



FARE

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Sharing valuable insights

Share

Welcome

Welcome to our second edition of the FARE Share Newsletter. This issue brings more research and analysis from professors and students at the Institute for the Advanced Study of Food and Agricultural Policy in the Department of Food, Agricultural and Resource Economics (FARE).

In this issue, you'll read about a new online tool for livestock producers, marketing insights for corn and soybean growers, and the growing significance of large farms in Ontario's grain and oilseeds sector. We also take a new look at neoclassical economics. We hope this issue brings our readers new information and insight.

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More bang for your muck

Research by: Rob Anderson and Alfons Weersink

Anaerobic digesters (AD) that convert manure and other organic farm waste into useable energy are helping producers move toward more sustainable production methods and reduce waste. For producers wondering if they should invest in this technology, there is now a handy online tool that can help determine if it's a worthwhile move for their farm operation.

FARE graduate student Robert Anderson and Professor Alfons Weersink along with Don Hilborn from the Ontario Ministry of Food, Agriculture and Rural Affairs (OMAFRA), are looking into the benefits and costs of building anaerobic digesters on various-sized dairy farms.

The researchers have created an online tool (available at http://bioeconproject.com/?page_id=68) that estimates farm waste output according to farm size and number of livestock. It calculates the estimated net profit from energy sales compared to start-up and operating costs.

"Anaerobic digesters are more common in western Europe. They are viewed as a win-win situation because they convert farm waste into energy for fuel or electricity, but in Canada they are expensive to build due to the scale and complexity necessary for electricity production," says Anderson.

Anaerobic digesters are not financially feasible for smaller farms because of the large initial capital investment required, he adds. "The

technology isn't advanced enough to produce a sustainable amount of energy from small amounts of farm waste," he says.

The research team used data provided by OMAFRA and the Agri-Energy Producers' Association of Ontario to calculate a farm's net profit using an anaerobic digester. They found dairy farms with more than 600 cows tend to reap the most benefits. ADs use anaerobic bacteria to breakdown organic material without oxygen. The result is biogas consisting of 60 percent methane and 30 to 40 percent carbon dioxide. Larger operations that have more animal waste at their disposal can quickly recoup their initial investments through energy production and utility savings. There are currently 10 anaerobic digesters in Ontario, and another 20 are under potential construction.

This article was adapted from a story that first appeared in the August 2012 issue of Milk Producer magazine by Anthony Ngai, a student writer with the University of Guelph's office of research.

Collaborators on this research include Chris Duke, OMAFRA biogas systems program analyst; engineering professor Bill Van Heyst; FARE associate professor Getu Hailu; and Claudia Wagner-Riddle, environmental sciences. Funding is provided by the OMAFRA – University of Guelph Partnership.





Growing significance of large farms

Research by: *Rakhal Sarker, Shashini Ratnasena and Farzana Enam Rasna*

Large grain and oilseed farms across Ontario are growing in number and size in the sector according to a study by FARE Professor Rakhal Sarker and Research Assistants Shashini Ratnasena and Farzana Enam Rasna.

The trio set out to gather empirical evidence to demonstrate the extent to which different sized farms are contributing to total production in Ontario. While the Business Risk Management (BRM) programs are helping all producers, little is known about the level of program benefits received by different sized farms. This study sheds light on both issues focusing on the grain and oilseeds sector, which is the most dominant segment of Ontario agriculture, both in terms of the total number of farms and the share of total farm cash receipts.

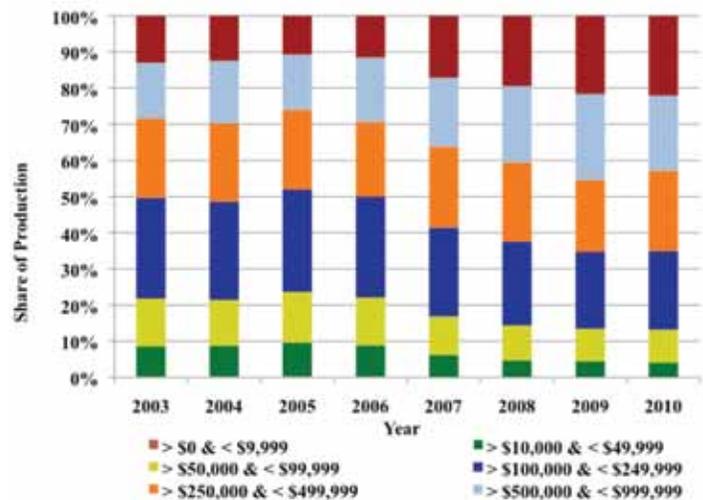
Using data from the “Ontario Farm Income Database” maintained by OMAFRA, the researchers determined that the number of farms growing grain and oilseeds declined between 2003 and 2010, but revenue per farm grew substantially. This indicates the growing significance of large producers. While the number of farms receiving BRM payments declined, the average size of the payment received per farm grew considerably for grain and oilseeds farmers in Ontario. This also indicates that medium and large producers are actively participating in BRM programs. A more insightful picture of the extent of structural change in the sector emerges when looking into the distribution of farms, production and program payments under different size categories.

