FROM THE ARCHIVES

THE MYTH OF FOOD MILES

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THIS ARTICLE APPEARED IN THE *FRASER FORUM* IN APRIL 2010

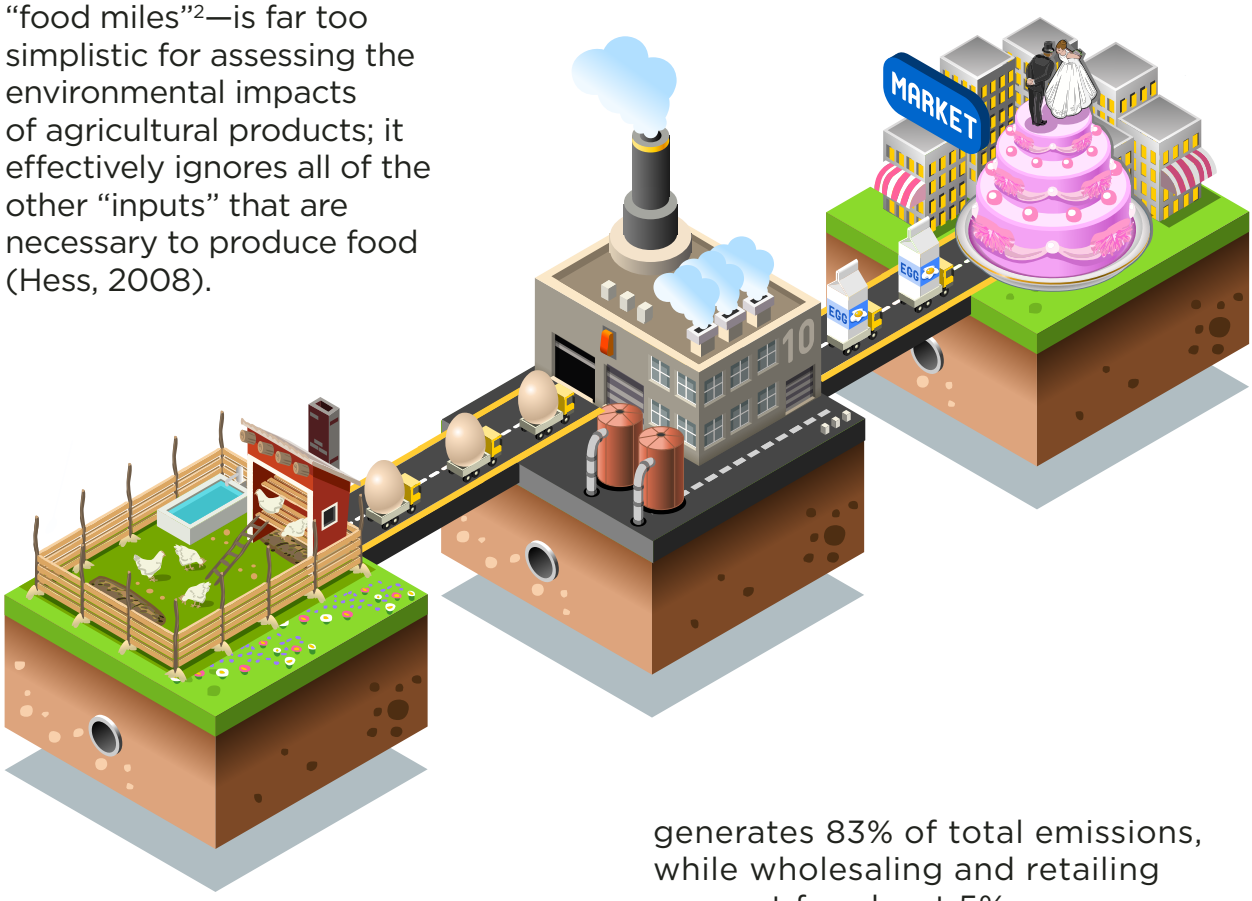
Consumers are increasingly being told that "local" foods—typically regarded as those grown within 100 miles of the point of purchase—are environmentally superior to foods that are grown farther away. But research suggests that this is not the case (Shimizu and Desrochers, 2008). The transport of agricultural products actually accounts for a relatively small proportion of the total energy-related emissions generated in food production (Weber and Matthews, 2008).

