

## Food and the environment

The degradation of our environment, and our health, by food production: Can we make better food choices and help our environment?

**D**oes treating the soil as if it were machine to produce food for sale and sustenance degrade our biosphere? As world economies increase our standard of living should developing countries include more meat in their diets? Should destruction of equatorial rainforests to increase the growth of cheap beef exports be permitted? Is it right that we burn as much fossil fuel to transport our food around the globe as we do? Just because we can have winter crops in summer and summer crops in winter, should we? The 2006 best-seller *The Omnivore's Dilemma* by Michael Pollan poses many of these questions and numerous others.

Pollan posits that the biggest challenge to buying and consuming locally grown food at first blush is the price. However, he counters, that actually it's the cheapest food you can buy. When the real costs to society are factored in such as water pollution, antibiotic resistance, foodborne illness, crop subsidies, subsidized oil and water, cleanup of farm pollution damage to land and waterways, and health care costs, then the economical answer is local, responsibly grown foods.

North American society has been trained to believe that "all pork is pork" and "all eggs are eggs" with little attention to the degrading quality of pork and eggs that has occurred with industrial agriculture. We have learned to produce as much food as possible as cheaply as we can, with little concern for quality, sustainability, and the health and welfare of livestock, not to mention the end user, us. As Pol-

lan says, "When you think about it, it is odd that something as important to our own health and well-being as food is sold strictly on the basis of price."

The book *Animal Factory* by David Kirby clearly outlines how factory farms destroy and devalue the land, making the family farm in a healthy rural setting unsustainable, a thing of

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the past. Runoff from the concentrated animal feeding operations found in industrial farming that contains urine and fecal material poisons ditches and streams that flow into large bodies of fresh and salt water resulting in dead zones where no life can survive. The irony, this author tells us, is that the large food companies control almost all aspects of raising the produce, but take no responsibility for the environmental damage they create. Individual farm owners, when caught and prosecuted, are on their own. The acrid air pollution from these concentrated animal feeding operations causes neighbors to sell their properties at bot-tomed-out prices to escape the health risks of continued rural farming.

A third book, called *The China Study*, by Cornell University biochemist T. Colin Campbell, concludes that

people whose diet consists of high consumption of animal-based foods are more likely to suffer chronic disease, while those who consume a plant-based diet are the least likely. Campbell examined the diet and lifestyle of 6500 people and discovered that those people who ate less than 20% animal protein failed to develop a number of chronic diseases, including liver cancer even when exposed to aflatoxin (a liver carcinogen). People who consumed primarily non-animal protein foods were less likely to be obese, thereby reducing the diseases found with metabolic syndrome.

In North America there is excessive production and marketing of underneeded crops. Corn and sugar are produced in abundance and receive unbelievably high subsidies. These foods are unneeded in our diets and in refined form, such as high fructose corn syrup, contribute significantly to our growing health threats of obesity, diabetes, and atherosclerosis, and there is some evidence indicating a contribution to dementia.

The production of corn today is not the corn on the cob we picture on the dinner table or at a barbeque, but is processed into a slurry and centrifuged. The corn oil is spun off for oils and hydrogenated for margarine. Water and energy are needed for processing, and for every calorie of energy produced 10 calories of fossil fuel are used. Because refiners can easily use enzymes to break down cornstarch into glucose, sweeteners have become industry's major product and are now the chief substitute for cane sugar. High fructose corn syrup is the most valued product refined from corn.

Most processed foods contain high fructose corn syrup, and many people

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*This article is the opinion of the Council on Health Promotion and has not been peer reviewed by the BCMJ Editorial Board.*

believe it shares responsibility for our epidemic of obesity and the diseases that accompany it. Many farmers who once grew mixed crops have been economically pressured into growing only corn or soy (or both), and conforming to the rules of big corn producers. As well, production of sugar as a sweetener is even more coercive as big producers ensure that cane workers in fertile tropical areas are kept in economic servitude. These areas could effectively produce a multitude of more health-enhancing crops, but diversity is quickly vanishing.

Planned composting of farm organic waste and woodlot maintains the health of the soil and can actually improve it and increase the nutrition of the crops produced. Industrial agriculture has no such preservation component.

—Bill Mackie, MD, Chair,  
Environment Health Committee

**Steps we can take to improve our health and environment**

**Use the marketplace and personal habits to effect change:**

- Support farmers’ markets and get to know and support the farmer who grows your food.
- Discuss composting and preserving woodlots to enrich soil and its water.
- Buy local produce. One hundred-kilometre diets make sense when one considers the fuel costs to transport food. It may seem more expensive at the cashier but overall societal costs are reduced.
- Advocate for livestock to be raised without antibiotics unless needed to combat disease in the animals.
- Check labels and if high fructose corn syrup is included, choose something else.
- At dinner, include more vegetable protein. Canada is the world’s leading exporter of lentils and yet we don’t consume much locally. Try them!
- Adopt “Meatless Mondays,” and consider expanding that to meatless alternate days to improve overall health.
- Insist on quality food rather than volume per dollar.

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