

Organics Management Company Invests in Award-Winning Lystek Technology

Third High Farms Ltd., Iroquois, ON

Lystek

Nothing wasted.
Everything to gain.

Municipalities are looking to their partners for cost effective ways to return nutrients to agricultural lands that have been removed through harvesting and food consumption.

ABOUT

Headquartered in Iroquois, Ontario, Third High Farms Ltd. was the largest regional biosolids management company in Eastern Ontario, operational for many decades. In 2018, Third High Farms was acquired by Terrapure Environmental.

CHALLENGES

- Business growth and diversification limited by provincially regulated storage capacity
- Risk of exceeding storage limits, sending valuable organic material to landfills

SOLUTION

Third High Farms Ltd. implemented Lystek THP at their site, providing these benefits:

- Production of fertilizer from biosolids and residuals (CFIA regulated, Class A quality)

RESULT

- Diversification of services
- Ability to process biosolids and residuals year round
- Increased capacity to receive and process organic material
- Increased opportunity for storage of processed material
- More than 100,000 tonnes of fertilizer produced and applied to local farmland



KEY METRICS

Annual Processing Capacity: 50,000 tonnes

Lystek THP Module Size: 1 x LY10 (1.0 dry tons / hr)

Lystek THP Processing Footprint: 153 m² (1650 ft²)

Feedstock: Municipal biosolids (anaerobically digested aerobically digested, undigested)



Third High Farms Ltd. is an organics management company that provides biosolids management services to cities in Ontario, such as Toronto, Ottawa, Peterborough, Brockville, Kingston, and others. The company provides transportation, storage, treatment, and land application of biosolids. For many years it was operated as a family business, and was sold to Terrapure in 2018.

In the early 2000s, the company experienced major growth, as demands from municipalities for biosolids beneficial use options were expanding. Municipalities were making efforts to minimize landfilling as a biosolids management practice to help reduce greenhouse gas emissions and extend the life of landfills. At the time, Third High Farms did not have the capability to process residuals – the company solely offered transportation, storage, and land application services for non-agricultural source material (NASM, or Class B biosolids). The company's operating permit specified the quantity of NASM that could be stored on-site. Reaching capacity with the expansion in demand for their services, the company began to look for means of further treating



the biosolids to produce a fertilizer (Class A biosolids), which would expand their service offering and storage options.

"Essentially, we had been acting as a hauler, storage site, and land applier of dewatered biosolids," says Dean Swerdfeger, owner and founder of Third High Farms.

"We wanted the ability to manage more liquid material, and provide more sophisticated, long-term, resource recovery solutions."

Dean Swerdfeger

The maximum biosolids storage capacity of the Third High Farms receiving site imposed a real limit to the company's business growth and ability to serve new clients.

The key to addressing storage issues while simultaneously creating more diversified business opportunities with the ability to efficiently convert organic materials – hauled from across the Province – into a saleable fertilizer product that can be safely stored in existing liquid storage pits (unused manure storage).

"We live or die by storage. Had we reached capacity, valuable material would have gone to a landfill. It's that simple,"

Dean Swerdfeger

Third High Farms reviewed several other technologies and selected Lystek THP. "Lystek's technology was the only one that addressed all of our needs," confirms Swerdfeger. "We also liked its small footprint, low cost, and ease of operation compared to others we had seen." Lystek was responsible for the full design, building and commissioning of a new building in

addition to the Lystek THP system.

The system was commissioned in 2013, and has allowed Third High Farms to expand their service offering to utilities and private generators. "With Lystek technology, we can now provide municipalities with a competitive solution that better supports their biosolids diversion goals while giving us another option for managing and monetizing the resulting product," says Swerdfeger.

About Lystek

Lystek is a leading provider of Thermal Hydrolysis solutions for the sustainable management of biosolids and organics. The multi-use, award-winning Lystek system reduces costs, volumes and GHG's by converting municipal and industrial wastewater treatment facilities into resource recovery centers. The technology transforms organic waste streams into value-added products and services, such as the patented LysteMize® process for optimizing digester performance, reducing volumes and increasing biogas production; LysteGro®, a high-value, nutrient-rich fertilizer and LysteCarb®, an alternative source of carbon for BNR systems.