

“Local food” vs. global food: which is the most environmentally-sound choice?

The local food movement has emerged as a consumer choice that is gaining marketing strength based on an environmental appeal and in contrast to the conventional food system and global trade in agriculture. There are a growing number of individuals who are dissatisfied with the current mainstream food system and want to express their values through consumer choices. The “organic”, fairtrade, and local food movements are manifestations of these consumer values. As local food gains greater exposure, conflicting information has emerged about its marketing claims. Marketing can be a driving factor behind food choices because of the profit margins (Halweil, 2004, p.3), which makes it essential to investigate the claims made by local food marketing. I will argue that the environmental aims of local food marketing, to reduce energy use and capture the total “real cost”, can best be achieved by encouraging the efficiency found through global trade in agriculture. First, I will address the current environmental problems that local food marketing wants to change. Second, I will focus on why the current global system was developed out of the previous local food system. Lastly, I will discuss why policy changes should focus on global trade liberalization of agriculture to achieve the best benefits for the reducing energy use.

I. What is the meaning of “local” and what does it want to change?

Local food encompasses a variety of concepts. Halweil, author of Eat Here and senior researcher for WorldWatch, claims local food is “one of the most significant choices you can make for the planet and yourself” (Halweil, 2004). The marketing of local food is categorized by four main characteristics that are set up in contrast with conventional food: 1) local food is fresher; 2) local food provides a social connection between consumers, farmers, and food; 3) local food supports national security and local economies; and 4) local food produces less food miles and is therefore better for the environment (FoodRoutes, 2007). The first two claims, regarding freshness and social interaction can be characterized as personal perception and preference and although important to the local food movement, will not be critiqued (please see Afterword). The third claim has traces of protectionist rhetoric, and although not formally

discussed here (due to page limit constraints) is somewhat addressed through the defense of the global system. The fourth claim, which captures the attention of the environmentalists, is “food miles” and is at the center of local food marketing.

One of the main arguments for local food consumption is decreasing “food miles,” which is the “distances from production to point of sale” (Pirog, 2003). Although produce may be cheaper at checkout, local food marketing suggests that the real cost, when food miles (including subsidized energy costs) are taken into account, is much higher. This marketing argument is made in contrast to the commercial food system, which is described as using an excessive amount of fossil fuel and energy to operate. According to Local Harvest, an informational, internet-based resource on the “Buy Local” movement in the U.S., “most [conventional] produce is picked 4-7 days before placed on market shelves” and on average “shipped 1500 miles to be sold” (LocalHarvest, 2007). A study done in Iowa found that locally grown produce traveled on average 56 miles as compared to a 1,494 mile average for conventional produce to reach the same points of sale (Pirog, 2003). However, the local food movement has many differing opinions on the meaning of “local” in terms of distance between producer and customer. “Local” definitions range from 30 miles as ideal from the National Association of Farmers’ Markets (in the UK) (Jones, 2004), to a 250 kilometer radius for the Farmers’ Own Market in Sweden (Wallgren, 2006), to definitions of geographic regions (such as a watershed), to the distance of “one day driving”.

Although the distance that food travels can be an indicator of the real cost of the product, it does not capture the total cost or energy used. A Swedish study presented findings where local food sold at a farmers market was compared with the conventional food system. It found that local food did have shorter transport distances, but minimal “energy use favour[ed] the conventional food system” (Wallgren, 2006). The energy and emissions used to transport food are often dwarfed by other stages of the product life cycle (McWilliams, 2007). Critics of “food mile” marketing argue that to calculate the “real cost” of food one must evaluate total factor inputs (energy, resource, packaging, and fertilizers used) and externalities (subsidized water, waste disposal, and land) (McWilliams, 2007).

II. How did the conventional, global food system develop from the previous local food system?

Local food systems are not a new concept. Historically, communities throughout the globe depended on local food systems for all of their food consumption. However, more recently farmers began shifting towards larger forms of production, processing, and distribution to utilize economies of scale. These changes also allowed for producers to gain a comparative advantage in a particular product and then create trading partners, therefore increasing efficiency. The dynamic gains from trade are efficiency, economies of scale, and increased competition (which in turns creates more efficiency) (Carbaugh, 2006, 35-38). The conventional system, by utilizing economies of scale, has created a very efficient system of transportation. Space in large trucks is maximized for carrying food in the conventional system as opposed to smaller-scale efforts where food is dispersed in multiple smaller vehicles (“Ethical food”, 2007). Additionally, centralized supermarkets reduce transport miles for consumers since they can do all of their shopping needs in one location.

A result of economies of scale is intra-industry trade, which gets a lot of attention in the local food marketing. Local food marketing complains that apples in Des Moines, Iowa come from China even though Iowa produces apples and that potatoes in Lima, Peru come from the U.S. even though Peru produces potatoes (Halweil, 2004, 8). This shifting of produce is not completely absurd, as is often the claim, but can be a result of the efficiency of economies of scale, whereby producing more and exporting it, firms may lower production costs (Scorse, 2007, class 3). In addition, “goods aren’t perfect substitutes,” therefore potatoes from the U.S. may be different than potatoes in Peru and therefore find a market in Peru (Scorse, 2007, class 3). However, the food swapping addressed by local food advocates can also be the result of subsidies, which will be discussed in the third section.

