

Is Canada "food secure"?

## **The globalization, industrialization and corporatization of the Canadian food system**

**By: Bronwen Williams**

Our food system in Canada has become increasingly globalized, industrialized, and corporatized, causing it to be unsustainable, and putting our health at risk. If

we consider the accepted Canadian definition of food security, which is:

when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (Food Security Bureau, 1998),

I propose that the pressures of globalization, industrialization and corporatization also threaten our national food security. First of all, this type of food system is unsustainable from a resource perspective, threatening our capacity to produce sufficient food in the future. Second, there is resultant environmental and eco-system damage, jeopardizing the safety of our food system, and again, its capacity to provide sufficiently for future generations. Finally, there are negative health risks from this system, which negate its capacity to support an "active and healthy" life.

### **Competing in the global marketplace**

Globalization is the process of becoming more global, but in contemporary terms it generally refers to the globalization of markets and trade. Globalization has been described as the integration of world economies, affecting productivity, imports and exports, technology, and growth rates (Questia: The World's Largest Online Library, 2004). Globalization of our food system necessitates industrialization and corporate structure.

Providing a clear illustration of the pressures on agriculture in Canada (and North America) to increase global trade, to industrialize, and to adopt corporate structures, Qualman and Tait (2004) quote several key sources, including the following:

As...farmers strive to compete in a global marketplace, they continually look for new efficiencies, whether in the form of economies of scale, new technology, or vertically-integrated operations. Since the end of the Second World War, agriculture has become increasingly industrialized. This has meant fewer but more efficient farms” (Ontario Ministry of Agriculture and Food, *Discussion Paper on Intensive Agriculture Operations in Rural Ontario*, January 2000; <http://www.gov.on.ca/OMAFRA/english/agops/discussion.html>); (OMAF, 2000:5)

Clearly, there is an imperative for Canadian farmers and producers to become more competitive in global markets, and to participate in “economies of scale” and “vertical integration”<sup>1</sup>, which are hallmarks of corporate structure. Qualman and Tait (2004) outline the benefits that economists suggest will come along with the adoption of economies of scale: that larger operations can produce goods and services more cheaply and more efficiently than can smaller operations. They develop a powerful critique to the idea that “bigger is better”, with data to show that smaller family farms are becoming *more* efficient, while the large corporations that dominate the rest of the food system are becoming *less* efficient, and reaping the profits. They report that each link in the agri-food chain is dominated by fewer than ten (and often as few as two) multibillion-dollar transnational companies.

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<sup>1</sup> Vertical integration is the degree to which a corporation acquires its upstream suppliers, or its downstream buyers (The Columbia Encyclopedia Copyright©, 2000), or owning more links in the supply and processing chain.

Laidlaw (2004) outlines the industrial transformation of agriculture: it began in the 1920s, beginning with hybridized seeds, which farmers had to buy each year from the seed companies; next, they began to replace horses and animal power with tractors and fossil fuel power. With fewer animals on the farm to produce manure for fertilizer, farmers began to need an external source of nitrogen; here was yet another fossil-fuel based input. Before these artificial fertilizers were available farmers kept their soil replenished using manure, but also by rotating crops, which had the additional effect of keeping pests and weeds in check. The availability of cheap fertilizer made possible the growth of monocultures, which also made necessary the use of pesticides, as bugs and weeds flourished in the uniform fields.

### **The laws of energy conservation**

This industrialized, corporatized food system uses more capital, technology, fertilizer, chemicals, water than a more traditional system, and does so in a manner that is unsustainable. Giant food retailers have centralized distribution so that food is trucked back and forth unnecessarily, consuming increasing amounts of fossil fuel. “A food system that ships wheat from Saskatoon to Montreal to make flour for bread and bagels and that makes bagels in Montreal and ships them back to Saskatoon: Could anyone call this system efficient? Wouldn’t an efficient system just fax the Montreal recipe to Saskatoon and make the bagels there?” (Qualman and Tait, 2004:27).

As Laidlaw (2004) writes, getting food from farm to table demands an ever-increasing use of fossil fuels to produce and ship the food, especially when consumers

have come to expect a wide variety of fresh fruits and vegetables year round. In 1940, the average American farm produced 2.3 calories of food energy for every calorie of fossil fuel energy it used. Today, the situation has more than reversed, with three calories of fossil fuel needed to produce just one calorie of food. For pork, the ratio is as much as 68 calories of fossil fuel energy for one calorie of food energy (Laidlaw, 2004).

Accordingly, this increased fossil fuel use produces greenhouse gases and the associated environmental concerns that are not borne by the farmers or the food companies, but instead are passed on to society, and to future generations (Qualman and Tait, 2004). It doesn't take long to see that this system is ultimately unsustainable, when we are using up more of the earth's energy reserves than we are getting in return, and more than we are returning to the earth. Such a system is destined to fail, threatening our food security by failing to ensure a secure food supply for the future.

### **Our environment bears the brunt**

From the point of view of simple energy conservation then, the current system is unsustainable, but also from an environmental and eco-system perspective, the system is unsustainable. The instances of environmental damage, such as increased greenhouse gas production, and chemical contamination are referred to as "externalities", factors which, as Qualman and Tait (2004) write, are consistently left out of the "efficiency" calculations carried out by economists and governments.

Here are just a few examples of the environmental and eco-system damage resulting from industrialized farming. Nearly 20,000 square kilometres of the Gulf of Mexico has become a "dead zone" because of nitrogen and phosphate fertilizer run-off. In Manitoba there is growing concern that "nitrogen and

phosphate from the province's intensive livestock operations (ILOs) pose a serious risk to surface water and groundwater" (Qualman and Tait, 2004:27). Prince Edward Island has experienced numerous fish-kills from pesticide runoff: province-wide there have been at least 26 fish-kills since 1994 as pesticides washed into the island's 263 waterways (Laidlaw, 2004). Such environmental damage costs governments as they attempt to address the problems, and further, producers must spray more chemicals to replace those that have washed into the water, an input which is often supported by government subsidies (Laidlaw, 2004).

