



## COMMUNITY COMPOSTING

Composting is one of the best ways you can reduce the amount of waste you are responsible for. It is the most effective and efficient way of returning Carbon to the soil. When Composting is done at source the benefits are multiplied several times. The satisfaction derived from being able to create fertilizer and free your conscience from the crime of contributing to environment degradation is immense.

In the past year a few of our residents and members of Institutes and Housing Societies in Bandra have not had the need to use the daily BMC garbage truck for their waste disposal. Through community activity these small groups have effectively stopped the need to use fossil fuels for this activity altogether. (i.e. no need for the transportation of waste to the land fill and the fertilizers to our garden). The simple process being followed has us managing to control the release of methane that would otherwise be produced as food waste rots in plastic bags dumped in one of the many landfills around Mumbai.



What started off as devising a simple low cost method for conveniently composting food waste for one family on an experimental basis has now spread to several locations comprising of households, societies and institutions. Many more are in active discussion and planning ways to join us in this effort.

### A Road Map.

Situation	Objective	Challenge
Even though it is the primary objective of the BMC to encourage Composting at source, many people are not aware of this and have never considered composting as an alternative to waste management.	To Convince them of their responsibility as citizens and to convert them to our point of view and this necessity.	To convince them, of the larger need to care for nature in an environment of total dis-regard and provide "good" answers to their concerns.
Composting is "not my job" ... the wide-spread perception of waste management as something that the Government has to do.	To get citizens to take ownership for managing their waste.	To make one a self-driven composter, not motivated by any extrinsic reward or device. To make it a 'cool' activity, rather than a cumbersome, time-consuming chore.
The smell and flies that are normally associated with garbage need to be 'managed'.	To eliminate odour. To introduce new natural smell into the process. To eliminate or reduce	To overcome mindsets and get people to believe that managed well, this is a hygienic process.

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BECAUSE MOTHER EARTH NEEDS A HELPING HAND



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	the presence of flies.	
The fear of having to do it yourself ... "What if I don't do it right?"	To create a chain of support ... that help is just a phone call away.	Strong service design and back end support material.
"We don't live in houses with large garden areas anymore. So how will I compost?  Are there products to help me do this?"	To design, manufacture, distribute and service a range of products that are  Functional, Affordable, Sustainable, AesThetic	These products must :  Be easy to use, Fit into Indian conditions as prevalent, Be easy to maintain, Be made of simple materials & Use appropriate technologies
Where can I find information about composting that is relevant, contextual and easily available as and when I need it?	To have very visual material, that is easy to understand by our target customers.	To do it without being intimidating and over burdening with scientific facts. To attract readers to become users.

**The Compost tumbler** became our best choice because it has answers to problems faced by people who are already doing composting with various levels of success; whether the stench, the rodents & cats, lack of space, no soil, meat & fish waste, etc.



**Aerobic In Vessel Composting** is recognised the world over as the most efficient method to solve these problems. Our solution at the entry level is also a series of environment friendly steps. By using recycled HDPE containers we put to use what would otherwise be useless. As its closed it ensures the rats and cats cannot get at the leftover waste before it composts.

We have provided ventilation at the top of the container that allows fresh air in and a drain at the bottom to rid excess moisture. To this we have added a weather resistant custom metal frame with pivots for tumbling the bin. The result is an ideal aerobic composting environment. The design is simple and can be maintained for many years. For Larger quantities we have fabricated to order solutions which can be discussed based on the requirement.

Now all that needs to be done is our wet and dry organic waste is put in every day till it is 3/4<sup>th</sup> full. A couple of tumbles a day and about 15 to 20 days later, depending upon conditions conducive, the compost is ready. Straining will get professional looking results or it can be just added it to the soil as it is. Using 2 or more bins ensures that when one is full and still composting, another is available to put in more waste.

**Where's the magic?** Our first discovery was that on day 1 you put in what looks like a lot of waste. On day 2 when you open it to add more waste you discover that

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**Nature never produces waste. Mimic Nature ... that's responsible progress.**

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what you put in is reduced considerably. This process continues and you soon begin to wonder where all the waste has gone. The waste we dispose off is almost 90% Water and Air which makes its volume huge. The container is conditioned to release this excess.

**What Happens next?** We start the process by activating the bin once with micro organisms friendly to composting. They multiply in an environment that is a good balance of wet and dry bio waste and oxygen. With the correct balance the micro organisms heat up the waste and kill all harmful bacteria. As you add more waste the micro organisms eat and multiply in proportion to the food available. Then when the sources of food they thrive on no longer exist they disappear as fast as they appeared. The process of composting is totally controlled by nature all you have to do is feed it. Ensure its damp, not soaking wet; see that there is a mix of enough dry and wet matter. If it's too wet add dry leaves, dry grass, paper, cardboard or sawdust. Other than that you just watch the fun. It's a breeze; you become an expert within a week. Nature always works; it will not let you down.

A comparison with other methods:

Function	Compost tumblers (OUR Method)	Compost pits, Boxes, Piles
Speed	As little as 2 - 4 weeks	Several weeks to months.
Work	Waist high for easy loading. No heavy turning - just tumble it rotates on a pivot. Easy removal - just pour it out.	Awkward and difficult to use. The walls of the box/ pit actually make mixing, loading and removal harder. Heavy manual shoveling and turning necessary.
Pest	Pest-Proof. Simple sturdy construction.	Minimal protection a haven for rodents, birds, cats dogs etc.
Smells	Proper drainage and air circulation. The enclosed drum effectively contains any unpleasant odours. Excess water is easily drained off. Once done good compost actually smells sweet!	Poor drainage and excessively damp waste will restrict air flow this will lead to rot and bad odours. For heaps, same as boxes, but more foul
Mess	Everything is contained inside the Tumbler; hose it off and brush it down to clean.	Boxes tend to have messy piles around them from awkward loading and unloading. Shabby looking Tarps are then used to cover the mess.
Quality	Proper drainage, air-flow, and consistent mixing (tumbling) creates perfect, odourless compost every time.	Spotty; Some part out of the box will come out fine; others will not ... there's no consistency. Not many people can work the pile enough to allow for proper drainage, air-circulation and mixing.

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Some typical Installations:



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400 Liter compost station



440 Liter 20 Kgs. per day. (Society with 40 families)



With Crusher Capacity increases to 40 Kgs. /day. 5 to 10 Families 5 to 10 Kgs. /day.



**Sounds good? Would you like to join us?** We have solutions that make it easy. Compost tumblers for Societies in two sizes, Crushers and Strainers, Compost Accelerators, Odor & Moisture Control Agents; all conveniently made available. We provide on site support, training and maintenance of your compost process.

For more information we have all the details on our website: [www.HELM.org.in](http://www.HELM.org.in).

Email: [helm.bandra@gmail.com](mailto:helm.bandra@gmail.com) or call: **09221472472 / 09820442476**.

We will be glad to get you started and running for nature ... to do what is within your power to change.

**DENZIL REGO**

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