Food miles

by Caroline Stacey

Working out the environmental impact of the food we buy can be confusing. It's no longer just about food miles - there's production, processing, packaging and storage to weigh up too.

What are food miles?

Thanks in part to concerns about climate change, more people are stopping to consider the impact that everyday goods - including food - have on the environment. Food miles, the distance food travels from field to plate, is a way of indicating the environmental impact of the food we eat. Half the vegetables and 95 per cent of the fruit eaten in the UK comes from beyond our shores.

Increasingly, it arrives by plane - and air travel gives off more CO2 than any other form of transport. Agriculture and food account for nearly 30 per cent of goods trucked around Britain's roads and, according to a Government report in 2005, the resulting road congestion, accidents and pollution cost the country £9bn a year.

The end of the road for food miles?

The term 'food miles' was coined in the 1990s by Dr Tim Lang, professor of food policy at London's City University. While the idea of food miles has become common currency, many other processes contribute to the carbon footprint of our food. Agriculture, processing, storage and the way we shop all have to be factored into the bigger carbon emissions picture.

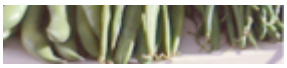
Together these factors combine to make the food we eat responsible for a third of UK households' impact on climate change.

Air grievance

The most contentious food miles are clocked up by the fresh fruit and vegetables arriving by plane from across the globe. Reducing the carbon footprint of food is not as simple as choosing not to buy fresh fruit and vegetables flown in from Africa or South America, however.

Although air-freighted produce accounts for less than one per cent of total UK food miles, it is responsible for around 11 per cent of the total CO2 emissions from UK food transport. That's because transport by plane generates 177 times more greenhouse gases than shipping does, for example, and it's the fastest-growing way of moving food around, according to latest figures from the Department for Environment, Food and Rural Affairs (Defra).

The most recent increase is affected by imports of animal feed from Brazil and the USA, but it is the green beans grown in Kenya, 70 per cent of which are destined for UK supermarkets, that draw much of the anti-air freight fire.



Because of concerns about the carbon emissions generated by air-freighting, Marks and Spencer and Tesco now label fresh produce flown in from abroad with a sticker depicting an airplane.

Miles in the balance

Others believe that highlighting the fact that the food is air-freighted can demonise such produce and threaten the livelihoods of some of the world's poorest people, who are dependent on exporting by plane. The £200million fresh fruit and vegetable trade with the UK supports one million people living in Africa.

To support environmentally friendly food production without unnecessarily harming vulnerable developing economies, the Soil Association has decided that, in order to qualify as 'organic', all air-freighted food will have to meet ethical trade standards from 2009. Incidentally most Fairtrade fruit, such as pineapples, bananas and mangoes, is transported by sea.

Lorry loads

Food transport is responsible for 25 per cent of the kilometres clocked up by HGVs on our congested roads. Supermarkets have national distribution systems, so even food grown near a particular branch may have travelled by lorry to a central depot and back to its place of origin. Ingredients used in the food processing industry travel around the country from factory to factory before reaching the shops.

All these journeys around Britain mean that HGVs transporting food transport are responsible for a quarter of CO2 emissions.

Car culprits

It's easy to overlook the fact that the food we eat clocks up extra miles on the drive to the supermarket and back. The last set of figures looking at the distance food travels found a seven per cent increase in city car journeys making longer and more frequent trips to the shops. Cars are responsible for 20 per cent of the UK's CO2 emissions from food transport.

Is home-grown always better?

Even locally grown and organic food can be kept chilled for months. Refrigeration requires energy; trying to cheat our climate by growing fruit and vegetables outside their natural season is also contributing to climate change.

A 2005 Defra report indicated that it can be more energy-efficient to import tomatoes from Spain by lorry than to grow them in a heated greenhouse in the UK. Lettuce grown out of season in the UK also compared unfavourably with Spanish salad when total carbon emissions were measured.

A study carried out at Lincoln University in New Zealand concluded that rearing and distributing British lamb produces more CO2 emissions than importing the meat 11,000 miles by sea. New Zealand farmers use more renewable energy and less fertiliser, so agriculture is much more energy efficient than the UK's, making up for the food miles.

Carbon 'foodprint'

Different farming systems use varying amounts of energy. The reckoning of all the carbon emissions produced in the growing, processing and distribution of our food starts in the field. Measuring the environmental impact, from fork to plate, is known as the life cycle.

Organic farming uses less energy because it relies much less heavily on fertilisers and chemicals used in intensive farming, the manufacture of which creates greenhouse gases.

Meat is the most energy-intensive of all foods to produce, taking up larger amounts of water than any other food production - 2,400 litres of water to produce a 150g hamburger compared to 13 litres of water for a 70g tomato. Cows give off methane which contributes to global warming, too. Livestock rearing generates more greenhouse gases than transport does.

Processing and packaging also contribute to food's carbon footprint, as does keeping it chilled or frozen. All these carbon emissions can outweigh those produced by food miles.

Is there still mileage in food miles?

While some think the term food miles will be superseded by a life cycle carbon footprint, it is still important to keep track of the distance food travels.

Food miles have jump-started the debate about the carbon footprint of our food. Paul Steedman of the Food Ethics Council insists they're still a valuable concept, although only one component of the life cycle of food. 'It's heartening the way people are now thinking about the ethics of food, and we don't want to throw the baby out of the bathwater,' says Steedman.

He and others would argue that comparing English and New Zealand apples in July and finding that the imports score lower on carbon emissions is a red herring, because consumers shouldn't expect to eat apples out of season and that supermarkets shouldn't be selling unseasonal fresh fruit and vegetables all year round. That way, he argues, the responsibility wouldn't lie with shoppers having to weigh up which foods are better for the environment.

Carbon labelling

But a global food economy seems here to stay and consumers will doubtless continue to demand the out-of-season produce that they've grown used to. The challenge is to reduce the impact food production has on climate change.

By working out a way of measuring how much CO2 is given off at every stage of production that's partly what the Carbon Trust is helping organisations to do. Look for the distinctive 'footprint' label on various products, from crisps and smoothies to potatoes and orange juice. Companies opting into the Carbon Trust scheme must commit to reducing emissions or lose the right to use the label.

Only when several similar foods have their carbon footprint measured can shoppers choose their foods accordingly. Until then, shopping locally for what's grown locally (and, preferably, organically) and in season, may be the only guarantee that the food we buy is doing the least possible damage to our environment.

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