Food Miles

Standard Note: SN/SC/4984

Last updated: 1 June 2010

Author: Christopher Barclay

Section Science and Environment Section

- This note discusses whether consumers should be concerned at how far food has travelled before they buy it. A related note is Food Security - UK Policy (SN/SC/4985).
- The original food miles idea was that the distance that farm produce had travelled before consumption was a good indicator of the amount of CO_2 that had been emitted.
- That idea has been seriously challenged, because transport accounts for only a very small proportion of the CO2 emissions from farm produce.
- In some cases, carbon emissions are much lower for items produced in tropical countries rather than in temperate countries. In other cases, emissions are much lower when they come from the most efficient source.
- Some people argue that food labels should have more detailed information about the environmental impact of that item. Others argue that such a requirement would make labels too complex and probably not greatly affect consumer behaviour.
- The Soil Association agreed, after long consultation, to monitor the use of air freight for organic produce, but not to require special labelling for it.
- The Labour Government encouraged local food hubs.
- In 2009, the EU banned a Swedish campaign to buy local.
- The 2010 Coalition Programme for Government did not mention food miles.

This information is provided to Members of Parliament in support of their parliamentary duties and is not intended to address the specific circumstances of any particular individual. It should not be relied upon as being up to date; the law or policies may have changed since it was last updated; and it should not be relied upon as legal or professional advice or as a substitute for it. A suitably qualified professional should be consulted if specific advice or information is required.

This information is provided subject to our general terms and conditions which are available online or may be provided on request in hard copy. Authors are available to discuss the content of this briefing with Members and their staff, but not with the general public.

Contents

1	**The original idea**	**2**
2	**Challenges to the Food Miles approach**	**2**
3	**Could food labelling assist the consumer?**	**5**
4	**The Soil Association and air freight**	**6**
5	**Labour Government encouragement of local food hubs**	**7**
6	**European Commission challenges Swedish buy local campaign**	**8**

1 The original idea

Professor Tim Lang originally coined the term "food miles" and explained his idea in 2005:

> The idea behind food miles…was and remains simple. We wanted people to think about where their food came from, to reinject a cultural dimension into arcane environmental debates about biodiversity in farms. The Defra report confirms that there is a real problem. Food miles have rocketed in recent years. Between 1978 and 2002, the amount of food trucked by heavy goods vehicles (HGVs) increased by 23%. And the distance for each trip increased by over 50%. In 2002, food transport accounted for an estimated 30bn vehicle kilometres. Food now accounts for a staggering 25% of all HGV kilometres in the UK. (…)
>
> But consumers also contribute to the food-miles problem. Car use for buying food in towns has risen by 27% since 1992. (…)
>
> So what can shoppers do? Simple: shop locally and buy local produce.[1]

He complained that labels in a supermarket make it impossible for a shopper to make environmentally friendly choices. In general, he argued that they should buy local and in season.

2 Challenges to the Food Miles approach

There has been a backlash against the idea of buying local. Foreign exporters complain that it results in buying goods from one's own country even though they often involve more energy use than imports when production and transport are taken together.

A 2007 report from New Zealand has challenged the view that the most environmentally benign food purchases are those from near to home:

> The "food miles" efficiency of the New Zealand dairy industry in producing and delivering products for the British market has received new confirmation from a Lincoln University report released today. The report shows that in the production of New Zealand dairy product the generation of greenhouse gases - carbon dioxide, methane

[1] Tim Lang, "Origin Unknown", *Guardian*, 3 August 2005

> and nitrous oxide, all implicated in global climate change - is less than in the British dairy system.
>
> The Lincoln study's central finding is that the UK produces 35 percent more emissions per kilogram of milk solid than New Zealand and 31 percent more emissions per hectare than New Zealand - even including transportation from New Zealand to Britain and the carbon dioxide generated in that process.
>
> The 25-page report, authored by Professor Caroline Saunders, Director of Lincoln University's Agribusiness and Economics Research Unit, and Andrew Barber of The Agribusiness Group, is titled Comparative Energy and Greenhouse Gas Emissions of New Zealand's and the UK's Dairy Industry.[2]

