

Devotional Waste Recycling Process

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ABSTRACT

Devotional waste (garbage) which is mostly found on the temples now a days are worship flowers, plastic bags of worship favour, all worship related waste, leaves of trees, mostly dumped waste is coconuts shells and flowers etc. All this waste either thrown into a garbage areas or thrown into a river but we have to change it and have to use it for purpose like composting or extractions of essential oils or any other extraction which could help us to prevent the garbage areas and river water contamination, When adding grass to a compost pile, mix it thoroughly with leaves so it does not compact and restrict airflow. In maximum quantity used flowers for worship in temples are rose, jasmine, marigold, hibiscus, etc. This waste can be used as multiple ways to produce organic compost for agriculture purpose and can help to save nature mainly from water pollution and other pollution as well. Mostly we can use these waste as vermicomposting, composting organic matter, dyes extraction, extraction of oils, and bio-gas formation. The waste can be used and managed to get valuable products which will guid to a fresh and pollution free nature.

Keywords: Environment pollution, River water contamination, Vermicomposting

INTRODUCTION

Set up your compost trench in a convenient location that is more than six feet away from your main structures. To help it retain moisture, place it in a shaded area within reach of a garden hose. The location should be a flat, open space that is protected from flooding or runoff to surface waters or wells. Keep the areas in front of and above the pile clear so you can work without difficulty.

Vermicomposting, or worm composting is a process in which the turning of kitchen scraps and other green waste like green leaves into a rich, dark soil that smells like earth and feels like natural soil. Made of almost pure worm castings, it is a kind of super compost. Not only is it rich in nutrients but it's also loaded with the microorganisms that create and maintain healthy soil and can use them for multiple

purpose and ready to distribute in city for use.

Following are the utilization of vermicomposting

- 1.provides nutrients to the soil
- 2.increases the soil's ability to hold nutrients in a plant-available form
- 3.improves the soil structure'
- 4.improves the aeration and internal drainage of heavy clay soils
- 5.increases the water holding ability of sandy soils
- 6.provides numerous beneficial bacteria

International Journal of Engineering Technology Science and Research IJETSR that covers all topics related to Devotional Waste. This journal circumscribe both exploratory as well as hypothetical articles and review of research papers of environmental importance. There are two

basic styles of composting: (1) single batch, where you add materials all at once to form a pit; and (2) continuous pit, where you add organic materials as they become available. Build your trench three to five feet high and at least three feet in diameter so it can become self-insulating to retain heat. Add four or five inches of carbonaceous materials (browns), then two or three inches of nitrogenous materials (greens), and keep alternating the layers. Another method is to thoroughly mix up browns and greens during loading. Be sure to thoroughly water each layer to ensure even moisture distribution. Toss in a handful of soil on each layer to introduce more microorganisms.

Table 1: Environment Pollution analysis

Materials High in Carbon (Browns)	Materials High in Nitrogen (Greens)
Autumn leaves- 30-80:1	Grass clippings- 15-25:1
Wood chips; sawdust-100-500:1	Animal manure- 2-25:1

The following list provides examples of organic materials that may be added to compost pit -

1. Autumn leaves, twigs, yard trimmings
2. Grass clippings
3. Tea leaves and bags
4. Sawdust from deciduous hardwood trees
5. Bamboo skewers
6. Nut shells (no walnut shells—they can be toxic to plants)
7. Yard trimmings

Applications

1. Make the trench; mix in leaves, straw, sawdust, or wood chips
2. Make the pit larger, provide insulation, add water while turning, and add nitrogen sources.
3. Cover food with brown leaves, wood chips, or finished compost; keep wet out of the pit; enclose the pit in 1/4” hardware cloth
4. Mix in grass clippings, food scraps, and other sources of nitrogen.

Research and Reviews: Because decomposition happens on the surface of materials, particle size and shape are crucial to the composting process according to International Journal of Engineering Technology Science and Research IJETSRS. Chopping materials into smaller particles creates more surface area and accelerates decomposition. Use a chipper, grinder, or a machete to reduce particle size, or place materials in a bucket and use a square-end shovel to cut them into pieces smaller than two inches. Don't get carried away, because very fine particles will prevent air from flowing into your compost pit. Coconut is one of the mostly used contribution in the temples and after removing its outer portion, the shell is generally thrown into the garbage bins. These shells eventually find their way into some rivers or on some open areas nearby causing environmental problems. There is an enormous possibility of using the coconut shell as a future or a renewal material in the construction industry. This will have double benefits of minimize the cost of construction material and solving the dumping problem. And in another side in garbage we have to maintain moisture level, the pit should feel like a wrung-out sponge. The compost is within the right moisture range if a drop or two of water can be compress from a nuisance of material.

CONCLUSION

As surveyed and studied in detail, we can prevent the river water contamination and environment pollution in temples with the help of digging a hole at backyard of the temple and lay all the temple's devotional waste in the hole process by process and the name is given to hole is called devotional waste recycling plant. And alternatively we can produce organic compost, vermicomposting, manure etc. from it.

With this we can reduced the amount of

garbage and devotional waste and keeps clean and fresh environment which is good for small children as well as senior citizens and is also good for future generation. The generated vermicomposting, organic compost, fertilizers are very beneficial to agriculture and we can also use the compost on the temple's gardens to grow healthy and tall trees. It will also helpful to government and other communities which is running the "Save Planet Earth" assignments to keep clean surroundings and healthy environment.

REFERENCES

1. Suthar, S., & Singh, S. (2008). Vermicomposting of domestic waste by using two epigeic earthworms (*Perionyx excavatus* and *Perionyx sansibaricus*). *International Journal of Environmental Science & Technology*, 5(1), 99-106.
2. Singh, R. P., Singh, P., Araujo, A. S., Ibrahim, M. H., & Sulaiman, O. (2011). Management of urban solid waste: Vermicomposting a sustainable option. *Resources, conservation and recycling*, 55(7), 719-729.
3. Shouche, S., Pandey, A., & Bhati, P. (2011). Study about the changes in physical parameters during vermicomposting of floral wastes. *Journal of environmental research and development*, 6(1), 63-68.
4. The Expert Committee, (2000) Manual on Municipal Solid Waste Management, The Ministry of Urban Development, The Government of India. 1(2), 789.
5. Arlosoroff, S., & Bartone, C. (1987). Assisting developing nations. *BioCycle (USA)*..