

WITH Larry Martin, Senior Research Fellow, George Morris Centre



Larry Martin was born in Missouri and raised on a dairy farm in Ohio. He was educated at Ohio State University and the University of Illinois. At the U of I, he was sponsored by the Ford Foundation to conduct his dissertation research in India. Larry joined the faculty of the Department of Agricultural Economics and Business, University of Guelph in 1972, teaching marketing and risk management until 1986 when he was appointed Chair of the Department.

Upon completing his term as Chair, the George Morris Centre had been conceptualized and someone was needed to turn a dream into reality. Larry was appointed the first Director of Canada's only independent agri-food think-tank in 1990, and CEO when the Centre became a not-for-profit corporation in 1998. In 2007 Larry became Senior Research Fellow at the Centre, with a focus on our education programs. Larry is also a fellow of the Canadian Agricultural Economics Society. Larry Martin was interviewed after his Lunch on the Frontier speech on the Frontier speech on February 11, 2008.

Frontier Centre: Ethanol has been heralded as solving three problems: absorbing surplus agriculture production capacity with increased demand, reducing greenhouse emissions and reducing dependence on oil from other countries. To what extent do you think these promises could be fulfilled by greater production and use of bio-fuels in Canada?

Larry Martin: Well first of all, I think we did have a surplus of production in the last number of years. But with the growth that has taken place and demand for food around the world, I don't think we do any more so I'm not even sure about that first argument. It obviously can absorb it if it's there. The other two issues are ... it's really close, in that it appears that we use almost as much energy to make energy in that process therefore I'm not sure we gain anything at all in terms of replacing the fossil fuels. There is increasing question as to whether the environmental effects, whether it's greenhouse gas or others, are positive or negative. The internal research folks in the European Union are just now seriously thinking about limiting the amount of bio-fuels in the future as a result of the issues on both cost and the environment.

FC: Are some bio-fuels more realistic than others?

LM: Yes. The numbers I've seen all say that the ones that are the least-effective in both areas are corn and wheat. The most effective is sugar cane. Some of the bio-fuels like cooking greases and so forth are actually, in addition to being much more efficient, are much better for the environment to be used that way. Even, though it's by far not the best, canola oil in terms of bio-diesel is more efficient than those are. So there's a huge range and we're beginning to see increasingly now that new technology is coming on using wood fibre, so wood fibre and grasses appear to have great potential.

FC: Most technologies in history have had side effects. What, if any, negative side effects are there from developing the ethanol industry?

LM: Well there's a couple that are pretty obvious. One is that a whole bunch of places that have ethanol plants are finding that their water tables are falling. It's based on corn in the U.S. and there's a growing dead zone at the mouth of the Mississippi River in the Gulf of Mexico because of the

nutrients and chemicals that are washed down the Mississippi River from the run-off. The issue that I have down the road is the negative impact on the livestock industry. If ethanol continues to grow at the rate it is and Canada becomes a net importer of grains instead of an exporter of grains, then we basically take away any advantage from the livestock industry.

FC: How wise do you think it is to build an industry that depends upon ongoing government policy for its own existence?

LM: I philosophically don't agree with that. If there was any evidence that this could exist on it's own I would be in a different position than I am, but nothing I have seen says that it can exist without subsidy so I don't think that's wise policy.

FC: Are there areas of the bio-fuel industry that have the possibility of surviving without subsidies in the immediate future?

LM: One that comes to mind is sugarcane in Brazil. And the only other one that potentially comes to mind but is not immediate is cellulosic technology based on grasses and wood, but it's not there yet for gasoline substitution. It is for some aspects of coal.

FC: Some will inevitably argue that where subsidies are required they will not be required indefinitely because technological advances and economies of scale will make them viable in the long run. From a public policy perspective do you believe it is possible to design a program of subsidies that balance the subsidies at a level that keeps the industry viable without disincentivising efficient development?

LM: This is the "infant industry" argument, isn't it? That we should subsidize this industry so that when it gets mature it won't need subsidizing anymore. Problem is that the ethanol industry in the U.S. has been subsidized for over 30 years. So how old does this infant have to be before it's not an infant anymore?

FC: How do you think rural communities who have made the decision to invest in bio-fuel production should mitigate against the risk of sudden policy shifts?