A further New Zealand report in 2010 showed that shipping accounted for only 5% of the greenhouse gas emissions generated in exporting 10 grams of lamb to the UK. The study showed that 80% of the 1.9 kg of greenhouse gases created were generated on the farm and 3% in the processing stage. The study found that 57% of the total footprint was methane produced by sheep belching as they digested pasture and 15% was nitrous oxide from animal excreta.[3]

Duncan Green, Oxfam's head of research, made the case for imports from Africa on grounds of equity and proportionality:

> First equity: African farmers are amongst those least responsible for climate change, and yet they are being hit first and hardest by its effects - where's the justice in making them pay first to correct the results of our own carbon profligacy?
>
> Second proportionality: While we acknowledge the impact that a growth in airfreight will have on carbon emissions, it's important to keep things in perspective. If everyone in the UK switched one 100W light bulb to a low energy equivalent it would, over a year, reduce CO_2 emissions by five times the amount that would result from not purchasing fresh fruit and vegetables from sub-Saharan Africa. We should (literally) put our own house in order before boycotting African produce in the name of climate change.[4]

Gareth Thomas, Minister for Trade and Development, in a speech in September 2007 stated Labour Government policy, strongly supporting African producers:

> In Africa the fresh fruit and vegetable trade means that a million African farmers and their families benefit. Take Kenya - Kenya is a country where half of the population live on less than 50p a day - they live in extreme poverty. For you and I 50p means buying a small bar of chocolate for a snack, but for Kenyans, living on 50p means not knowing in the morning where the food for their children will come in the evening; it means putting off treatment for a sick child because they can't afford to pay for it.
>
> Take the small-scale farmers who bring their beans to Kaviani shed in Machakos District in Kenya. Each week they sow, they weed and they pick green beans and each week they earn an income - around £20 a week - which they can spend on their families. Not huge riches but it does mean better education and healthcare, and yes, a house with a tin roof that doesn't leak, a bicycle, a radio - big changes in their standard of living from what seems a small amount of money to us.

---

2 Lincoln University, "New 'food miles' report shows NZ dairying still more efficient than UK, greenhouse gases included," 27 July 2007

3 "NZ meat study debunks food miles argument", *Agra Europe*, 9 April 2010

4 Oxfam, The Rights and Wrongs of Food Miles, 4 December 2007

(…)

> Food miles alone, or the distance food has travelled, is not a good way to judge whether the food we eat is sustainable. Driving 6.5 miles to buy your shopping emits more carbon than flying a pack of Kenyan greenbeans to the UK. Air transport does have environmental impact and this is growing rapidly. But, air-freighted fruit and vegetables from Africa account for less than one-tenth of 1% of the UK's greenhouse gas emissions. But more than this, we should remember that people living in the vast majority of African countries are responsible for a tiny amount of carbon emissions. In Kenya, carbon emissions equate to 200 kg a head; here it is 50 times that. If we boycott the goods of poor people in Africa that are flown to the UK we deny our fellow human beings their chance to grow; their chance to reduce poverty. It's like saying, we caused the damage but you can pay the price.[5]

A report by AEA Technology for Defra was published in July 2005, *The Validity of Food Miles as an Indicator of Sustainable Development*.[6] The report investigated data and highlighted trends. It stressed the unreliability of food miles as an indicator of environmental effect and recommended a more complex indicator than simple food miles:

> Our analysis indicates that the wider environmental, social and economic effects associated with different food supply chains are complex and very system specific. Consideration of these effects does not lead to a clear case for a move to either higher or lower food miles systems. What is clear is that the complex trade-offs between different social, environmental and economic costs and benefits cannot be evaluated, and policies cannot be formulated, unless food miles and their impacts are monitored and measured. It is also clear that policies directed at reducing food transport should consider these wider effects, and be integrated with policies and initiatives in other key areas, such as rural development, trade, international development, agriculture, transport and environment. A correctly structured food miles indicator would allow continuous analysis of the trade-off between different environmental, social and economic factors.

