroy many seeds and nearly all types of pathogens (exceptions may include prions). The sanitizing qualities of (thermophilic) composting are desirable where there is a high likelihood of pathogens, such as with manure.

Vermi-Compost tea

Compost tea is a liquid extract or a dissolved solution but not simply a suspension of compost. It is made by steeping compost in water for 3–7 days. It was discovered in Germany and became a practice to suppress foliar fungal diseases by nature of the bacterial competition, suppression, antibiosis on the leaf surface. It has also been used as a fertilizer although lab tests show it is very weak in nutrients with less than 100ppm of available nitrogen and potassium. Other salts present in the tea solution are sodium, chlorides and sulfates. The extract is applied as a spray to non-edible plant parts such as seedlings, or as a soil-drench (root dip), or as a surface spray to reduce incidence of harmful phytopathogenic fungi in the phyllosphere. (Leaves).