

Conclusion

Vermicomposting is one of the most exciting and educational form of recycling. Simply, vermicomposting means making of compost by worms, utilizing worm's innate behavior. Vermicomposting process improves soil aeration and thereby promotes the survival and dispersal of the useful bacterium within such systems. It could be prepared from the kitchen waste, farm waste, market waste, even from biodegradable city waste.

Worm castings used as fertilizer provides all sorts nutrients and trace minerals (such as nitrogen, phosphorus, and potassium) and it rejuvenates soil to better hold those nutrients in place (so they do not wash away with watering). The nutrients they provide are naturally water-soluble which means that they are in a form that plants can metabolize on a cellular level. This is mostly because of all the microbial life (germs) at work. Additionally, castings also contain the slimy stuff (the mucus that worms produce). That slime helps to hold those nutrients in place in the soil during watering so that it better retains the nutrients.

Farmers all over the world use chemical fertilizers, but many are now shifting to organic fertilizers due to the apparent benefits of the latter. Organic fertilizers are carbon-based compounds that increase the productivity and growth quality of plants. They have various benefits over chemical fertilizers, which include the following:

1. Use of these organic fertilizers ensures that the food items produced are free of harmful chemicals.
2. The majority of organic fertilizers can be prepared locally or on the farm itself. Hence, the cost of these fertilizers is much lower than the cost of chemical fertilizers.
3. Organic fertilizers help in maintaining the soil structure and increasing its nutrient-holding capacity.
4. Organic fertilizers ensure that the farms remain fertile for hundreds of years.
5. Organic fertilizers are easily bio-degradable and do not cause environmental pollution.

Fertilizer use is very expensive and can harm the environment if not used correctly. Farmers urgently need a sustainable alternative, which is both economical and productive while also maintaining soil health & fertility. The new concept is "Ecological

Agriculture”, which is by definition different from “Organic Farming” that was focused mainly on production of chemical free foods. Ecological agriculture emphasizes on total protection of food, farm & human ecosystems while improving soil fertility & development of secondary source of income for the farmers. Vermiculture provides the best answer for ecological agriculture, which is synonymous with “sustainable agriculture”. Vermicompost,” is said to improve plant growth and make plants more resistant to disease and insects than plants grown with other composts and fertilizers.

Large-scale or commercial vermicomposting systems need reliable sources of large quantities of food. But we can go through Small-scale (or home systems) vermicomposting systems that usually use kitchen and garden waste. Small-scale vermicomposting is well-suited to turn kitchen waste into high-quality soil amendments, where space is limited. Thus we can conclude that vermicomposting is probably the best way of composting kitchen wastes; and the vermicompst produced by this system provide us own organic soil for pot plants and container gardens on balconies and roofs to grow our own healthy food.