Technology also has played a central role in the development of the current global agricultural industry. Chemical fertilizer has “tripled grain yields with very little increase in the area of land under cultivation,” whereas more small-scale farming methods that are based on crop rotation necessitate more land to be cultivated (“Ethical food”, 2007). The costs and benefits to each method must be fully recognized to make the best choices. Although chemical fertilizers are not the ideal solution environmentally, it is possible that they are the better choice because of allow for maximum land usage.

Global trade in agriculture has many benefits, including the concept of virtual water and greater variety of food products available. Virtual water is the idea that traded products also encompass all the inputs that were used to create the product, most importantly water (Scorse, 2007, class 14). For example, trading grain includes the transfer of the water that was used to make the grain. Through trading of goods, countries with a comparative advantage in a certain resource or climate are able to sell goods that are resource abundant and buy goods that are resource scarce. Therefore trade also allows consumers to have a wide range of goods, throughout the year. The local food movement in many areas has a hard time keeping a reliable selection of products. Halweil discusses that one local food store had “no reliable source of bread or frozen vegetables [and]...apart from tomatoes and cucumbers, the shelves hold little produce in the winter” (Halweil, 2004, 5). In Sweden, the growing season for fruits and vegetables is only two or three months (Wallgren, 2006), therefore making Swedes dependent on food imports.

Economic trade liberalization is based on the most efficient producer gaining the advantage for a particular product. The most efficient producer “by definition has environmental benefits” because higher efficiency means less waste and better use of resources (Scorse, 2007, class 14). An important reason for global trade is energy use. One prominent study found that lamb raised in New Zealand and shipped 11,000 miles to Britain “produced 1,520 pounds of carbon dioxide emissions per ton while British lamb produced 6,280 pounds of carbon dioxide per ton.” The reason noted for this difference is New Zealand’s efficient, low-energy use farming practices (McWilliams, 2007).

III. Global trade liberalization: the most environmentally sound choice

Agriculture is “the single greatest human alteration of terrestrial ecosystems in the world, so what influences agriculture hugely influences the environment” (Scorse, 2007, class 14). As a result of the negatives effects agriculture can have on the environment, greater efficiency can have dramatic benefits for the environment. The global food system, by supporting the most efficient producer, actually should support local food when it is the most efficient. However, as a result of protectionist policies, some of which are used for marketing local food, the global food system is distorted.

The main reason that local food is currently relying on niche marketing rather than mainstream purchasing is because it is often more expensive. This is a result of economies of scale (which reduces the price of large scale agribusiness), but more importantly it is a result of government subsidies. Subsidies are the central reason why the “real” cost of conventional food is not reflected in the price.

Although protectionist measures in the form of tariffs and quotas have been reduced through global efforts towards greater trade liberalization, farm subsidies remain a tactic used by many governments. Starting in the 1930s, the U.S. government began supporting farmers because of the depression in an effort to stabilize prices for both consumers and farmers. However, government supports for farmers have changed dramatically over the last 70 years. Today, government supports, as established through the Farm Bill “determine the set of rules for the U.S. food system,” says Michael Pollan (Talk of the Nation, 2007). Pollan, a professor at U.C. Berkeley and writer of The Omnivores Dilemma, argues that the Farm Bill, through subsidies, creates the “difference in price between junk food and good food” (Talk of the Nation, 2007). According to Pollan, the current subsidized commodities (wheat, corn, soybeans, rice, and cotton) are the “building blocks of processed food” because subsidies make them artificially cheap, such that “Twinkies are cheaper than carrots” (Talk of the Nation, 2007). In particular, the subsidies for biofuel have substantially increased the production of corn-ethanol, increasing the world prices of corn dramatically. Biofuel increases the price of land, which increases the price of agriculture and food (Scorse, class 8). Therefore these subsidies have huge effects on the production and consumption costs of local food and distort the “real” costs, which favors inefficient producers (if they were the most efficient, they wouldn’t need subsidies) (Scorse, class 7).

Rather than reverting back to the local food system, I propose capturing the benefits of local food by better utilizing trade liberalization policies. Reducing farm subsidies or switching to non-distorting subsidies, such as paying farmers who use environmental methods of production or providing welfare to farmers, will help illustrate the “real” cost of food (Scorse, class 7) and thus let the most efficient producer win-over the consumer.

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Afterword

Although I have provided a critique of the environmental effect of local food in comparison to global food, I do not believe that supporting a better global food system and supporting local food systems are mutually exclusive. While the global food system may have great potential benefits for efficiency and the environment, local food can also achieve these benefits. In addition, I think the social benefits of buying local food, such as building a strong sense of community and better understanding the sources of our food, provide an important and positive contribution. I also think that it does taste better, does not have as many additives or processing as conventional food, and I feel healthier eating it. This may be one of the most popular points for local food supporters- a Washington State study found that 94% of consumers questioned (out of 950 total respondents) voted freshness as very important in their perception of local food (Ostrom, 2006).

Another important point, possibly one of the most crucial points for some local food advocates, is that the global food system does not have a mechanism to support consumption reducing behavior. The local food system has this built into it- if you can't get strawberries in the winter, you don't eat strawberries in the winter. I also think we need strong regulation of some agricultural practices, such as the use of chemicals. The global market may maximize the use of the land, but that can have disastrous affects on the soil and public health. There is also need for more collaboration between the food systems, such that local food producers can sell food in a centralized, cost and energy efficient manner (Andree, 2006). Maybe one answer is to use both: local food may be the best environmental option for purchasing in-season produce, while buying grains and coffee are best purchased through the most efficient producer globally.