

Biosolids: and concerns about PFAS

WHAT ARE PFAS?

Per and Polyfluoroalkyl substances (PFAS) are a large group of manmade fluorinated compounds that have been in commercial use since the 1940's and are abundant today. There have been concerns about PFAS appearing in biosolids as a by-product of the wide range of their use and dispersal in municipal wastewater systems.

The issue of PFAS is something that everyone should take seriously. We do, and so does our industry. Biosolids, however, are not the problem.

The real issue are the companies that purposely use PFAS in their products, such as non-stick fry pans, and waterproof clothing. It can be found even in the packaging of many fast-food products as well as cosmetics (some mascaras and foundations). The good news is that companies are beginning to eliminate PFAS from their manufacturing processes, but these chemicals will remain in the environment for some time.

Any PFAS that are present in biosolids are in a very small number - measured in parts per billion (ppb). A part per billion is like one soybean seed from 7000 – 50 pound bags (enough for 6,000 acres).

The science of PFAS management and its regulation is in its early stages.

We know that both the federal and provincial governments are investigating this issue. The biosolids industry and wastewater treatment plants are working with them to make sure the land application of biosolids remains a safe, reliable, and sustainable option for farmers.

EFFECTIVE REGULATION IS KEY: Municipal, Provincial, & Federal

Applied to agricultural land, biosolids improve soil health, recycle nutrients, reduce GHG emissions, sequester carbon, reduce fertilizer use, and enhance agricultural economies.

Biosolids have been safely applied on agricultural lands in Ontario over the past 40 years. When applied according to strict Ontario and Federal regulations, there have been no adverse effects to the health of humans, soils, crops, or animals.

Municipalities (who hire biosolids management companies to use this product of the wastewater system) require companies to make biosolids solely available for beneficial use. That is, land application. It is important

to remember that the agricultural land application of biosolids for beneficial use from a licenced municipal wastewater treatment plant is a well-regulated practice. This practice is regulated under Ontario's Nutrient Management Act (NMA) or Federal Fertilizer Act. In Ontario, there are no regulatory standards for PFAS levels in biosolids. Industry, farmers, and regulators need to work together to establish these as soon as possible.

Thank you for taking the issue of PFAS seriously. It is important to convince governments to develop regulations concerning their appearance in biosolids. Together, we can ensure that biosolids remain a safe, sustainable, and valuable asset for Ontario farms. We will keep you informed with any updates. If you have questions or concerns, please contact me any time.

PFAS concentrations (parts per billion)

Biosolids – no more than 50 ppb

Household Dust – approx. 523 ppb

Carpets – approx. 471 ppb

Source: California Association of Sanitation Agencies

“Only a limited number of studies have measured concentrations of PFAS in biosolids and composts. Here the handful of studies have analyzed under 20 or so different materials. With that said, they suggest that while present, concentrations are more like muted tones rather than loud screams.”

Sally Brown, Research Professor in the College of the Environment at the University of Washington