

BLOGS

Agribusiness & Foodservice; Environmental Protection Agency (EPA)

PFAS Contamination Found in Michigan Cattle Operation: *From Effluent to Sludge to Crops to Beef*

A multi-year investigation into Michigan's wastewater treatment plants led to a recent discovery—PFAS chemicals made their way into Michigan's beef supply. While PFAS contaminations have occurred in isolated beef populations in states like New Mexico, this was the first occurrence in Michigan.

What's the concern? Accumulation in humans.

PFAS are a class of man-made compounds that are used to create fluoropolymer coatings which make products resistant to heat, oil, stains, grease, and water. Their pervasiveness results in countless sources of PFAS contamination. They are found in a range of products from nonstick pans to industrial wastes like paper, textile, and tannery operations. PFAS chemicals do not easily break down and can accumulate over time in the environment, including in humans and animals.

Some regulatory authorities have raised concerns over PFAS in humans, indicating that it can lead to long-term adverse health effects. PFAS levels in humans are scrutinized at very low (parts per trillion) levels. Although there are no federal or state regulations for levels of PFAS in food, the EPA has indicated that safe levels of PFAS in drinking water could be approximately 70 parts per trillion. This number may be reduced in the future as the EPA evaluates new PFAS studies. Other agencies like the FDA and DOA are increasing their sampling and research efforts to assess PFAS in the food system.

Recent testing from Michigan's PFAS Action Response Team (MPART) found that beef from the Grostic Cattle Co. in Brighton, Michigan contained an average of 1.9 parts per billion of PFOS (a common PFAS chemical)—more than 27 times higher than the EPA's guidance for PFAS levels in drinking water. In response to MPART's findings, the Michigan health and agriculture departments issued their first ever joint consumption advisory for PFAS chemicals in beef, indicating that the beef from the Grostic Cattle Co. may pose a public health risk.

How did this happen? Sludge.

The PFOS contamination at the Grostic Cattle Co. can be traced back to an industrial discharger that emitted PFAS-contaminated effluent to a wastewater treatment plant in Wixom, Michigan. The Wixom plant treated the effluent and created "biosolids" (aka "sludge") in the process. The biosolids were then used by

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the Grostic Cattle Co. as fertilizer for the crops it used to feed its cattle. It was later determined that those biosolids contained a whopping 2,150 parts per billion of PFOS.

Biosolids have long been used as nutrient sources for agricultural applications. However, in the wake of MPART's findings, steps have been taken to avoid replicating the PFOS contamination suffered by the Grostic Cattle Co. On a local level, the City of Wixom installed carbon filtration technology at the industrial discharger, which reduced PFOS discharges by 99 percent. On a statewide level, Michigan started requiring testing of biosolids before they are used in land application. Michigan now prohibits the land application of industrially impacted biosolids containing PFOS levels higher than 150 parts per billion.

What's the takeaway? Know who you are sourcing from.

The situation at the Grostic Cattle Co. was somewhat unique. The Grostic Cattle Co. operated a closed loop system where the farm applied its own fertilizer, grew its own crops, and fed those crops to its livestock. Its fertilizer happened to be PFAS-laden sludge, affecting its entire operation.

Whether you grow your own crops or purchase your animal feed from a supplier, consider evaluating the source of your fertilizer or animal feed and whether it has been tested for contamination. Your due diligence just might save you from the headache that the Grostic Cattle Co. experienced.

Although there is uncertainty regarding regulation and health studies over PFAS in food, companies operating within the agricultural industry should monitor the continuing developments of PFAS including any regulatory actions that might apply to your business.

If you have any questions about PFAS or how it might affect your business, do not hesitate to reach out to Brandon Chapman, Matt Walker, or any member of the PFAS team at Lathrop GPM where they are ready and eager to assist you.