

URBAN AGRICULTURE ON STABILISED CITY WASTE

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OPEN DUMPS REMAIN UNIMPROVED

**The Municipal Solid Waste Rules 2000
required :**

Improvement of existing sites by 2001

Identification of new sites by 2002

**Setting up of waste processing and
disposal facilities by end 2003.**



‘BIOLOGICAL PROCESSING FOR STABILISATION OF WASTES’ as per Rules

**This can be easily and immediately done
as-is without waiting for compost plants :**

**SANITISE waste to remove smell, flies, fire,
starting with waste-collection points**

**STABILISE waste by unloading it in
aerobic windrows sprayed with bio-cultures**



WINDROWED WASTE REDUCES IN VOLUME & IS FREE OF GERMS AND WEED SEEDS

Wind-rows heat up to 55-70°C inside thru biological activity, 'pasteurising' the waste.

Windrows need turning at least once after a week, + preferably weekly for 3-4 more times

**Waste is STABILISED in 45-60 days,
producing no leachate.**



STABILISED WASTE SUPPORTS PLANT GROWTH

After decomposition is over, the waste is moist but free-flowing, dark-brown & earthy, rich in humus.

Seed germination is the best test for maturity of the waste and completion of the decomposition process.



WHAT IS COMPOST ?

After unwanted materials are sieved out of stabilised waste, the humus-rich fine fraction is saleable as compost.

Sieving is necessary only because city waste contains mixed inerts and plastics etc along with the food wastes.

Sieving is the most expensive part of compost production, raising compost costs to farmers which makes it difficult to sell.



WHAT IS VERMI-COMPOST ?

Earthworms feed on DECOMPOSED waste, excreting microbe-rich vermicastings good for soil.

So feeding waste to earthworms is an alternative to sieving, not to aerobic windrowing or fermentation in heaps.

Vermiculture needs less capital cost but more area and time than windrows.



PRODUCTIVE USE OF STABILISED WASTE

The ultimate aim of composting is to turn waste back into foods or crops.

These can be grown directly on stabilised waste spread in a layer 0.5-1 meter thick, preferably after sieving out the coarsest fraction through a 50 mm screen



IMPROVING OLD DUMPS WITH STABILISED WASTE

In metros like Mumbai and Chennai where agricultural lands are far away, stabilised waste spread over old piles of untreated waste can support plant growth to reduce water percolation & leachate formation + improve aesthetics.



URBAN AGRICULTURE ON STABILISED WASTE

At Dhapa's Square Mile in Kolkata, vegetables have been grown on stabilised waste for a century, to provide low-cost food for the city.

Grow flowers or fodder, or peelable foods like maize, banana, pumpkin.



DUMPSITE REMEDIATION

Stabilised waste spread over old dumps keeps down dust.

Watering the crops controls fires.

Perimeter plantings can control encroachments by shanties and

provide alternate livelihoods to co-ops of rag-pickers who sometimes set fires to reclaim metals. Crops will stop this.



POLICIES ARE NEEDED FOR PRODUCTIVE USE

Immediate improvement of existing dumps by windrow placement and inoculation and spreading layers of stabilised waste is possible and easy.

It needs people-friendly policies.

Rag-pickers and poor cultivators cannot fill tenders. But prevent squatting through cultivation by collectives or through NGOs.



City compost works wonders for improving saline soils.





