Crossfire: 'Food miles and livelihoods in the global South'

RICHARD KING and DUNCAN WILLIAMSON

In our debate between two experts, Crossfire invites Richard King and Duncan Williamson to argue the case '**Are the local food movement and concern about food miles in "the North" harming the livelihoods of small-scale producers in "the South"?**'

Dear Duncan,

Food miles are a poor proxy for measuring greenhouse gases emitted 'from farm to fork'

The concept of 'food miles', i.e. the distance food travels from where it is grown or raised to where it is ultimately consumed, is, in many ways, a valuable one: it is widely understood by consumers; focuses attention on individuals' contributions to climate change; and it helps consumers to make informed purchasing choices. But food miles are, ultimately, a poor proxy for measuring the true extent of the greenhouse gases (GHG) emitted throughout the entire life cycle of producing, processing, storing, and transporting food 'from farm to fork'. By focusing just on the transportation stage, food miles only capture 12 per cent (on average) of food's total GHG emissions (King, 2009), and even then fail to take account of the varying emissions' intensities of different forms of transport. For example, per 'tonne km' (i.e. transporting one tonne a distance of one kilometre) a large ship produces 94 times less emissions than does long-haul airfreight; 40 times less than a light goods vehicle; and 19 times less than a heavy goods vehicle on the UK's roads. The vast majority of food imported into the UK comes by sea (King, 2009).

Substituting tropical production with local growing will result in greater levels of GHG emissions, so-called 'carbon hypocrisy'

Because emissions are generated throughout a food's life cycle, not just by transporting it, switching food sources to reduce 'food miles' does not guarantee a reduction in the volume of emissions. In many cases, substituting tropical production with local growing of similar products, especially under artificial glasshouse conditions, will actually result in greater levels of GHG emissions, so-called 'carbon hypocrisy'. And worse, doing so can threaten the livelihoods of poor producers in developing countries. In Africa alone, an estimated 1.5 million women and men depend on agricultural exports to the UK for a living (MacGregor and Vorley, 2006). This trade provides vital

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Consumers who support 'local' food should welcome globally sourced products that benefit producers in developing countries

incomes for the millions of poor farmers and workers that depend on it, and can provide demonstrable benefits in both food security and poverty reduction. For a small farmer in Africa, profits from exports can pay for housing and food, as well as medical care and education for their entire family (Rae Chi et al., 2009).

We all need to be concerned about the environmental impacts of the food we buy, but these concerns do not provide a rationale for boycotting produce from developing countries. The distance between farm and fork tells us very little about food's total environmental impact, and says nothing of the social and economic benefits it delivers to those people who provide us with our food. Because these differ significantly from product to product and from place to place, the full impacts of local or more distant food can only be assessed through context-specific social and environmental life cycle assessments. Unfortunately this type of analysis is currently lacking for nearly all food chains (Canals et al., 2008).

Social and environmental life cycle assessments measure the full impacts of local or more distant food

The lengths to which consumers are prepared to go to understand the consequences of their purchasing habits should be applauded, especially given the increasingly complex minefield of competing ethical concerns. There is no reason not to support local produce when it is farmed in a sustainable manner; foods that are particularly perishable may have an especially strong case for local production. But consumers who support 'local' food should embrace a broad understanding of community and solidarity by welcoming globally sourced products that benefit producers and workers in developing countries.

The bottom line should be that no one living in poverty suffers unnecessarily as a result of efforts to mitigate climate change. They are the least responsible for historical emissions, and yet the most vulnerable to the likely impacts – it would therefore be a cruel irony if they were also made to pay the majority of the costs of adjustment and mitigation. 'Food miles' pose such a threat.

Best wishes,
Richard

Dear Richard,

I agree that the concept of 'food miles' is a poor way of measuring the sustainability of food, especially when the vast majority of food miles in the UK are people driving to and from the shops and lorries on our roads (Defra, 2005). Not buying fresh produce airfreighted from Africa will reduce UK total greenhouse gas emissions by less than 0.1 per cent (MacGregor and Vorley, 2006). Food miles as a concept is easily misused and misunderstood, and mis-sold. Though many people like the idea, I feel it might be jettisoned when the food one wants is not

available, fresh being so much better, so at Christmas, New Zealand strawberries it is.

