**The Value of Farmland -Part II - Rene Van Acker - OAC**

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I want to thank the Organizers for inviting me to participate in this event today, and the opportunity to say a few words in relation to the movement and what it is achieving.

The Food and Water First movement is showing real leadership in what is the next step in the evolution of Canada's Food Culture. The fact that Canadian's increasingly are interested in what they are eating creates a real change in our population in terms of what is important to them. The environmental movements of the late 70's and early 80's were born of a need to rally against industrial excess and its relationship to the planet, or its lack of relationship to the planet; and although this movement made a real impact in many ways it has waned. It is not that the principles upon which it was formed are any less important now, but those principles have to be realized by each generation in ways that are important to them. It is interesting therefore to see how the evolution of Canada's food culture is reaching into the environment. Food and Water First is an excellent example of this reach and it makes perfect sense; truly perfect sense because food is ultimately both a very intimate element to individuals at the same time that it links us inextricably to our environment. Food is of the land, we are the food we eat, therefore we are of the land. The circle of our existence on this planet completes itself most intimately and most obviously through food. And here in lies the fundamental value of the land, and of farmland in particular. It is not an optional item and it is the exact opposite of frivolous. And it should not be ignored and absolutely not mistreated. It is in no way our luxury or right to do so. This is perhaps the most important thesis for our generation and defending it is not only noble but fundamentally necessary. Food and Water First, in its defense of farmland through food, is a very modern and fundamentally and practically relevant environmental leadership movement.

And what of this farmland. What is it? Is it just dirt? is it landscaping? Can it be simply recreated? In Canada we classify farmland on a scale of 1 through 7, with class 1 farmland being the best and 7 the worst (Class 7 cannot be farmed at all). The limitations on farmland that determine classes range and include, for example, limitations in terms of excess water, depth to bedrock, drainage capacity, soil structure (which may impact drainage and root growth) and topography. These are all characteristics that are fundamentally impacted by aggregate extraction. Class 1 land has essentially no limitations in regard to these characteristics and it is considered very highly productive and very valuable -or at least we should consider it to be very valuable. Within Canada only 11% of our land area has agricultural potential - however - only 0.5% of our land area is class 1 farmland. In Ontario we are especially fortunate in this regard because Ontario is home to more than half of Canada's class 1 farmland. This is due not only to the classification characteristics I referred to earlier but also to Ontario's climate. Within Canada, we use the Agro-Climatic Resource Index (ACRI) to evaluate the impact of three climatic restrictions on agriculture potential including the length of frost free period, the degree day accumulation (accumulated thermal energy over the season) and availability of water (as rainfall). Ontario is a special place in Canada in regard to the ACRI because we are substantively warmer than the vast majority of the rest of agricultural Canada and we have typically reliable rainfall. This makes our farmland that much more valuable and that much more productive, and rare.

It is important for us to reflect on the ACRI especially in regard to the capacity in Ontario for reliable rain-fed agriculture. Studies from across the globe show us that high income countries have generally more land suitable for rain-fed agriculture and that arable rain-fed farmland per person is also highest in developed and middle income countries. These are also the countries with the highest annually renewable freshwater sources. So absolute prosperity is directly related to the amount of rain-fed agricultural farmland we have. This is something for us to think about. And there are things happening around us right now that should make us realize even more how precious our rain-fed farmland is. California's historic drought reached a new milestone in January of this year when the newly released U.S. Drought Monitor showed that exceptional drought now covers 9 percent of the state, a new and unprecedented high. We cannot take agricultural productivity for granted, and that productivity is rooted in quality rain-fed farmland.

And what happens when we eliminate farmland? For example, in Ontario 18% of the class 1 land is already urbanized. Where do we get new farmland? Well in Canada, and really for the vast majority of the world the answer is nowhere. By-in-large new farmland does not exist, certainly not in Canada, and definitely not in Ontario. And we cannot just recreate farmland by pushing topsoil back into place after extracting aggregates. Farmland is not just topsoil. It is comprised of soil horizons; the A horizon (typically topsoil), the B horizon (structural layers including materials evolving into soil, perhaps) and the C horizon which forms a foundation layer for the soil including parent material (from which soil is built over geological timeframes, i.e. 10's of thousands of years). These horizons form a complex structure that allows for drainage, root growth, nutrient exchange all to support crop growth. Disrupting these horizons fundamentally disrupts farmland and repairing the disruption (especially when it is absolute) is not simple, it is not quick and it may not be possible in all cases. And when there are efforts to reclaim farmland after mining what is the goal typically? Typically, the goal is not to return the site to farmland. It is to at minimum, to ensure the site is safe and non-polluting, and at best, to ensure it can serve some function as a wildlife habitat. Why are these the typical goals, because returning sites to farmland is difficult, because farmland is not man-made. In many cases, aggregate extraction does not allow for reclamation to farmland, especially if the extraction extends below the water table. And if it does, it is to a lesser quality and class of farmland. Experience to date in this regard supports this. In surveys on reclamation of farmland in Ontario reviewed by the Ontario Aggregates Resources Corporation (AORC) last year, farmers were asked to rate on a scale of one to ten (ten representing the land being returned to what it had been previously) the overall quality of the land that had been rehabilitated and its use for agriculture in projects ranging back to the 1970's. Only two thirds rated the land above a five, while one third rated their land quality as less than five. Only 8% of the farmers rated their rehabilitated land as a 10. Most farmers acknowledged that the land would take time to improve, although how much time wasn't clear. Some farmers suggested that their land had been irreparably damaged by poor rehabilitation, or perhaps situations where rehabilitation was not possible. The preliminary results show that farmer satisfaction of rehabilitation varies greatly. The differences in farmer satisfaction may come from variables such as management practices and rehabilitation techniques, but it demonstrates that rehabilitation is not simple or assured. OARC does want to better understand the differences in farmer satisfaction and they intend to conduct a quantitative research project on a subset of these rehabilitation sites this year (see: Interim Report From Aggregates to Agriculture, Ontario Aggregates Resources Corporation 2013).

Quality farmland, especially quality rain-fed farmland is rare, it is valuable and it cannot be easily or readily rehabilitated. Farmland is something, therefore that we have to value. It is fundamentally important to our prosperity, it is our connection to the land and it is what allows us to live on this planet. The leadership in terms of farmland preservation demonstrated by the broadly represented civil society movement, Food and Water First is, therefore, vitally important and I want to thank them for what they do and for the opportunity to contribute to this event.