Hobby farms and small farms are becoming increasingly less relevant both in terms of total number of farms and total

production. While mid-sized farms remained economically relevant and maintained their share in total farms, production and program payments, large and very large farms are commanding larger shares of total production over time. During the last decade or so, low farm incomes plagued all farms, large or small. Since BRM payments are based on farm-specific production and reference margins, the large farms have also received larger shares of BRM payments in Ontario.

The study concludes that barring any substantial change in the design and payment limit of the BRM program, a larger share of BRM payments will continue to flow towards large and very large grain and oilseeds producers in Ontario.

Share of grain and oilseed production by different size categories in Ontario



Funding is provided by the OMAFRA - University of Guelph Partnership



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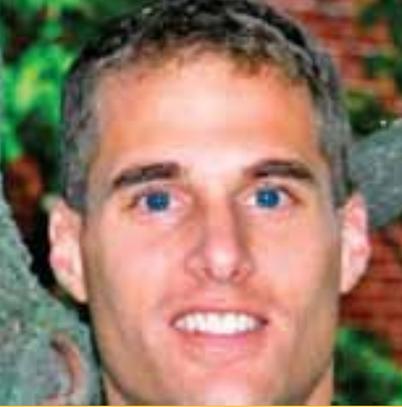
First Nations Land Management Agreement Accelerates Economic Development

First Nations communities that manage their land and resources according to their own land code have greater economic development potential, says Chief Robert Louie of the Westbank First Nation.

His remarks were made during a recent FARE Talk podcast on First Nations land management and control, hosted by Dr. Brady Deaton, Associate Professor, FARE. Their discussion focused on

the Framework Agreement on First Nations Land Management that enables First Nations to opt out of the 34-land related sections of the Indian Act and develop their own land code.

“The Agreement recognizes that First Nations are their law makers on their own lands, that they have the power to make laws over their lands and their resources,” says Chief Louie, who is also Chairman of the First Nations Lands Advisory Board. “It allows the First



Alternative marketing strategies

By Richard Vyn, Assistant Professor, FARE

“In years where the pre harvest prices are greater than the costs of production, producers would be better off marketing their crops through pre harvest strategies rather than waiting for even higher prices later in the year.”

With wildly fluctuating commodity prices over the past few years, the job of marketing has not gotten any easier or less stressful for Ontario corn and soybean producers. Lack of information available to producers regarding the effectiveness of various corn and soybean pricing alternatives and contracts under various market conditions also complicates matters. A recent study addresses these issues, giving producers valuable marketing insights.

In the study – “The effectiveness of alternative marketing strategies for Ontario corn and soybean producers” – a simulation model is developed to compare returns from various pricing alternatives and contracts. Using daily cash and futures prices from 1992 to 2009, average prices net of applicable costs (e.g., storage, interest, commissions) are generated for a set of 17 marketing alternatives. These strategies are composed of marketing tools that are regularly utilized by grain and oilseed producers, such as cash sales, forward contracts, basis contracts, futures contracts, options, and combinations of these tools.

The average prices for each alternative generated by the simulation model are compared to that of a baseline strategy, where the entire crop is sold at harvest. To examine for differences in the effectiveness of specific strategies across years with different market conditions, the simulation model is then run separately across two types

of years – those with pre-harvest prices that are greater than the costs of production and those with pre-harvest prices that are lower.

The strategies that performed best over the time period examined in this study differed substantially between corn and soybeans. Pre-harvest strategies, particularly those in which futures or options are used, performed best for corn while cash sale strategies did not offer much improvement over the baseline strategy. Conversely, cash sale strategies generated higher average prices than did pre-harvest strategies for soybeans, meaning different marketing strategies should be developed for different crops.

In addition, the differences in the relative effectiveness of specific pricing alternatives between the higher-price and lower-price years imply that using only one specific strategy every year may not be the best approach to marketing, even if the selected strategy has been found to perform better on average across all years compared to other strategies. Rather, it may be prudent to use different strategies that are selected in response to market conditions in the pre-harvest period.

Read more about this study in the December 2012 issue of the Canadian Journal of Agricultural Economics.

Funding for this project was provided by the Ontario Corn Producers’ Association (now part of the Grain Farmers of Ontario) and OMAFRA.