We are producing food in a more expensive, less efficient and more destructive manner. This, again, threatens our national food security by failing to ensure a safe and sufficient food supply.

### **Are strawberries from California really good for our health?**

Finally, we are left to consider the health consequences from environmental damage, and associated with industrialized and globalized food system practices. First of all, there are health issues associated with the use of chemicals in this type of food system. Food grown in the "Third World" (a good proportion of our imported food) has likely been sprayed with chemicals that are not permitted in Canada, the U.S. or Europe, such as DDT (Roberts *et al.*, 1999). Roberts *et al.* (1999) report that DDT is still in widespread use, as confirmed in numerous studies by the International Joint Commission. The U.S. Environmental Protection Agency (2004) considers DDT to be a persistent, bioaccumulative and toxic (PBT) chemical, which although it was banned in the U.S. in 1972 is still found in our environment, and in the Great Lakes. DDT can take more than

15 years to break down, and has the following health effects: it is a probable human carcinogen, damages the liver, damages the reproductive system, and can cause liver cancer (Environmental Protection Agency, 2004). It is carried by air currents from Central and South American plantations to Canada, which explains why levels in the Great Lakes are as high as they were when it was banned 20 years ago (Roberts *et al.*, 1999).

More health risks are realized from increased reliance on burning fossil fuels which produces greenhouse gases and creates air pollution. Health Canada warns that air pollution can irritate the respiratory system, and exacerbate breathing and heart problems (Health Canada, 2002). It can cause premature mortality for thousands of Canadians, and illness for tens of thousands more (Canadian Public Health Association, 2002). Greenhouse gases have been linked to climate change, which is predicted to have significant effects on human health, beginning with heat waves causing illness and death, and potentially leading to unstable weather patterns, floods, droughts and storms, higher risks of infectious diseases and threats to our food supply (The David Suzuki Foundation, 1998). These health risks negate the capacity of this type of food system to support an “active and healthy” life, and thus threaten our national food security.

### **What does food really cost?**

We need to consider the “true cost” of an industrialized, fossil-fuel dependent food system. As Laidlaw (2004) points out, the mixed farms of the days before extensive nitrogen fertilizer use, where farmers grew several different crops and raised animals as well, offered farmers the ability to offset troubles in one sector (e.g. corn) with better

conditions in another (e.g. pork). “As farmers took out loans to buy farmland, machinery, chemicals and seeds, farming shifted from being labour-intensive to capital-intensive” (Laidlaw, 2004:20). Farmers have become increasingly dependent on nitrogen fertilizer, and with payments to make on capital investments, farmers are in less of a position to risk changing their farming practices.

In order to begin to address these issues and reverse the continuing pressure for globalization, industrialization and corporatization of the food system, we must change agricultural policy in Canada. Roberts *et al.* (1999) outline how agricultural subsidies *support* industrialized farming: farmers who have fuel- and chemical-intensive operations receive tax breaks for the cost of fuel, fertilizer and pesticides, whereas a smaller farmer employing more labour must pay payroll taxes instead. There is even a tax advantage for companies who make packaging from new materials rather than recycled, making recycled packaging more expensive by fifteen cents on the dollar (Mintz, 1994, 1998). Fuel for trucking food from California is subsidized US \$6.81 for every gallon burned, and in Canada, every mile a truck travels is subsidized 2 cents for every ton hauled. In California, irrigation is subsidized to offset the fact that California is a desert. It has been estimated that a \$1 bunch of beets from California contains \$6 worth of subsidies (Roberts *et al.*, 1999).

Lappe and Lappe (2004) write that when people think of “farm subsidies” they think of the government helping poor, struggling farmers to survive, “not enhancing the bottom line of our nations largest corporations” (p. 137). They report that in the United States, between 1995 and 2002, 10% of the largest, and often most profitable crop producers collected 71% of all subsidies, while the

bottom 80% received only \$846 on average, per year. Given the information we have about tax subsidies, outlined above, and based upon the imperatives of the government, illustrated in the quotation from the Ontario Ministry of Agriculture and Food, it is my assumption that Canada is likely very similar, having a similar trade and market structure.

### **Changing policy to begin to change the system**

My specific policy recommendation is that we must change federal food system policy in Canada, doing away with subsidies that support agribusiness giants, which make costs artificially low. We must redirect subsidies to support those who are attempting to change to sustainable food growing and processing operations that are minimally reliant on non-renewable resources and chemical inputs. We must also support farmers and processors in seeking local markets and more diversified farming, which is more sustainable. As Laidlaw (2004) writes, however, smaller, organic growers and producers tend not to need government subsidies, and pass on few costs to society. Subsidies should be retained to help farmers transition their operations, and for times of emergency.

If we consider a food system based on the principles of locally-grown and processed, less fossil-fuel reliant and sustainable, one might wonder what the cost to the consumer would be. From a quick comparison I have done, of present costs for a market basket of such foods, a consumer might expect to pay about 50% more. However, I would suggest that food costs for locally-grown, less fossil-fuel reliant, and sustainable food would be reduced as the system changes to facilitate this. I would also argue that

health costs and environmental costs over the long term would be reduced, costing the taxpayer less. When considering the increased cost to the consumer we cannot overlook the serious issues of health, the environment, and national food security. Along with changes to food system policy, we also have to change public opinion and buying practices. At some point, food produced through reliance on a non-renewable resource will become unaffordable for the vast majority of us. It simply makes sense to change the system now, while we still have the capacity to do so, and before the damage is irreversible.

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