

Home Compost Bins¹

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Unmanaged garbage in cities and loss of soil fertility in rural areas are two of the most serious problems facing our country. One way to tackle both these problems at once is to convert organic waste generated in the cities into compost and use this to improve soil quality. Our forefathers knew this and they had built *Saagaas* ("saa" means Compost and "gaa" means pit in the Newari language) in their homes and *chowks* to compost household waste. Mr. Gopal Singh Nepali in his book "The Newars" mentions that the Newars used to sell waste, mainly human excreta, to farmers for 50 paise per tin. Today, many of us have lost this fundamental value that treats waste as a valuable resource that needs to be recycled.



In the recent past, Kathmandu Metropolitan city (KMC) and several NGOs, including ENPHO, have organized training programmes to encourage people to take-up home composting. Following the training, almost all participants realize the benefits of compost and the simplicity of composting household waste, yet when it comes to actually making compost at home, many of them start to make excuses. "I do not have enough space at home... ", "I do not have the time....", "other people in my family may not like it... ", "What if it smells..." are some of the most common excuses. In reality, most people find it more convenient to just dump their waste or give it to the waste collector. Furthermore, there is a fear that letting a pile of garbage rot at home may be dirty or unhealthy. Clearly, there is a need for something more than just training programmes to motivate people.

Product Design

The Compost Bin has been developed to address this need of Kathmandu's urban residents and assist them compost their own waste. The following requirements were considered while designing the compost bin:

The Compost Bin needs to be:

- Attractive enough to be displayed in the kitchen or garden
- Strong and durable, even if it is kept outdoors and handled roughly
- Light enough to be moved around with ease
- Technically sound
- Affordable for a middle-class family
- Big enough to handle waste from one family
- Simple and user-friendly

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The bin is made of plastic, similar to that used for making water tanks, in order to make it strong, light, attractive and affordable. A 100 litre capacity bin was selected and it was fitted with a natural aeration to ensure that compost production happens quickly without causing offensive odour.

Composting is a natural process. The Compost-Bin will help people manage this process so that they can produce high quality compost in the convenience of their homes without creating a mess. Here are a few tips to help in this process:

- Purchase a compost bin and place your bin at a convenient location (kitchen, garden, balcony, etc.)
- Separate your organic waste (food, garden clippings, etc.) Although meat items can also be composted, you may want to keep these items away from your bin so that it does not attract rats or other animals/insects.
- Cut the waste into small pieces (about 1 inch in length/diameter) so that it degrades quicker.
- The moisture content of the waste should be about 50 percent, which means the waste should feel moist when you touch it but water should not be dripping from it. If the waste is too dry, add some water and if it is too wet, add some saw dust or ash.
- If your waste has a lot of green stuff like leaves and vegetables (which is normal for household waste) add some brown material like saw dust to balance the carbon to nitrogen ratio in the waste.
- Place the waste in the bin close the lid. In the beginning, you may have to put some straw at the bottom of the bin to prevent the waste from falling down into the bottom compartment.
- Sprinkle some Bokasi or liquid EM (effective microorganisms), or old compost or garden soil to activate the degradation process.
- Stir your compost about once a week to ensure that it is well aerated. Lack of oxygen causes garbage to smell as it degrades. If you notice that your compost is too dry, add some water or if it soggy, add some saw dust.
- Your compost should be ready in about two months. It will be dark brown in colour and have an earthy smell.
- Use the fork to harvest the compost from the bottom of the Bin.
- Screen the compost and place the rejects back in the Bin.
- Your compost is now ready. Mix the compost with soil (about 30 to 50 % compost) or use it directly in your garden. While storing compost, do not place it in the open; it may lose some of its nutrients.

Marketing

Initially KMC began producing these bins by purchasing bins from the market and assembling it with the aeration system. Now, however, one company has invested in preparing a especially designed mold for home compost bins and this company is in the process of mass producing

the bins. In order to assist the users of the bin, the compost bin comes with the following accessories:

- A set of gardening/composting tools
- A packet of compost
- A cloth shopping bag
- Effective Micro-organisms (EM) to produce high quality compost
- Book on composting (in Nepali)

The total cost of the compost bin, together with accessories, is Rs. 850. KMC is currently providing a 30 percent subsidy and selling the bins for Rs. 600. So far, about 100 Home Compost Bins have been sold and there have been no major complaints from the users.

The Home Compost Bin can be purchased either from KMC or from Clean Energy Nepal or ENPHO. KMC also regularly provides training on home composting and staff from KMC also visits people who may be having problems with their home composting system to diagnose the problem and offer solutions.

So if you want to compost your garbage using this compost bin contact KMC's Environment Department (phone: 4242148) or ENPHO

Have fun Composting!