The four recommended indicators are:

1 Urban food km in the UK, split by car, GV, HGV.

Urban food km account for most of the accident and congestion costs. The impact of air pollution is also much higher in urban areas. At present, this indicator relies on the assumption that the urban/rural travel ratio is the same for food transport as for all other transport. An alternative proxy for congestion and accident costs would be car food km.

2 HGV food km

This covers HGV transport both in the UK and overseas. HGV transport is responsible for the majority of infrastructure, noise and air pollution costs.

3 Air food km

Air freight of food is rapidly growing and has a higher environmental impact than any other transport mode.

4 Total CO_2 emissions from food transport

---

5 Speech by Gareth Thomas, Minister for Trade and Development, at the launch of the DFID Air-freight Seminar on September 17th 2007

6 AEA Technology for Defra, *The Validity of Food Miles as an Indicator of Sustainable Development, July 2005,*

> Emissions of CO_2 from the transport sector are highly significant and are growing. This indicator includes estimated CO_2 from transport fuel use both in the UK and other countries. Currently excludes CO_2 and other greenhouse gas emissions from refrigeration during transport, although it would be desirable to include this in future.
>
> In addition to the four headline indicators above, we also identified other areas where supplementary indicators are desirable, to capture some of the complexities and tradeoffs discussed above. However, for most of these areas, related indicators or policies already exist as part of other government strategies.[7]

Recommended future work included: "A study of potential policies to reduce the impacts of food transport."

A PQ in January 2008 asked about Government policy on food miles:

> **Jonathan Shaw:** While research for DEFRA has shown that food miles are an incomplete measure of the sustainability of the supply of food, reductions in transport can benefit society through reduced congestion and improved air quality. DEFRA supports the Food and Drink Industry Federation's voluntary commitment, announced last October, to reduce the environmental and social costs of domestic food transportation by 20 per cent. by 2012 compared to 2002.[8]

3 Could food labelling assist the consumer?

Tim Lang has accepted that consumers do not have enough information to take account of food miles in purchasing decisions, let alone all the other environmental factors of importance. In September 2008 he proposed a much more elaborate system of food labelling:

> He said scientists and policy-makers now realised the environmental, ethical, and health impacts of the food we ate. Producers needed to find a way to present this information to the consumer, he told the conference.
>
> He outlined a number of criteria that consumers should consider when buying food: how much energy and water are used to produce each calorie of food; what is the impact of the food item on climate, biodiversity, and the labour-force of the country it was grown in, and what are the health and financial costs of food.
>
> "Packaging could be the point of entry for [this] information," said Professor Lang.
>
> Information on socio-economic and environmental criteria could be presented simply through "food flowers" - diagrams where each petal represents a different impact, with the shaded area of a petal showing how highly a food item scores. The more detailed information could be accessed from a website and uploaded from food packaging to our mobile phones. There would, however, need to be universal agreement on which issues should be reflected in the labels.
>
> "That needs governments to agree with companies, to agree with civil society to agree what those criteria are," explained Professor Lang.[9]

---

7 Executive Summary, http://statistics.defra.gov.uk/esg/reports/foodmiles/execsumm.pdf

8 HC Deb 22 January c2001W

9 "Foods 'should label up eco-costs'", *BBC News Online*, 8 September 2008

In 2007 Defra Minister Jonathan Shaw had said that he had no plans to include food miles on food labelling.[10]

4 The Soil Association and air freight

In March 2008, the Soil Association announced the results of its consultation on air freight, recommending:

> Following an extensive first round consultation on the issue of air freight – lasting 4 months, receiving nearly 400 responses from the public, NGOs, industry, government and international agencies plus meetings with 100 organisations – the Soil Association's Standards Board recommended that the organisation's standards should be changed so that organic produce can only be air-freighted if it also meets the Soil Association's own Ethical Trade or the Fairtrade Foundation's standard.
>
> A second round of consultation launched today (6 March), in accordance with best practice, gives people the opportunity to comment on the implementation of this recommendation and provides an opportunity to ensure it is practical and fit for purpose.[11]

However, after the second round of consultation, the Soil Association Standards Board concluded that:

