



Biosolids - An Untapped Resource?

The term “biosolid” is not something many people encounter very often, if at all. The Environmental Protection Agency (EPA) defines biosolids as “a primarily organic solid product produced by wastewater treatment processes that can be beneficially recycled.” This definition could lead someone unfamiliar with this industry to think biosolids=poop, which is not the case. Let us explain.

Fresh wastewater (influent) is comprised of 0.01 % solids; at this point in the process, these solids are made up of feces, grit (eggshells, coffee grounds, sand-like particulates), as well as items that belong in the trash instead of down the drain. Keep in mind that the influent is not just toilet water but all drains that contain used water from homes, schools, and businesses. Some solids, such as grit and trash, are removed from the influent when it reaches the plant. The rest of the solids are used in the biological process of stabilizing that waste. During wastewater treatment, the liquids are separated from the solids. Those solids are then treated physically and chemically to produce a semisolid, nutrient-rich product known as biosolids. The terms ‘biosolids’ and ‘sewage sludge’ are often used interchangeably.

Dewatering must occur to change these semisolids into a more easily handled form. The most common treatment at this process stage includes mixing with a polymer and dewatering with a belt press or centrifuge. Dewatered biosolids at this stage are around 17-20% solid and are about the consistency of playdough. For many municipalities, treatment stops here, and the biosolids are either landfilled or have to pay companies to pick them up.

The other option for biosolids involves raising the solid content by incineration or heat drying. These processes reduce vector attraction (flies, mice, and other pests) and pathogen (disease-causing viruses/bacteria) reduction. The biosolids can be used for “beneficial” purposes since they meet state and federal requirements. The CCWSA currently pays a company to haul our biosolids to South Georgia, where they are heat-dried, mixed with peanut shells, and sold as fertilizer. Landfill costs continue to rise in many areas, and some no longer accept biosolids, leading several larger utilities to consider adding heat drying to their current process.



With the rising cost of chemicals, biosolids are an economical option for many in a more residential setting, with the added benefit of being an organic, slow-release fertilizer. The UGA Extension office has stated, “In Georgia, about 25 percent or 44,000 dry tons of biosolids per year are currently land applied (UGA Engineering Outreach Report, 2000).” This number is expected to increase as the costs of chemicals continue to rise, and the public is made aware of this resource. We realize the idea of putting organic fertilizer out may make many readers native to this area picture chicken litter on hay fields and its smell. Biosolids are not the same as poop in the human or animal variety. Biosolids undergo treatment to reduce the characteristics that turn people off to other organic fertilizers, including smell, vector attraction, and pathogens. As the public is made more aware of this resource and the “ick” factor wears off, this will be a more valued “untapped resource” to help municipalities and the community.

References:

Engineering Outreach Report on Biosolids, 2000. University of Georgia. ([http://www.engr.uga.edu/service/outreach/Publications%20\(Articles%20and%20Reports\)](http://www.engr.uga.edu/service/outreach/Publications%20(Articles%20and%20Reports))).

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