

## THE SAWDUST TOILET

This toilet is one of the most basic composting toilets to build. It is not suitable for Council Approval.

**The System will manage ALL the human waste created in your home.**

If you are fascinated by this subject then the purchase of the Humanure Handbook, Joseph Jenkins, Jenkins Publishing 1999, ISBN 0-9644258-9-0 is highly recommended.

### THE COMPOST SYSTEM

A sawdust toilet requires three components: a) the toilet receptacle, Fig. 1; b) cover materials; and c) a compost bin system Fig 2. The system will NOT work without all three of these components. The toilet is only the collection stage of the process. The composting takes place away from the toilet, and the compost bin is important.

1. The toilet receptacle is seen in Fig. 1. This is purely to collect your humanure and is not part of the composting process. *Always cover humanure deposits in the toilet with an organic cover material* such as sawdust, wood shavings, rice hulls or dry lawn clippings. Make sure that enough cover is applied so that there is neither excess liquid build-up in the toilet nor offensive odors escaping either the toilet

2. When the toilet is close to  $\frac{3}{4}$  full transfer the contents to the compost bin. *Always cover fresh deposits on the compost bin pile with cover materials* such as wood shavings, shredded straw, or leaves. Make sure that enough cover is applied so that there are no offensive odors escaping the compost pile. The trick to using cover material is quite simple: *if smells bad or looks bad, cover it until it does neither.*

3. *Keep good access to the pile* in order to rake the top flat, to apply cover material when needed, to allow air to access the pile, and to monitor the temperature of the pile. The advantage of aerobic composting, as is typical of an above-ground pile, over relatively anaerobic composting typical of enclosed composting toilets, is that the aerobic compost will generate higher temperatures, thereby ensuring a more rapid and complete destruction of potential human pathogens.

4. The disadvantages of a collection system requiring the regular transporting of humanure to a compost pile are obvious. They include the inconvenience of: a) carrying the organic refuse to the compost pile; b) keeping a supply of organic cover material available and handy to the toilet; c) maintaining and managing the compost pile itself; d) the transfer process can be quite odorous and even "eye watering", so be prepared.

### NORMAL COMPOSTING SEQUENCE

Start the Compost Bin by establishing a thick layer of coarse and absorbent organic material on the bottom of the bin. This is called a "biological sponge"; its purpose is to act as a leachate barrier. The sponge may be an 150mm layer of hay or straw, grass clippings, leaves, and/or weeds. Place the first container of the humanure/sawdust mix from the toilet directly on the top center of the sponge. Cover immediately with more s such as wood shavings, shredded straw, or leaves - the cover acts as a natural "biofilter" for odor prevention, and it causes air to become trapped in the developing compost pile, making physical turning of the pile for aeration unnecessary.

It's very important to understand that *two* factors are involved in destroying potential pathogens in humanure. Along with heat, the *time* factor is important. Once the organic material in a compost pile has been heated by thermophilic microorganisms, it should be left to age or "season." This part of the process allows for the final decomposition to take place, decomposition that may be dominated by fungi and macro-organisms such as earthworms. Therefore, a good compost system will utilize a large composting bin. As you fill the bin the layers at the bottom will be composting. When the Compost Bin is at nearly full, and no less that 6 to 8 weeks since the first deposit into the Bin aging bin, remove one of the doors from the base of the Compost Bin and remove a few buckets of processed compost. There should be soil smelling contents. If the bin fill in less than 6-8 weeks. Get another Compost Bin.

You can now use this valuable fertiliser to feed your garden and fruit trees. Just as a precaution, avoid using this fertiliser on root vegetable crops.

If you have small animals such as chickens or rabbits, their manure can go into the same compost pile. Pet manures can also go into the same compost pile as well, although pet manures, like human manures, can contain pathogens, so thermophilic composting and/or adequate aging of the compost are essential.



Fig. 1 Toilet receptacle



Fig. 2 Compost Bin