

[3] Waste (WS)

[3.3] Organic Waste Treatment



Description:

Three bins system will be installed at different location of the MNS-UAM for proper collection and segregation of different wastes. Separate bins for each type of waste will also be placed in each office.

Organic wastes: The wastes which are biodegradable and come from living things (animals, plants) are called organic wastes. These wastes will be collected in **green bins**. Following wastes will be included in this category;

- Peels of fruits and vegetables
- Eggshells



➤ Used tea bags

- Leftover food
- Grass clippings
- Leaves of trees
- Paper pieces
- Newspaper pieces
- Used tissue papers
- Twigs of trees



Management of Organic waste: The collected organic waste will be converted into organic fertilizer through composting by following steps.

Construction of composting structure: A composting structure (10x6x4 ft.) will be made with brick walls. Three walls of the structure will be of 4 feet height and one wall is of 2 feet height.

Size reduction: First of all, collected organic wastes will be crushed to reduce the particle size to 1.0 cm.

Addition of bulking agent and decomposition enhancers: Bulking agent (sawdust, dry leaves, wheat straw etc.) will be added and mixed to maintain the moisture content around 50%. 1.0 kg urea/100 kg of the mixture will also be added. If moisture content is less than 50% it will be maintained with 5% molasses solution.

Moisture content of the composting mixture will be maintained

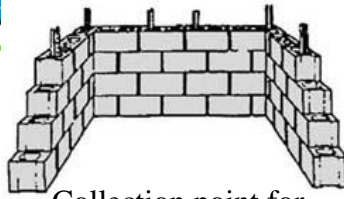
Composting: Finally, mixture will be filled in composting structure and will be covered with plastic sheet to initiate the composting process.

Stirring: Stirring of the mixture will be done weekly to increase aeration for accelerated composting.

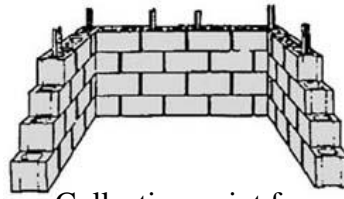
Maturity and Quality analysis: Various chemical analyses will be performed to evaluate the quality and maturity of the compost.

Germination test: Germination test with different plant seeds will be carried out to assess the toxicity of compost.

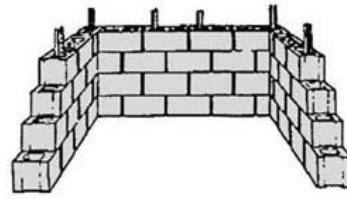
Packing and sale: After attaining the full maturity of the compost it will be packed in the specially designed packets and will be marketed and sold to gardeners and farmers.



Collection point for Non-recyclable waste



Collection point for recyclable waste



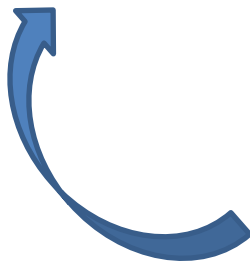
Collection point for organic waste



Windrow composting



Shredding of organic waste



Shredded organic waste

