The Good, The Bad, and The Ugly

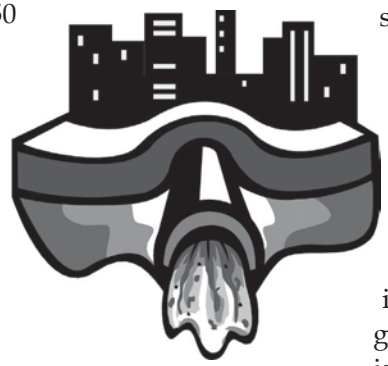
Biosolids

Brenda Greenough

I toured a plant here in Nova Scotia, Canada called Loomers Pumping Services. What they do is pump septic tanks, holding tanks, and camp sites and then treat the waste turning it into fertilizer. This fertilizer referred to as biosolids, is then used on parks, golf courses, community lawns and gardens, even on the White House lawn. The waste product can consist of:

- Feces
- Blood
- Urine
- Parasites
- Solvents
- Detergents
- Vomit
- Pesticides
- Synthetic hormones
- Pills
- Antibiotics
- Bacteria
- Viruses
- Protozoa
- Heavy metals

Farmers and gardeners have been using biosolids on agricultural crops, and to fertilize gardens and parks for decades. Land application of biosolids is legal in every province in Canada and also takes place in all 50 states. The only Canadian province to ban the use of biosolids is Newfoundland. Sweden, Switzerland, France and Holland are among countries that have either banned or have tougher standards on the use of biosolids as a fertilizer. Nestle, Delmonte, and Gerber will not use foods that have been fertilized with biosolids because they are concerned that trace amounts of heavy metals might find their way into the food chain. The real Canadian Superstore has recently stated that they will not sell any produce grown in biosolids. There is much controversy over whether this practice is safe or whether it is harmful to people, as well as the environment, because once biosolids are used on any type of surface or field they have entered the food chain. But, of course, there are always a minimum of two sides to every story.



Sewage refers to human waste that is flushed down the toilet or washes down the drain.

The process for treating sewage and producing what is known as biosolids is as follows:

Waste is collected and pumped into a holding tank. The waste then goes through a strainer, or a skimmer is passed over the top of the liquid, to remove hair, condoms, personal care products, and any other inor-

ganic material. A polymer is then mixed with the waste product. The polymer adheres to the solids to make them stick together while the liquid is removed with a sieve. The liquid is then pumped into another holding tank, treated, and put back into our waterways, rivers, oceans, and streams.

The solids are then combined with wood chips, leaves, and sometimes lime and spread into rows approximately 5 feet high. These rows are then left to "cook" at a temperature of 55 degrees Farenheit and they will be turned every couple of weeks for up to three years before the product is ready to use.

The Nova Scotia Federation of Agriculture would like to see the sewage sludge used to power farms instead of fertilizing the fields. The material, when mixed with agricultural waste, produces biogas, which is an alternative energy source used in Europe and the US. In Sweden public transit is run using biofuels generated from Organic waste.

There is no question that something needs to be done with the vast amounts of sewage that are produced. In Halifax, Nova Scotia alone, more than 7 million tonnes of waste had to be dealt with in 2009. I would like to see mini-bioreactors located under apartment buildings that are able to convert raw sewage from the apartments into methane gas to heat the building. The treated waste water is then recycled back to flush the toilet. Lower water bills, and no heating bills!

Brenda Greenough is a nurse's aid whose love of learning has taken her back to school. At age 50, she is a student in an Adult Learning Program in Nova Scotia Canada where she will complete her high school diploma and move on to becoming a Licensed Practical Nurse.

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