

MCC Agricultural Globalization Survival Kit

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Last spring I attended a 'Hunters' Dinner' in a little village high in the mountains of southern France. It was a modest affair, about sixty people crowded into a largish room from about noon til 6 pm – six hours in which they slowly ate themselves through five courses of food prepared from materials collected almost entirely within a few kilometres of the village. At some point towards the end of the meal, the mayor of the village, who like many others present had to live and work elsewhere, stood up and spoke of the fact that, even if the world outside was completely disrupted; they could still return to their village and start again. I was astounded by this statement – most of us simply refuse to consider the possibility. Did this unglobalized Frenchman really have such confidence that his place was so reliable? I suspect that he was both serious and very confident – this village had been in existence for at least six hundred years, perhaps longer and people have been living in this region for literally a million years. But what a thought for a globalized New Worlder! How many of us have such trust in a piece of land to continue to support us?

I tell this story because it introduces us to the topic which has been part of my work and non-work for the past thirty years – food and agriculture. Perhaps there are those here in the meeting who have spent even longer in such activities as farming but my vantage point has always been somewhat from the sidelines – food processing engineer and teacher, rural development worker, development work administrator, organic farm worker, rural politician, food aid administrator and most recently, agricultural foreign aid and international trade policy analyst. All of this much more by accident, perhaps divine, than by my own planning. But, I am convinced that in the cacophony of crises that are daily blared at us – none is so central to our survival and welfare than food and agriculture. Let me make my case.

A former Executive Secretary of MCC, a historian I might add, used to start discussions about the future by asking the very fertile question, "What time is it?" This has really stuck with me since the first time I heard it at a planning meeting in 1986. We are here to reflect on globalization, a historical process in human history which seems to be gradually enveloping us all and leaving us with an urgent question of where this is all leading.

So, what time is it? In Canada we have a national lecture series each year called the Massey Lectures. The series just completed, by anthropologist and historian Ronald Wright, was entitled 'A Short History of Progress'. I find the anthropologist's time frame very helpful when we are considering questions of humanity's destiny and survival – particularly food and agriculture. Some of the facts that he pointed out in these lectures:

- biologically speaking, humans have been around for about two million years but it is only in the last 10,000 years that we have been experimenting with civilization – the organization of large scale human groupings. That is less than 1% of the entire human story.
- during most of that relatively brief time, civilizations have been localized. When one passed away, somewhere else there were others taking shape. The Mayan civilization, which rivalled that of Europe in sophistication, seems to have gone into steep decline just before the Europeans arrived. The individual experiments eventually failed but the overall human project continued.
- the past two centuries have seen the rise, for the first time, of a global civilization or, as I think we are referring to it in this meeting, globalization. This is the most ambitious and most risky experiment of all, for if this doesn't work out, there are no other civilizations waiting in the wings to take over.
- the foundation of all civilizations, including our current global one, is our food supply. It is food supply, although sometimes not only food supply, that spelled the end of all previous civilizations. Sumer was one of the first civilizations and did quite well until it became trapped by its dependence on an unsustainable irrigation system that finally poisoned their fields. We need to be thinking very hard and very often about our food supply and, since civilization is synonymous with agriculture, about agriculture.

Everyone in this room probably knows the numbers. It took almost two million years for the human population to reach the first billion mark, about 1825 by some educated guesses. That's a very long time – more than 99.9% of human history so far. We added the second billion just in 1925 in time for the start of the Oil Age. Finally, we added the sixth and most recent billion during the last 13 years. Current demographic trends hold out the hope that we are headed for a levelling off of human population at about 10 billion by the middle of this century. If we manage well, global human civilization could succeed where the smaller earlier experiments failed, at least from a human point of view. And we are talking of those who are near and dear to all of us here in the room.

From a food supply point of view, that we have reached six billion people is remarkable. Some have estimated that, on the strength of our own muscle power, we could probably grow enough food to support one billion people. But with a lot of extra energy and ingenuity we are supporting six times that number. Given the pace of recent population growth it is an astounding accomplishment. But what is happening to that food system, particularly agriculture and farming now?

Adaptation to Global Warming .. and Global Climate Change

Again returning to Ronald Wright, he asks the question, 'If agriculture, and civilization that followed it allowed humans to be so successful, why did we wait so long to become farmers?'. Apparently analysis of ice cores taken from ice

caps that have survived for hundreds of thousands of years has shown that about ten thousand years ago the earth's climate entered a period of unprecedented stability. Wright suggests that agriculture was simply waiting for the conditions to be right to make it possible and these appeared only recently in human history. Certainly anyone who has tried to grow crops appreciates how valuable predictable weather is. Humans had been gathering plants as food for several thousand years but it was only when the weather became more predictable that they found they could reliably grow their own plants.

This, of course, underlines the risk posed by global climate change in the direction of greater unpredictability. Much has been made of the threat of coastal flooding and extreme weather. But it is our food supply that is the most vulnerable target. Behind the stocked and overstocked shelves of our supermarkets there lies an agricultural system that has seen consumption exceed production for the past four years. In many ways, the global food system is close to maxed out. In such situations, small changes in production can have huge impacts and the more tightly integrated the food system the wider will be these effects. The Italian restaurants in Winnipeg know all about the hurricanes in Florida – how do you make ratatouille without tomatoes? So the prospect of increasing climate variability is going to pose a huge challenge to most of the world's farmers and our food system in general. And their success or failure is going to have an immediate impact on all of us.

