

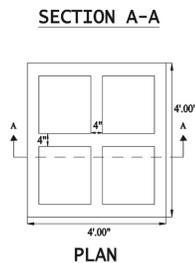
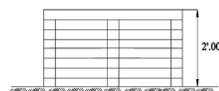
Household four pit Vermi compost unit

Household four pit Vermi—Centre of Science for Villages, especially to use kitchen waste & vegetable waste, designs compost unit. In this unit, the above waste material is utilized to generate Vermi-culture, which forms best quality of manure. This manure is very much useful for kitchen gardening.

Vermi-compost is a simplified and continuous process of composting. In this process Bio-waste and kitchen waste is converted into good quality compost with the help of special species Udrilas Ujini of earthworms. This compost can be used for kitchen garden.

Vermi-compost tank is made in 4" thick brick wall in mud / cement masonry with 4" Perforation in partition walls after every brick (refer drawing for details) the size of tank is 4' x 4' x 2' with two partition walls.

In this type of Vermi-compost 4 tanks are used by cycle method i.e. when manure in first tank will be ready that will be excavated and filled again with organic waste. When manure in the second tank will be ready that will be excavated & filled again with organic waste. Same method is repeated by cycle. All the waste material from kitchen can utilize and best quality compost is manufacture.



Household Vermicompost Unit

NADEP Compost Unit :

This method is developed by an old Gandhian worker of Maharashtra (Pusad) called Narayan Deorao Pandharipande and based on his name, the method is called NADEP method of composting.

Structure:

NADEP compost is prepared in an aerobic tank made up of bricks and cement, the size of the tank is 10' X 4'6" X 3'. All the four walls of NADEP tank are provided with 6" vents by removing every alternate brick after the height of 1 ft. from bottom for aeration. Tank can be constructed in mud mortar or cement mortar.

Construction

Following raw material are required for the construction of the NADE tank.

1. Bricks - 1,200 Nos.

- | | | |
|-----------|---|---------------------------|
| 2. Cement | - | 3 bags |
| 3. Sand | - | 20 cft (1 bullock's cart) |
| 4. Mason | - | 1 for 1 day |
| 5. Labors | - | 2 for 1 day |

The tank is ready to be filled after 24 hours of construction.

Filling NADEP Tank:

The tank should be filled and sealed within 48 hours. Raw materials required for filling NADEP Tank:

- | | | |
|---------------------------------|---|----------------------|
| 1. Agricultural waste | - | 1,350 - 1,400 Kg. |
| 2. (Dry and green) | | |
| 3. Cattle dung or biogas slurry | - | 98 - 100 Kg. |
| 4. Fine sieved soil | - | 1,675 Kg. |
| 5. Water | - | 1,350 - 1,400 litres |

First Filling

Before filling, the tank is plastered by dilute cattle dung slurry to facilitate bacterial activity from all four sides. It is also filled in definite layers, each layer consisting of the following sub-layers.

Sub-layer 1

4 to 6" thick layer of fine sticks, stems, tuar stalk, cotton stalk (This is given for the initial layer only to facilitate aeration) followed by 4 to 6" layer of dry and green biomass.

Sub-layer 2

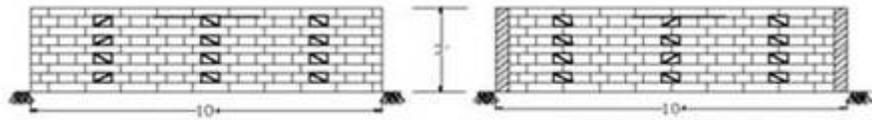
4 Kg. Cow dung is mixed with 100 litres of water. This slurry is sprinkled thoroughly on the agricultural waste to facilitate microbial activity. This slurry is used only as bacterial inoculums in this method.

Sub-layer 3

60 Kg. of fine dry soil is spread uniformly over the soaked biomass. Soil helps in moisture retention, adds micro-flora and also acts as a buffer during biodegradation.

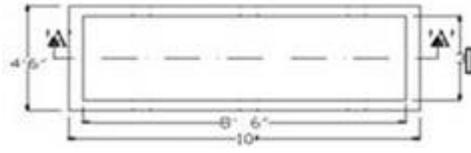
The proportion of organic materials for each layer is 100 Kg. Organic biomass: 4 cow dung + 100 litres water: 60 kgs. Soil. In this way, approximately 10-12 layers are filled in each tank. The tank is filled approximately 1.5' above the height of the tank. After filling the tank, biomass is covered with 3" thick layer of soil and sealed with cow dung + mud plaster. After 15-30 days of filling the organic biomass in the tank gets automatically pressed down to 2ft. At this time without disturbing the initial sealing layer, tank is refilled by giving 2-3 layers over it and is resealed. After this filling the tank is not disturbed for 3 months except that it is moistened at intervals of every 6-15 days according to the weather conditions. From each NADEP tank approximately 2.5 tones of compost is prepared within 90-120 days.





ELEVATION

SECTION 'A' - 'A'



NADEP COMPOST PIT