The UK is 60 per cent self-sufficient (Cabinet Office, 2008); we probably could not feed ourselves any longer from our own land, especially not with the variety of foods we have become accustomed to and our high meat diets. Many growers in the 'South' have started growing foods for our tables; we cannot just walk away from these 1.5 million people saying we would prefer to shop at the local farmer's market (MacGregor and Vorley, 2006). To suddenly stop importing food would damage the economic and social structures of those developing countries that we have encouraged to grow food for our plates. This would cause social problems and perhaps ecological damage as communities seek new ways to survive. If the UK were entirely self-sufficient it would increase the vulnerability of the nation's food supply to bad weather, disease and crop failures. In addition, agricultural inputs such as fertilizers, machinery, and energy supplies would continue to be imported.

We cannot walk away from 1.5 million people saying we prefer to shop at local farmers' markets

Almost half the global population is eating too much or too little

Outsourcing food production has impacted our farms, disconnected people from food, and led to an age where we no longer pay the true value of food. Food miles have awakened people to thinking about where food comes from, the impacts it has on our environment, on society, and economies. It is one of the few food-related conversations which has entered the mainstream. People are growing their own, buying local and seasonal produce, supporting local farmers and artisans.

The knock-on effect is that it is preparing people for the coming perfect storm: we have a food system that is broken; 40 per cent of food is wasted; 1 billion people are malnourished; another 1 billion suffer from hidden hunger; while over 1 billion are overweight – almost half the global population is eating too much or too little (Foresight, 2011). We are entering an age of oil and water scarcity and the impact of climate change will be increasingly felt. Our food system is at the forefront of this and we are going to need to start looking at how we can produce enough food; this will lead to our plates having lower food miles.

There are many products, such as coffee, cocoa, and bananas that do not grow in the UK but will always be part of a shopping basket and I would advocate buying these from responsible sources. Between 1988 and 2007 UK 'self-sufficiency' in fresh fruit roughly halved; since that time it has plateaued at just above 10 per cent (Boukouvalas et al., 2009). We grow apples, pears, berries, even melons; and we should be choosing UK fruit when it is available and in season and supporting our farmers. It is shocking that we

consume so little of our own produce.

The distance between forks and fields is less important than the emotional distance between consumers and producers

We cannot keep separating the issues and say the environment, climate, or food security takes precedence; we need to get out of our silos and work on the win–wins together. It is time to start talking about food security, poverty alleviation, and environmentally friendly food systems as equal parts of a holistic future food system.

Best wishes,
Duncan

Dear Duncan,

Fair trade has been successful at communicating the links between consumers and producers

You make several interesting points. First, I share your concern that we are becoming more and more disengaged from food and its true values. This trend looks set to continue, not just at the checkout, but also on the trading floor as food becomes commoditized and financialized, increasingly representing investment opportunities rather than picnic opportunities. So, although the environmental bases for seeking out local food are often equivocal, in this context, the case for reconnecting with the origins of food is compelling. Fostering a culture of environmentally and socially sustainable consumption will only be possible if we once again feel connected to the food we buy. But reducing the physical distance between forks and fields is much less important than reducing the emotional distance between consumers and producers. While there will always be more intermediation between developing-country producers and consumers than the face-to-face connections possible at farmers' markets or farm shops, much can be done to increase our respect for distant producers. Initiatives such as fair trade have been successful at communicating the links between consumers and producers as well as allowing producers to capture more of the product's value. But much can also be done in conventional supply chains to increase the prominence of food's provenance and to highlight the importance of supporting poor producers in developing countries as well as in the UK.

To that end, I think it is also important to note that although the UK is (only) 60 per cent self-sufficient in all food types, this is actually significantly higher than during the interwar period (Defra, 2008), and in terms of indigenous foods we are 74 per cent self-sufficient (Defra, 2011). Nearly four-fifths of food consumed in the UK (by raw farm-gate value) comes from the UK or EU (ibid.), so although we could not entirely feed ourselves (and, as you point out, doing so is not necessarily desirable from a food security standpoint), the proportion of food that we import from developing countries is actually fairly limited.

I was also interested in your comments about the high

degree of meat in our diets and the amount of food we waste. In terms of ameliorating the environmental, social, and health impacts of our diets, meat and dairy consumption is one of the issues that warrants most of our attention. Environmentally and socially, this is especially true of produce from grain-fed livestock as there are several second-order impacts aside from the emissions and localized environmental impacts of the animals themselves (Foresight, 2011). For example, the grains used to feed livestock may be more efficiently and equitably fed directly to humans; or they may have been grown on previously forested land cleared explicitly to grow feedstocks. Nearly 80 per cent of UK soybeans, an important animal feed, are imported from Brazil (Van Gedler et al., 2008); so there is a strong link between meat and dairy production and consumption in this country and deforestation of the Amazon. This also illustrates why 'local' doesn't always mean local when all factors of production are taken into account. But, of course, the issue is not clear-cut, and some livestock do provide environmental benefits. For example, on marginal uplands in the UK appropriate densities of livestock allow wildlife to flourish and help to prevent peat (an important carbon sink) from drying out (NFU, 2007).

