



Karnatak University's,
KARNATAK SCIENCE COLLEGE, DHARWAD
NAAC Accredited



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7.1.3-Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 200 words)

Our Institution has practice of cleaning the entire campus including roads, corridors, garden area, parking area and stair case of all departments twice a day. Karnatak University has appointed the gardeners and sweepers for the same. Campus maintenance committee monitors their work.

Solid Waste Management:

Our Institution effectively addresses the degradable waste leaf litters from the campus road sweeping. The leaf litter waste is dumped in a separate pit constructed in the Zoology department in the campus. Separate pit/dust bins are maintained in the essential places in the campus.

Vemi Compost Pit:

In our department, the vermicompost has been practiced for many years as under best practices. The degradable waste generated from our department such as leftover eatables, and dried leaves from our department garden is raw material for vermicompost. These raw materials are added every day (leftover eatables) and dried leaves are added every week to the vermicompost pit.

Precautions for Vermiculture and Vermicomposting

For vermiculture several precautions in doing such a process: -

- To ensure that the culture would turn out successful and fruitful.
- From our hands-on experiences, the vermicomposting pit should be protected from direct sunlight
- so that the worm would survive. Direct heat possibly causes the worms to die.
- Spray water on the pit as when required to maintain moisture level because worms are fond of it.
- We should also protect the worms from ants, rats, birds, and excessive rain.

Every 45 days the vermicompost is ready and has been sieved and the fine compost is taken out. This compost is used in our department for garden plants. After that new set of

vermicompost pits will be ready for the next cycle operation. Manures of the cow contribute to the fertility of the soil by adding organic matter and nutrients, such as nitrogen, that are trapped by bacteria in the soil. These previously used earthworms were taken separately in the pit putting dry degradable waste generated in the department was added to the pit. After that, covering that dry waste small layers of garden soil are added then earthworm was left in that and sprinkled with water and covered the lid. This is regularly done in our department as part of best practice.

CONCLUSIONS

The Vermiculture and Vermicomposting activity is such a worthwhile and exciting venture. We have learned a lot specifically about the methodologies, benefits, and significance of this activity. After almost every year, of activity delivery and execution, we can therefore conclude that:

1. Vermiculture is a substantial way of reducing wastes, producing fertilizers, and maintaining the balance of the ecological environment;
2. Vermicomposting can produce high-quality fertilizers that are better compared to other commercial fertilizers in the market;
3. Vermiculture converts farm wastes into organic fertilizer, making it an environment-friendly technology;
4. Vermiculture increases crop yield and lessens dependence on chemical fertilizers thus mitigating climate change;
5. Vermiculture can be made into a livelihood program and become a source of extra income through selling the vermicast and the vermi worms;
6. Taking worms out of their natural environment and placing them in the vermi beds creates a human responsibility. They are living creatures with their own unique needs, so it is important to create and maintain a healthy habitat for them to do their work. If we supply the right ingredients and care, your worms will thrive and make compost for us.

- Biomedical waste management:** As per the guidelines, the biomedical wastes are collected in yellow bags. Then bags are taken to Common Biomedical Waste Treatment Facility (CBWTF) or a waste-to-energy plant.



E-Waste Management:

All electronic e-waste materials like, memory chips, motherboard, cartridges, computers printers, Fax, compact discs, floppy etc. generated by computer lab, electronics lab and Physics lab collected centrally and send to our university, as our Institute is part of university.

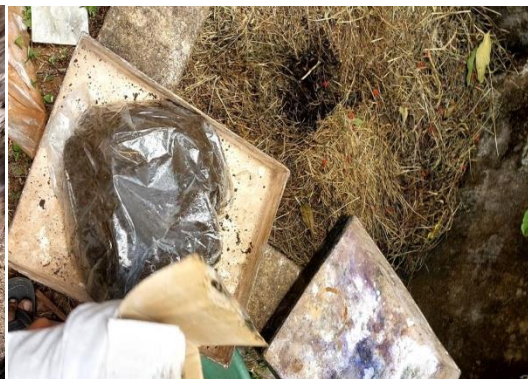


Waste recycling system: Institute does not have waste water recycling system.

Hazardous chemicals and radioactive waste management: Both basic science courses or the applied courses do not contain the experiments which uses the radioactive materials or the highly hazardous chemicals in their curricular. However, department of physics uses radio isotopes of allowed level of activity supplied by authorized suppliers (permitted by DAE BARC) for teaching basic Nuclear Physics experiments to UG and PG Students.



1. Introduction of earthworms



2. Adding of cow dung and dried leaves



3. Watering of degradable waste, cow dung with earth worms



4. Adding garden soil and cow dung



Students involving in the vermin-compost activity in Zoology Department

Liquid Waste: The liquid waste includes sewage water, laboratory, cafeteria and hostel effluents. As a responsible Institute, in north Karnataka, water is highly preserved and it is used without significant wastage. The sewage water generally will not contain any hazardous substances. it will be let into the drainage system. The liquid waste from experiments containing toxic substances from laboratory in department of chemistry, zoology, microbiology, biotechnology will be treated by using alternate chemicals, and mild hazardous substance will be neutralized in the laboratory level (by adapting Standard Operating Procedure) and then let out by flushing water sufficiently . **In chemistry laboratory, generally solvents are reused after distillation.**

All electronic e-waste materials like, memory chips, motherboard, cartridges, computers printers, Fax, compact discs, floppy etc. generated by computer lab, electronics lab and Physics lab collected centrally and send to our university, as our Institute is part of university.

Waste recycling system: Institute do not have waste water recycling system.

Hazardous chemicals and radioactive waste management: Either the basic science courses or the applied courses do not contain the experiments which uses the radioactive materials or the highly hazardous chemicals in their curricular.



HDMC Employees collecting solid waste from the dustbin installed in the campus.



Dust Bins for solid waste collection.

PLASTIC FREE CAMPUS