LM: The best way to do it is the best way to do it with any business: pay down your debt, make sure that your balance sheet is ok, don't overcapitalize by re-investing, and don't keep your debt-equity ratio high because that really puts you at risk. **FC:** You had a slide today that showed that the livestock industry would generate far more in terms of jobs and economic spin-offs than ethanol. Could you explain?

LM: A study has been done on the employment generation for rural communities by the ethanol industry in the U.S. When one adds the direct and indirect jobs together, a plant that uses 18.5 million bushels of corn generates about 98 jobs. The direct employment from livestock farms that use the same amount of corn runs from 400 people for hog farrow to finish operations to about 130 for wean to finish operations. So the direct employment alone is greater than the direct and indirect for ethanol. And we don't have calculations for indirect but they have to be at least as large as ethanol's.

FC: So what you're saying is that going the ethanol way is a way of essentially reducing the number of jobs in the economy?

LM: Well if we get to the point where there is the conflict between livestock and ethanol, absolutely. I don't think you even have to think about it for very long to figure out that livestock is going to generate more employment than ethanol is. So if you take one, you're going to give up the other.

FC: Are the drivers behind bio-fuel production different in Canada from the U.S. and the E.U.?

LM: Yes, the level of subsidies is lower in Canada. I think our targeted inclusion rate is a little bit lower in Canada, although it's still a long way from where we are right now so it doesn't make much difference about that. I suspect that the wheat-based product, partly because of the greater volatility in prices in wheat in Western Canada, than for corn would be a bigger challenge over the longer term.

FC: Do Canadian farmers have to invest directly in bio-fuel production in Canada in order to get the benefit of bio-fuel expansion in other parts of the world?

LM: I don't think so. We've seen corn prices since September of 2006 go from about \$2.60 to as high as \$5.27. Wheat, partly because of ethanol, has gone from \$5 a bushel to \$15.63 yesterday. The effects of worldwide development are being felt in the price of the grains and farmers can take advantage of it that way.

FC: You mentioned in one of your slides that there was no strategic thinking in agriculture in Canada. Can you explain?

LM: I look at Canadian agriculture policy and I can't figure out what we're trying to accomplish. What's the strategic

objective? To me our agriculture policy is very complex because there's no focus. So we say a whole bunch of things in the federal policy but what we do is pour money into the CAIS program or other programs. We say that we're trying to build infrastructure, we say we're trying to improve management skills and so forth but what we're really trying to do is save small farmers, to a large extent. That's not what we say our objectives are and if our objectives are what we say they are, we're not even thinking about using the right instruments of policy. It almost looks like a bunch of politicians thought 'Hey, here's a good idea. We can get money to the country-side, we can generate some new employment out there in a time when grain prices were low, so lets go do that.' They never thought about the consequences that that might have on the livestock industry. So are we trying to be a livestock producer, a meat producer for the world that has huge increases in demand for meat right now? Or are we going to give all that up?

FC: Is there a smarter way to help rural Canada?

LM: I can't answer that simply. We at the George Morris Centre went through a major policy project with a whole bunch of people from around the sector last year. We came up with a vision for the sector. We came up with several very precise, strategic intents. We came up with about seven sets of instruments that need to be followed. I, honest to God, believe that if we could actually do that, it would be so much better for rural Canada.

FC: If you had to put a time span on a likely ethanol train wreck here, do you have any period in mind?

LM: I don't know. I think I'm going to say I don't have a calendar time span. When you see the breakthrough in cellulosic technology, that's when the train wreck is going to take place because they won't need corn anymore. Or if Brazil brings a WTO action against the United States because of their 54 cent a litre tariff on Brazilian ethanol and the U.S. loses, there will be a train wreck.

FC: And the farmer who paid a lot for the land will swallow the big capital loss?

LM: Absolutely. We've seen land prices in Iowa more than double. I don't think we're there yet in Canada but it is happening. They've more than doubled because of these high prices that are occurring, and again, I don't want to assign all the effect to ethanol because there are other factors. Once you build in \$5.24 corn and \$13 soy beans and \$15 wheat into the price of land, if it goes back to even \$3, \$7 and \$7 we've got a train wreck.