There is a strong link between meat and dairy consumption in this country and deforestation of the Amazon

We need to think more holistically about food justice in our increasingly resource-constrained world

In terms of waste, consumers in rich countries waste almost as much food (222 million tonnes) as the entire net food production of sub-Saharan Africa (FAO, 2011), and in the UK eliminating just the *avoidable* household food waste would deliver emissions reductions equivalent to taking one in every five cars off UK roads (Cabinet Office, 2008). This is far more significant than any potential gains from reducing food miles. In developing countries, food losses are almost as significant, but they tend to occur in the production-to-processing phases owing to poor infrastructure, low levels of technology, and low investment in the food production systems (FAO, 2011).

All of the above suggests that we absolutely do, as you suggest, need to think more broadly and holistically about food justice in our increasingly resource-constrained world. There is so much more at stake than how far food travels before it reaches our mouths or worse, our dustbins. We need to build a new global governance to avert food crises, build a new agricultural future by prioritizing the needs of small-scale food producers in developing countries, and build the architecture of a new ecological future so that scarce resources are shared more equitably. And if all that feels like a lot to achieve before dinner time, then at the very least we, as

consumers, need to have a better understanding of where our food comes from and to ensure that it is sourced from a balanced mix of places, supporting poor producers everywhere.

Best wishes,
Richard

Animal feeds are the food miles we should be worrying about

Dear Richard,

It seems we are coming to similar conclusions though from different starting points.

The real hotspot for me is meat and dairy. We eat too much; far more than we need from a nutritional standpoint, and far more than is good for the environment; and we are exporting our food habits to the South, with little thought for the impact it has on their traditions, wallets, or health. We are exporting a food system that relies on huge amounts of feed and water, and has a large carbon footprint.

We are exporting a food system that relies on huge amounts of feed and water, with a large carbon footprint

It is the feed that is the oft-ignored area and, as you say, this has environmental impacts. Look at the Cerrado in Brazil, one of the great global habitats, where people have been driven off their land. It contains 5 per cent of global biodiversity and is being destroyed to grow soya, of which globally 80 per cent is fed to livestock (Nieremberg 2006). By 2020 it is estimated that, globally, demand for soya will have increased by nearly 700 per cent since 1970 (Dros, 2004). These food miles are rarely spoken about. People are only concerned about where the animal was raised when purchasing their chicken dinner, pork joint, or piece of cheese. It is very likely that the animal was fed on something grown on the other side of the world. These are food miles we should be worrying about: people are losing their land; biodiversity is being trampled on; natural resources, the key one being water, are being diverted to grow these plants; and large amounts of fertilizers and pesticides are used to ensure they grow, all so we can have a cheap, plentiful supply of meat and dairy at every meal. The land could be used in a more sustainable manner that benefits all. There is a solution that involves reducing demand for meat, not going vegetarian, and feeding livestock more appropriate food, such as beans and legumes grown on-farm, which benefit the soil. This will release land in the other countries and enable farmers to grow traditional crops directly for themselves and for markets, and more land can remain for biodiversity. Food waste could be utilized as feed; it is a crime that food waste goes to landfill or incineration.

I fully support the concept of food justice as long as it includes justice for nature, the oft-overlooked and poor relation in any discussion around food and the future. The simple fact is that if we do not do everything we can to look after nature, conserve freshwater,

not pollute it with agricultural run off, protect habitats and biodiversity, and sustainably utilize the resources on-farm, we will have a very grim future with greater inequalities as we scramble for what is left.

I am optimistic: I believe that by supporting local producers, buying from reputable certified sources, such as Fairtrade or MSC (Marine Stewardship Council), preparing more food ourselves, moving to a sustainable diet, perhaps the Livewell Plate (MacDiarmid et al., 2011), and wasting less, we can forge ahead and create a sustainable food system that benefits all stakeholders. If food miles have proven to be a catalyst to this change, albeit a misunderstood and misused concept, I welcome it.

Our next challenge is to ensure the concept of sustainable intensification is not hijacked to benefit the status quo: that is, large-scale industrial farming systems that require high inputs and do not take into account negative externalities, and in the case of the South, damage the land and have little respect for traditional farming practices and land rights. I believe civil society organizations need to work together to ensure that this concept protects smallholders globally, works towards equity, enhances biodiversity and conserves natural resources.

The challenge is to ensure that sustainable intensification is not hijacked to benefit the status quo

Best wishes,
Duncan

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