



## A2A BIODIGESTER WORKSHOP Fact Sheet

When the family farmer is making a decent living, stewardship of the land becomes a lot easier. But it's no news that there's a crisis in farming that is persuading many owners of small farms to leave the land. At the time of the workshop, only the 2001 census figures were available. They showed that in the United Counties of Leeds and Grenville there were 1,348 farms, and the average return for all farms after expenses and taxes was about \$7,200.

A2A believes that a strong farming community is essential for the welfare of the United Counties, and for the protection and enhancement of the natural heritage available to everyone in the form of clean waterways, good quality groundwater, abundant wildlife, and productive forests and wetlands.

It was with this thought in mind that A2A held a one-day Biodigester Workshop at Toledo on April 10th at no cost to farmers. The intent was to provide owners of small farms with information on how they could increase their income, both through generating and selling electricity, and through reducing costs associated with nutrient management and the amount of electricity they have to buy from Hydro One.

Biodigesters can turn manure, agricultural wastes, and specially grown crops into methane (a form of natural gas), which can be used as fuel to power electricity generators. The electricity can be used on-farm, and the excess sold under Ontario's standard offer contracts to Hydro One at 11 cents a kilowatt hour. Additionally, biodigester residues are a very rich fertilizer, capable of displacing at least part of the chemical fertilizers normally used in farming.

The lead speaker at the biodigester workshop was Nils Semmler, president of RENTEC Renewable Energy Technologies Inc. RENTEC designed and directed construction of the biodigester/electricity installation at the Lynn feedlot near Lucan. RENTEC is also working on additional projects in Mexico, Peru, and Eastern Europe.

Mr. Semmler stressed that if farmers want to install a biodigester, they should first decide in detail how they want to integrate it into their farm operations, and what feed stock they plan to use. To produce the best results, biodigesters need to be designed to meet specific objectives. There is no such thing as a one-size-fits-all biodigester that will operate efficiently. The microbes that break down the feed stock, Mr. Semmler said, are very good at doing what you ask them to do.

But you have to be clear about what you want and build your system accordingly.

He said that the basic formula for financial returns from generating electricity using a biodigester to produce fuel is, given a price of 11 cents a kilowatt hour, one kilogram of dry organic matter will produce 1.24 kilowatt hours of electricity, and realize 13.6 cents in revenue.

Tom Hutchinson, a farmer and professor of ecology at Trent University in Peterborough, also spoke. He has been researching cropping strategies for producing electricity and ethanol. He said that one of the best specialty crops that can be grown as a feed stock for biodigesters is Jerusalem artichoke, because it has such a high energy content.

Russ Christianson, a consultant to cooperatives on strategic planning and organizational development, outlined the basic steps for forming a cooperative, and stressed that the fundamental reasons for starting a co-op is that it pools different kinds of expertise. It brings people together, he said, to accomplish something that could not be accomplished by individuals working alone.

The final speaker was Steve Clarke, energy and crop engineering specialist at OMAFRA (Ontario Ministry of Agriculture, Food and Rural Affairs). He is based in Kemptville, and has special expertise in selling electricity and connecting to the grid. He explained that until now it has been very expensive to connect to the grid, but that he expected an announcement shortly that the price of equipment for making the connection would be dramatically decreased.

Eighty people attended the workshop, most of them farmers. In a questionnaire distributed with workshop materials, participants were asked whether they thought the workshop met their expectations. Twenty-one evaluation slips were returned, and all of them stated: "Yes." Many expressed an interest in the workshop being offered in other parts of the A2A region.

A2A wishes to thank its numerous partners who helped make the Biodigester Workshop possible-The Township of Elizabethtown Kitley, Rideau Environmental Action League, the Frontenac Arch Biosphere, Eastern Ontario Model Forest, Rideau Valley Conservation Authority, the Toronto Food Policy Council, Hillside Farms, McCann Farm Automation, Leeds County Stewardship Council, E-Solutions, and Rural Leeds 2000 and Beyond.

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