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## Frequently Asked Questions on the

# ***VERMIGOLD on-site waste management system***

### **Q1) What is Vermicomposting?**

**A.** Vermicomposting is the process of feeding of earthworms with organic waste and conversion of this waste material into vermicompost – organic manure by the earthworms. It is the accelerated and controlled decomposition of organic wastes, using composting worms and mesophilic bacteria active in the temperature range of 20°C to 45°C.

### **Q2) What is Vermiculture?**

**A.** Vermiculture means feeding earthworms with organic waste or disposal of organic waste and breeding of earthworms. The primary objective of our system is disposal of organic solid waste / wet garbage and the secondary objective is generation of vermicompost organic manure.

### **Q 3) What is the processing period for conversion of waste material into vermicompost in the Vermigold Tat-G Organic Digester?**

**A.** The Vermigold Tat-G Digester has a very fast waste processing period of 7-14 days.

### **Q 4) What is organic solid waste or biodegradable waste / wet garbage?**

**A.** Organic solid waste or biodegradable waste / wet garbage means waste of plant and animal origin. It includes kitchen waste including: tea leaves, egg shells, fruit and vegetable peels, cooked food scraps, meat and bones, garden waste including leaves and grass, carton waste, cardboard waste and paper waste. These types of wastes are 100% recyclable and comprise around 67% of the wastes in a residential complex or a hotel.

**Q5) Can installation of this system enable us to comply with the various environmental regulations?**

**A.** Yes. Installation of the Vermigold on-site waste management system enables you to comply with the Govt. of India, Ministry of Environment and Forests (MOEF), EIA environmental clearance for new large construction projects and any other local municipal regulation for disposal of solid waste in an environmentally responsible manner.

**Q6) What kind of earthworms are used in the Digester? Can these earthworms process both vegetarian and non-vegetarian food waste?**

**A.** The earthworms used in the Digester are surface burrowing earthworms' also known as composting worms. These types of earthworms feed on rotting organic material. The composting worms used in the Digester are a blend of specially selected varieties of composting worms e.g. African Nightcrawlers (*Eudrilus Eugeniae*), *Periyonix Excavatus* and *Eisenia Foetida* – a blend of these composting worms is most ideal in Indian conditions. Through the vermiculture process all kinds of organic solid waste including vegetarian and non-vegetarian food is processed in the digester.

**Q7) Is Vermicomposting an EST (Environmentally Sound Technology)?**

**A.** Yes. It is an Environmentally Sound Technology (EST) according to the criteria defined by the United Nations Environment Program (UNEP). They define an EST as being less polluting, using resources in a sustainable manner, recycling more of their wastes and products and handling all residual wastes in a more environmentally acceptable way than the technologies for which they are substitutes. Vermicomposting has significant advantages over other waste disposal methods such as composting, landfill and incineration according to the criteria defined by the UNEP.

**Q8) What are the various types of vermiculture / vermicompost systems for disposal of organic solid wastes?**

**A.** Vermiculture / vermicompost systems can be classified into windrow based, pit based and continuous flow in-vessel systems.

**Q9) Is the Vermigold on-site waste management system an advanced vermiculture application?**

**A.** Yes. The Vermigold Tat-G Organic Digester is a continuous flow in-vessel vermicompost system. It overcomes many of the drawbacks of traditional windrow / pit based vermicompost systems.

**Q10) Are Vermigold units the right size for me?**

**A.** The Vermigold Tat-G Organic Digester comes in a single module to process up to 100 Kg of waste per day. It is a modular system and can be expanded to process waste streams upto 2000 Kg/day and beyond depending on customer requirements.

The Vermigold organic waste processor comes with capacity to process around 150 Kg/per hour; multiple units can be installed to increase capacity.

**Q 11) Where can the Vermigold waste management systems be installed?**

**A.** We recommend the installation of our systems as near to the source of generation of waste as possible to reduce material handling or at a centralized location depending on customer preference. A unique feature of our systems is that they can be successfully installed in basements of buildings.

**Q12) What odours and odour controls are needed?**

**A.** The Digester being an enclosed system, there is absolutely no chance of foul odours or the earthworms escaping provided prescribed procedures are adhered to.

**Q13) What happens if foreign non organic waste such as bottles, plastic or cans are accidentally introduced?**

**A.** There is no harm done to the composting worms, *however repeated contamination by foreign objects can affect the performance of the Vermigold Tat-G Organic Digester.* A service, whereby the lower section of removable mesh panels, must be removed and all foreign materials removed. This process is clearly described in the Digesters' Support Manual.

**Q14) Do I need to water the system regularly?**

**A.** No. The system has a temperature controlled automatic watering system which can either be solar or electric powered depending on the preference of the customer. The computer controlled automatic watering system saves considerable quantity of water compared to manual watering system.

**Q15) What about pests?**

**A.** The Vermigold Tat-G Digester is not susceptible to invasion by cockroaches and rats, as its shape and internal environment are not conducive to habitation by pests. Rat / Insect Poisons can be placed safely inside the Vermigold Tat-G Digester with absolutely no threat to the compost worms should the need arise.

**Q16) How much organic fertilizer will I get from the system?**

**A.** The vermicomposting process inside the Vermigold Tat-G Organic Digester reduces the quantity of waste input (feedstock) by a factor of 90%. So in fact if 100 kg of organic decaying waste is converted daily, then only 5-10 kg of converted vermicompost will fall to the collection trays. Along with the solid fertilizer, liquid fertilizer which is known as "vermiwash" is also generated.

**Q17) Why is the Vermigold Organic Waste Processor required to assist the Digester?**

**A.** The Vermigold Organic Waste Processor is a specially designed shredder cum pulveriser to process the organic kitchen, garden, paper and cardboard waste before introducing the waste material (feedstock) in the Organic Digester. Generally the smaller the size of the feedstock, the easier it is for the composting worms to eat the waste. Therefore we use the Vermigold Organic Waste Processor to reduce the size of the feedstock and avoid foul odour which could occur if the size of the feedstock is not reduced.

**Q18) How much power does the Vermigold Organic Waste Processor require?**

**A.** The Organic Waste Processor runs on a 5 HP motor and requires a three phase power point.

**Q19) Is the Vermigold on-site waste management system successful under Indian Conditions?**

**A.** The Vermigold on-site waste management systems have been successfully running at various locations in India from March 2004.