

a bit of history

Using human waste as fertilizer has a long tradition in other parts of the world. In the Far East there is a tradition of using faeces for 'night soil' - so called because the waste was collected at night on carts to be spread on agricultural land. This also happened to some degree in Europe, but not on the same scale as in China and Japan. Although the waste wasn't composted at source, it will eventually decompose in the soil. However, it is better to compost the waste at source because until it is composted properly, nitrogen and other nutrients are water soluble, and can leach out of the soil.

Often though, the use of human wastes in the Far East has been romanticised somewhat, and although, as mentioned before, there was no Asian black death, I would like to stress that it is an *extremely* bad idea to use uncomposted human waste on agricultural land or gardens. Although the use of night soil meant that water wasn't wasted or polluted, and soil structure wasn't damaged, it also meant that there has been a long history of related problems. Even up to the twentieth century, it has been reported that over half of China's rural population had some kind of tapeworm / fluke, and that deaths from faecal-borne diseases were disproportionately high.

I have used toilets in India that were over a pig pen, and the pigs were waiting for a meal below – this is a very old and a very good way of turning human waste into non-human waste very quickly.

Nowadays, two countries – Mexico and Vietnam – have a distinct leaning towards compost toilets. Apparently there are 100,000 twin-chamber compost toilets in those two countries; they've obviously seen the light.

In the West, in the late nineteenth and early twentieth centuries, we moved away from pit latrines, night soil, or disposal in streets and rivers, to disposal by flushing with water – the WC or water closet. More about this later, but first a mention of a man who campaigned against this waste of water, and this turning of two resources into a problem, and promoted the earth closet. His name was Henry Moule, and his earth closet competed very closely with the water closet before eventually succumbing towards the end of the nineteenth century.

Henry Moule was a vicar in Dorset, who invented something that looked very similar to a water closet, in that it had an overhead hopper and a chain. But instead of flushing the toilet with water, it deposited a small load of earth. He had recognised some big problems with water closets – that they flooded existing cesspits, which created a health hazard and wasted water. When this happened in Henry's case, he filled in his cesspool and got his family to use buckets, the contents of which he buried in trenches in his garden. He found that when he dug in these trenches several weeks later, all he found was soil, with no trace of human waste.

In his closet, the bucket of earth / waste mix was taken out when full and mixed in a pile with fresh earth. He also realised the fertilizer value of this mix, and used it in his garden.

Earth closets became popular in Europe but not in America, and when the sewer systems were completed in most Western cities, the water closet was finally victorious, as most people wanted the waste out of sight immediately, whatever the health or environmental consequences.

It was a closer contest than you might think though, and several public institutions changed from a water to an earth system. In doing so, they saved money, and solved lots of problems, such as toilets becoming blocked by people flushing unsuitable things down them.

The 'out of sight, out of mind' attitude prevails today too. Perhaps in future, new homes will include a proprietary compost toilet, which can be emptied and used by the owner / occupier, or for a charge can be emptied by local authority trucks, and taken to be spread on agricultural land. (This way those who help reduce the number of truck-miles clocked up to remove the waste will save money too.) Then none of us will waste water when we flush the loo, we won't need to spread sewage sludge with industrial toxins onto farm land, and we won't need the expensive and energy-intensive sewerage system. Until then, you can build one or install one yourself.



Henry Moule's earth closet

photo: www.jldr.com