The transportation of food is responsible for only 11% of the greenhouse gas emissions related to the food supply of an average family.

In fact, in many instances, imports have a smaller environmental "footprint" than locally produced food.

In most cases, the emphasis on "eating local" stems from a concern that the global food chain is

generating excessive emissions of the "greenhouse gases,"[1] causing global warming (Bentley and Barker, 2005). However, there is no proof of any such link (McKitrick, 2007). Moreover, this odometer approach to calculating environmental impact—commonly referred to as counting "food miles"[2]—is far too simplistic for assessing the environmental impacts of agricultural products; it effectively ignores all of the other "inputs" that are necessary to produce food (Hess, 2008).



As with all commodities, energy is consumed at every stage of food production, from the gasoline that fuels tractors to the electricity required for packaging. Researchers at Carnegie Mellon University have quantified the greenhouse gas emissions for the various components of farming and food processing. This "life-cycle" analysis found that the transportation of food is responsible for only 11% of the greenhouse gas emissions related to the food supply of an average family (Weber and Matthews, 2008). In contrast, the actual production of the food generates 83% of total emissions, while wholesaling and retailing account for about 5%.

The results of life-cycle assessments for different products vary, of course, depending on a host of factors, including the environment in which the food is grown, the farming practices used to grow it, and the degree of processing it undergoes. Consequently, as a team of researchers commissioned by Britain's Department of Environment, Food, and Rural Affairs concluded from their analysis of food's energy intensity, "a single indicator

based on total food kilometres is an inadequate indicator of sustainability" (Smith et al., 2005).

Mile for mile, transatlantic shipping consumes less energy than rail or road transport.

A more thorough analysis involves comparing the total emissions generated by a domestic product and its imported counterpart, as was done by researchers at New Zealand's Lincoln University. The study compared British imports of New Zealand lamb with lamb raised in Britain. The research found that raising lamb in the United Kingdom requires four times more energy than raising lamb in New Zealand (Saunders et al., 2006). A number of differences contributed to this disparity. For example, the pastures in New Zealand feature sufficient clover for lambs to graze, while UK farmers must use processed feed, which has relatively high energy intensity. New Zealand's use of hydro-electricity also generates fewer emissions than Britain's coal-fired power. And, mile for mile, transatlantic shipping consumes less energy than rail or road transport.

These results held true for other products, as well (Saunders et al., 2006).

Even when accounting only for food transport, there is evidence that "eating local" does not necessarily yield environmental benefits. The dominant system of food supply involves trucking products from central distribution centers to suppliers and supermarkets across a metropolitan area. Moving groceries in volume reduces the environmental impacts per unit of food, since a single trip involves the transport of large quantities. Local farmers may travel fewer miles to deliver their goods to the market, but they do so in smaller vehicles that carry lighter loads. Thus, the lesser distance to market for locally grown products is offset by the smaller vehicles, lighter loads, and repeated trips (Smith et al., 2005).

The notion that 'eating local' produces environmental benefits is more a myth than a reality.

Canada imports about half of the food consumed in the country and exports about half of the food it produces (Statistics Canada, 2006). Consumers obviously take advantage of the tremendous product choices that food trade permits and make purchase decisions based on a range of legitimate factors, including price, variety, and convenience, rather than product origin alone. There may be a host of reasons why consumers buy locally grown products, but the notion that "eating local" produces environmental benefits is more a myth than a reality. C

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NOTES

1 The term "greenhouse gas" is a misnomer. It implies that greenhouse gases trap heat like a glass greenhouse, but that is erroneous. In a greenhouse, sunlight warms the interior surfaces of the building. That heat is then transferred to the trapped air by conduction. In the atmosphere, the sun heats the Earth's surface, which transfers heat (energy) to surface air via conduction. But the heat is also distributed throughout the atmosphere by convection, evaporation, and condensation.

2 The National Sustainable Agriculture Information Service (2008) defines "food miles" as the distance food travels from farm to plate.

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