

Studies show antibiotic resistant pathogens concentrate in biosolids

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Editor:

This is a comment adding to Caroline Snyder's comments on sewage sludge (biosolids).

Thirty years ago, the United States Environmental Protection Agency conducted a major study documenting that sewer plants actually generated antibiotic resistant bacteria. That is to say that in addition to receiving these pathogens from the surrounding community, the plant itself enhanced the levels of resistance.

That this should be so is logical. There is a high rate of gene exchange going on in sewer plants where pathogens, which in nature might never get together, are thrust into each other within the crowded soup of these plants.

The levels of disinfection within sewer plants are insufficient to kill these bacteria and they are thus discharged into lakes and rivers that are sources of drinking water.

Much of what comes out of a sewer plant is in solid form and that is sewage sludge or biosolids as the industry calls it. Several studies have documented that antibiotic resistant pathogens are concentrated within the biosolids.

This is again logical because the disinfection processes used in treatment of sewage sludge are inadequate to kill off the bacteria.

The industry's own research has documented that bacteria within sludge under conditions of production can suddenly bloom, giving bacterial counts several magnitudes above allowed levels.

Keep in mind that the issue of antibiotic resistance in sewage sludge is eschewed by the U.S. EPA because if it admitted this fault, it could no longer promote the use of sewage sludge as a benign product.

That 30-year-old EPA study documenting antibiotic resistance can be found at:

<http://aem.asm.org/content/71/6/3163.short>

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