Nations to take advantages of things like economic development potential at the speed of business – by that I mean there is no regulatory red tape and approvals that the Department of Indian Affairs is required to do.”

Chief Louie points out that one in six First Nations are either signatories to the Framework Agreement or would like to be. Also, he mentions studies that show communities with direct control over their reserve lands and resources have increased registered land transactions, reduced administration costs, and a boost in employment and the local economies.

Chief Louie encouraged listeners to support the initiative citing an estimate that Canada receives a financial return of at least 10 times what the federal government invests in the Framework Agreement process. “I believe there is an understanding that is taking place now that by investing in the First Nations land management process we will get a return, not only to the First Nations, but to the local economies provincially and nationally,” he says.

To listen to the complete conversation and other podcasts, visit the FARE website: http://www.uoguelph.ca/fare/FARE_talk/index.html#first.

Market volatility

Philip Shaw, a farmer and agricultural economist based in Dresden, Ontario, adds another perspective to the study by Assistant Professor Richard Vyn. He points out that commodity markets during the first part of the study window experienced low volatility whereas the latter part underwent the other extreme.

In 2005, the commodity markets really changed. Millions of dollars of investment capital poured into commodities, partly because interest rates were much lower, but also because investment limits were expanded at the Chicago Mercantile Exchange, says Shaw, a FARE graduate who also writes *Market Trends*, a monthly analysis of grain prices for the Grain Farmers of Ontario.

The agricultural commodity market and the cash market for grains that we have in 2012 is totally different structurally than it was between 1992 and 2005, he adds. During this time, commodity markets experienced the perfect storm with expanded investment limits, low interest rates, as well as the expansion of the ethanol market leading to an increase in demand for corn. Shaw’s observation is in keeping with Vyn’s suggestion at the end of the study to conduct similar research for the same jurisdiction over a different, or perhaps longer time period, to observe whether the relative effectiveness of specific marketing strategies remains consistent.

Save the date

Be sure to keep your calendar open on May 14, 2013 to attend the second annual conference of the Institute for the Advanced Study of Food and Agricultural Policy.

On the heels of the highly successful "Growing Our Future: Making Sense of National Food Strategies" conference in Ottawa in April 2012, the Institute is planning a conference that will address land use issues. Stay tuned for more details.

This newsletter, FARE Talk and the annual conference are just three initiatives from the Institute whose mission is to provide independent, credible, and timely policy analysis with respect to socially significant food and agricultural issues.



The Mengerian milking stool

By Glenn Fox, Professor, FARE

The reputation of economics has suffered badly in recent years. Even among economists, disciplinary confidence is not high. One of my current projects is investigating the foundations of Mengerian neoclassical economics. Neoclassical has become an adjective with largely negative connotations. But if we reject the homogenization theory of the origins of neoclassical economics, then these connotations may not be deserved. If contemporary economics is largely Walrasian, then maybe we are throwing out the neoclassical baby with the Walrasian bathwater.

Menger's *Principles of Economics* (1871) established him as an original and perceptive theorist. But his methodological writing, particularly his *Investigations into the Methods of the Social Sciences* (1883), is the primary source for Menger's views on methodology. In that book, among other things, Menger outlines general science theory, which he applies to economics. It is this science theory, his methodological prescription for economics, that has been hidden in plain sight as a way out of the present methodological gridlock in economics.

I describe Menger's science theory for economics as "Menger's methodological milking stool." For the uninitiated, a milking stool has three legs. This configuration was important in the era when cows were milked by hand, by a person sitting beside the cow. Barn floors were uneven and a four-legged stool is unstable on an uneven surface. A three-legged stool, on the other hand, tends to not rock on an uneven floor. Menger's science theory for economics maintains

that theory, history (or empirical economics) along with the third leg of the stool, policy or application, play independent and necessary roles in sustaining progress in economics. Each of the three legs is necessary. No one leg is preeminent. Menger's methodology is not hierarchical. Theory does not trump data, neither do data trump theory. Much of the 20th century economic methodology project pitted various empiricist methodologies against theory, and assumed that these were the only two alternative science theories available in economics and that one had to be preeminent. By the end of the 20th century, a code of practice seems to have been established among economists that crowned some sort of empiricist science theory the victor, ignoring long understood problems of induction and of theory laden observation.

But Menger's methodological milking stool, had it been taken more seriously when it was proposed, would have avoided this needless and unproductive competition. Theoretical economics, empirical economics and practical economics might interact today in much the same ways that contemporary theoretical physics, experimental physics and engineering interact. And maybe the world would be a better place.

Fox describes Menger's science theory for economics as Menger's methodological milking stool with theory, history and policy/application each representing one leg – and each playing a necessary and equal role.



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