Are there concerns?

The National Academy of Sciences says the use of biosolids presents little risk to consumers, crop production and the environment. Potential problems can be prevented by proper planning and treatment practices, including those employed at ALCOSAN. Items of possible concern are odors, nutrient pollution and the possible release into the environment of pathogens, trace metals and microconstituents, which are contained in pharmaceuticals and household chemicals.

Implementation of industrial pretreatment programs and other source controls have decreased metal concentrations in biosolids far below regulatory limits. Additionally, some of the trace metals found in biosolids are the same elements present in soil, water and vitamins.

The presence of microconstituents in the environment is not unique to biosolids. These compounds are showing up in the air and water, even as household dust. Preventing microconstituents from entering the air or water supplies first is the most effective strategy. This can be accomplished by using less-toxic products and properly disposing of unused medication and chemicals.

The use of biosolids continues to be researched at major universities and laboratories within the U.S. and abroad. ALCOSAN has been testing ALCOSOIL for decades, often more frequently and thoroughly than regulations require, to confirm that it remains a suitable product for beneficial use. The results of this extensive research, as well as the positive experiences of farmers and land-reclamation efforts, all support the use of biosolids, including ALCOSOIL, as a safe and beneficial practice.

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ALCOSOIL™

A Growing Solution

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What is ALCOSOIL?

ALCOSOIL is a useful soil amendment created by the Allegheny County Sanitary Authority (ALCOSAN) during the process of treating wastewater from the 83 municipalities that make up the ALCOSAN system. ALCOSAN cleans up to 250 million gallons of wastewater each day. During treatment, organic solids are separated and thoroughly processed to meet safety standards. These are called biosolids.

At ALCOSAN, these biosolids are organic solids combined with lime to produce ALCOSOIL. It resembles crumbly, wet dirt. It is rich in nutrients and organic matter and can be safely used on agricultural land or to restore brownfield and mine sites.

Who can obtain ALCOSOIL?

Due to the type of treatment process used, ALCOSOIL is available only for agricultural or mine reclamation applications.

Is land application new?

The concept of storing and applying both human and animal manure to amend soil goes back thousands of years. Archeology shows that once humans abandoned the nomadic lifestyle and domesticated animal livestock, they mimicked nature and applied manures to soil, aiding its fertility.

Processed biosolids have been produced and sold commercially as garden, nursery and lawn products since the 1920s. Even the White House has used biosolids to reestablish its lawns. Since 1991, ALCOSOIL has been used successfully on both mine reclamation and agricultural sites, and usage is growing.

What are the benefits of using ALCOSOIL?

ALCOSOIL improves soil health since it is very high in organic matter solids. It builds healthier soil structure, sequesters carbon, increases water-holding capacity and decreases soil erosion during drought.

ALCOSOIL is rich in plant nutrients. It provides nearly all of the major elements and several required micronutrients that plants need to grow. It increases beneficial soil bacteria that, along with rain, slowly convert nutrients into a form available to plants. This conversion process lessens nutrient runoff that often occurs with synthetic fertilizers.

Land application saves farmers money while increasing yield, reducing pollution and extending landfill capacity.

How is ALCOSOIL applied?

Typical farm equipment can be used to apply ALCOSOIL either to the surface or incorporated into the soil. Under ALCOSAN's supervision, its contractor monitors the land application from start to finish with the utmost respect for the land and surrounding community.

What regulations apply to ALCOSOIL?

Land application of ALCOSOIL is regulated by federal, state and, in some cases, local governments. In 1993, the U.S. Environmental Protection Agency published federal biosolids regulations under the Clean Water Act. After extensive review of the scientific literature, these regulations established application rates, pollutant limits and proper management practices.

Individual states have the option of following those regulations alone or developing more stringent directives to match specific needs. Rules that vary by state include those that determine when and how to apply biosolids, and when to notify adjacent property owners.