



Biogas benefits

Opportunity for your farm

Biogas offers significant opportunities for Canadian livestock farmers. This factsheet details how biogas production can enhance a farm's environmental stewardship and advance the farm business.

Producing biogas reduces your farm's environmental footprint

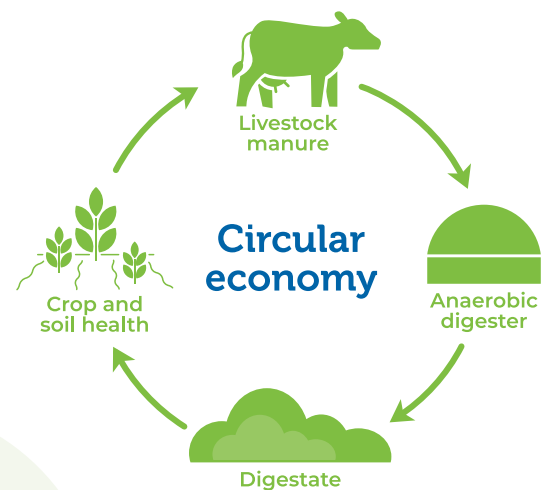
Adopting innovative technologies to manage manure can have substantial environmental and agronomic value. A biogas system featuring an anaerobic digester (AD) offers this opportunity.

Reduced greenhouse gas emissions

Capturing and using methane through anaerobic digestion can significantly reduce greenhouse gas (GHG) emissions from manure systems, mitigating the impacts of climate change. A study shows that an on-farm AD can reduce GHG emissions from manure storage, handling, and processing by more than 50%.ⁱ

Sustainable loop of food, waste and energy

Recycling nutrients through biogas production, creates an economically and environmentally sustainable food production system. In addition to biogas, the plant produces nutrient-rich digestate that improves soil health and boosts crop production, which feeds livestock and supports the farm's circular economy.



“Our environmental footprint has changed 100% for the better since constructing our biogas facility.”

Carl Frook
Marl Creek Renewables

For more information visit:
farmingbiogas.ca

Decreased odour and pathogens

The process of digesting manure at high temperatures destroys weed seeds and prevents pathogens from entering the watershed, protecting both animal and human health. Anaerobic digestion also removes odour compounds from raw manure, which provides a more neighbourly approach to manure management.

Green energy supports sector

Producing renewable heat and energy through anaerobic digestion lessens the farm's dependency on fossil fuels – an opportunity for the entire agricultural sector. According to a study, when biogas-based electricity replaces grid-based electricity overall GHG emissions from the entire dairy farm can be reduced by 35%.ⁱⁱ

A business opportunity for the future of your farm

Converting manure and other feedstock into renewable energy can help a farm diversify its sources of income and create new opportunities for the next generation.

Diversified farm income

A biogas plant can improve a farm's financial picture through energy sales and more. Biogas creates a renewable source of energy that can be used on-farm or sold to utilities or neighbouring properties.

In addition, biogas offers the opportunity to add revenue through tipping fees from non-agricultural feedstock. This not only boosts a farm's revenue, but provides additional capacity for energy production.

Production of digestate, a nutrient-enhanced by-product, can also create new income-generating opportunities through off-farm sales.

Biogas production can even be considered a risk management strategy for dairy farms as world markets and supply management evolves. It can increase a farm's resiliency in the face of uncertain commodity markets.

“Biogas certainly offers a diversified income so that we’re not just dependent on the sale of milk, veal calves and field crops.”

**Deborah Whale
Clovermead Farms**

Reduced input costs

An on-farm biogas plant reduces a farm's input costs. Digestate, the nutrient-rich by-product from anaerobic digestion, is key to this savings. By recovering and transforming lost nutrients into soil amendments, farms benefit from reduced commercial fertilizer requirements and costs. Converting nutrients into a form that is more accessible for plant uptake compared to raw manure boosts soil health and increases crop yield.

Farms with on-farm biogas systems are also energy independent, benefitting from reduced heat and electricity costs. The energy captured through biogas production can support many on-farm functions, including heating buildings and water as well as grain drying.

Investment in the next generation

Adding a biogas plant to a farm operation is another way to invest in the farm's next generation. Many young people are looking to join the family farm. A new biogas enterprise will enable them to carve out a unique role and add innovation to the farm.



If you're ready to realize these advantages for your farm, start by using the Biogas Self-Assessment Tool at farmingbiogas.ca to determine your farm's suitability.

The Canadian Biogas Association is the source to connect you with information and expertise to get your farm started with biogas.



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^{i,ii} http://www.sustainabledairy.org/publications/Documents/DairyCap_Digestion_FactSheet.pdf

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