A Globalized Food System

The process of globalization and the construction of a global civilization seek to manage our food supply by a highly integrated and standardized global agriculture which relies on extensive international trade to make it work. In an extension of the industrialization process, the institutions of globalization are looking to 'comparative advantage' in farming to yield the same production gains that Adam Smith's pin factory reputedly did. The WTO works to expand international agricultural trade by reducing roadblocks like national import duties and lubricating the gateways of international trade by standardizing (facilitating) import and export procedures at ports. To comply with the WTO requires that states restrict their freedom to implement policies that effect international trade, and in agriculture that covers a lot of ground. If the 'keys' to the way our food supply is organized pass out of the hands of elected governments even willingly, how will those who rely on that food supply for their survival have any say in how it runs?

Furthermore, if everyone uses the same math textbook to calculate the costs, they tend to end up with similar approaches to agriculture. These approaches, not surprisingly, end up focussing on the economies of scale. Of course, there is a vigorous debate about which math text book to use with environmentalists and small farmers around the world challenging the calculations that currently dominate the expanding global food/agriculture system. And how many of us have seen those calculations mean the disappearance of our small communities and an important part of our culture and identity at the same time. But it is not

just the scenario of millions of small farmers being deprived of their livelihoods and replaced by 5% of the population running large mechanized farms. It is also a world where both the suppliers of inputs to that agricultural system and the purveyors of the food produced are just a handful of global corporations. Placing one of the keystones of our civilization, our food supply, in the hands of a few is a very high stakes gamble.

Oil and Gas – a crucial input?

Most, but importantly not all, of the world's farmers rely on oil and gas. Mechanized tools are the most obvious example and their impact is dramatic. Who could imagine how many labourers it would take to cultivate by hand the average 2000 acre Canadian prairie farm? Of course, nothing like all of the world's farmers own tractors. Yet most of them do still rely on oil and gas .. in the form of so-called chemical fertilizers, particularly the all important nitrogen fertilizers based on ammonia. Nitrogen is a key component for all biological processes and, currently, about **half** of the nitrogen used to produce our food comes from the Haber Process that requires natural gas as a raw material. It may not always have to be that way but there are no alternatives on the horizon yet. For the time being, fertilizers will remain one of the absolutely essential uses for fossil fuels.

Forgetting How to Farm

The tendency to standardize agriculture under one overarching model may produce more food, at least in the short term, but there is 'no free lunch'. For something gained, something is lost and, in this case, it is literally hundreds of different agricultural systems developed over centuries to permit sustainable food production in a wide diversity of soils and climates. They disappear because the rules have changed and either the farmers using them dump them for more profitable techniques or those farmers themselves become urban dwellers, often in slums, and in a generation they have forgotten what they knew. We know from studies of ecology that diverse natural systems are resilient to change, simple uniform systems are not. Pat Mooney a noted observer of issues around seeds and genetic modification, has trenchantly observed that this will be the first generation that knows less when it dies than it knew when it was born. Of course, human history is full of discarded notions that were replaced by newer ones. But for agriculture today, perhaps that scrap heap will become very important.

Revisiting the Hillsboro Resolution

Almost thirty years ago, in the shadow of the 1974 World Food Conference and the fear that the world was running out of food, the MCC Annual Meeting took the decision to direct a major effort towards agricultural development. It made sense as so many of the young Mennonites came from farms and in those days we assumed that what worked for our farms would work for others. My own

involvement in MCC in Bangladesh was an indirect result of that resolution as was the formation of the MCC Foodbank, later to become the Canadian Foodgrains Bank (my current employer), and the major agriculture activities in several MCC programs worldwide. Over the ensuing three decades, hundreds of MCCers and national staff have worked in fields, pastures and orchards around the world, often among the very small farmers who are rapidly leaving the land – and whose knowledge is disappearing quickly as well.

As we contemplate the possibility of a string of climate-induced food crises in the years ahead, is there some practical contribution MCC could make to help farmers everywhere cope with these changes?

For example, MCC, in its alumni and national staff persons who have worked in agricultural development, has seen thousands of local agricultural adaptations – adaptations that could prove extremely valuable to farmers far away from their origin of the idea as they struggle to adapt to climate change. Adaptations that the standardizing process of globalization will have tended to cast aside. Other organizations have worked on seed banks to ensure that traditional varieties of seeds aren't lost. Is it time we had a 'knowledge for adaptation' bank, a database of all the various adaptations that MCCers around the world have seen, a database that could be shared online via the MCC website?

The idea could be extended by providing a specific focus to MCC's work in agriculture worldwide - climate adaptation. As well as the experience and resources of its own workers and alumni, perhaps other Mennonite-linked organizations around the world would be interested to participate.

It is always difficult to see clearly what lies ahead. But there are enough pointers to confirm that we are in for some major changes – and sooner than most of us contemplate. Is it time that we extended the Joseph story beyond the storage of produce to the storage of the ideas of how to produce. Can we hear in this 'thou good and faithful servant'?

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