- a standard to require licensees to monitor and report the produce they air freight was welcomed by businesses. The information should give us a clearer understanding of key trends and drivers in the use of air freight;
- requiring a plan to reduce air freight would be costly to implement and unlikely to contribute to a reduction in the use of air freight. Many businesses already proactively try to reduce the amount they air freight;
- informing consumers should be a key part of addressing concerns about air freight. There are various channels for doing this on line and through the media. Air freight labels, however, do not give consumers enough indication of the climate change and development impacts associated with the product. Carbon labels could provide a better indication of climate change contribution, however, this is dependant on a number of factors, such as methodology and use, which are still playing out;
- to progress with standards on energy use for glasshouses and protected cropping;
- not to require air freight also to have ethical trade or Fairtrade certification, but instead
- work with partners in East Africa on a project to capture and communicate the development benefits of organic agriculture in developing countries. We hope the project will be a model for similar initiatives in other parts of the world.[12]

The *Times* of 27 January 2009 reported that the Soil Association had given way to pressure:

> The organic food watchdog has caved in to pressure from supermarkets to allow air-freighted produce to display the organic label. The Soil Association proposed last year to ban suppliers and retailers from putting its certification label on fruit and vegetables

---

[10] HC Deb 20 November 2007 c764W
[11] Soil Association Press Release, *Ensuring limited organic air freight is fair and ethical*, 6 March 2008
[12] Soil Association, Air Freight,

that arrived in Britain by air, arguing that air-freighting produce generated 177 times more greenhouse gas than sending the same produce by sea.

But the association has retreated after being lobbied by supermarket chains including Sainsbury's, Tesco, Waitrose and Asda, which want to continue selling air-freighted organic food. The decision to approve air freight, which the association posted discreetly on its website, will provoke uproar in the wider organic movement. Many supporters of the organic lifestyle believe that it should stand for sustainable consumption, not just organic production. (…)

[The Soil Association] (…) denied that it had been influenced by supermarkets in reaching its decision. However, it admitted receiving certification fees from suppliers of organic products that carried supermarket brand names.[13]

5 Labour Government encouragement of local food hubs

A PQ in June 2009 explained:

Mr. Drew: To ask the Secretary of State for Environment, Food and Rural Affairs what financial and other support his Department has made available to encourage the development of local food hubs; how many such food hubs are in existence; and at which locations.

Jane Kennedy: I recognise the benefits of well run local food hubs in helping to make it easier for local food producers to access markets, including public sector customers. Under the Regional Food Strategy both DEFRA and the regional development agencies have provided support for a number of initiatives, including food hubs, aimed at facilitating access to market for local food producers.

Funding to encourage the development of local food hubs in England has come from a number of sources:

- The additional £5 million over five years (2003-04 to 2007-08) which DEFRA made available to Food from Britain (FFB) to support the quality regional food sector;
- The regional development agencies' (RDA) single pot funding;
- The Rural Development Programme; and
- The private sector.

Examples of food hub-related activities which have received public funding include:

- Under the previous England Rural Development Programme a 50 per cent. Rural Enterprise Scheme grant of £228,500 which helped fund the conversion of existing traditional buildings into Plumgarths Farm Shop and Lakelands Food Park in Cumbria;
- The Ludlow Food Centre which has received funding (£159,000) from the West Midlands RDA; and
- A study being funded by the South East of England, East of England and London RDAs examining the feasibility of using food hubs to serve London with local and regional produce.

[13] "Stamp of organic approval for air-freighted produce", *Times*, 27 January 2009

> In addition to the above, other examples of food hub facilities can be found in Bedfordshire (Woburn Country Foods), Essex (Ashlyns Organics); Shropshire (Weston Park); Nottinghamshire (Southglade Food Park) and Cumbria (Redhills near Penrith). In the south-west, the development of food distribution hubs is being driven by local demand through the supermarkets and food manufacturers without the need for public sector intervention.
>
> Finally, DEFRA has also helped fund, via FFB, the research by Westley Consulting Ltd. and John Geldard (Plumgarths Farm) which led to the 'Supplying Local Food to Mainstream Customers' report published in August 2008. A copy of this report, which recognised the role that well run food hubs could play but was cautious about recommending public investment in establishing more hubs, can be found at the Westley Consulting website.[14]

A similar question in October 2009 related to support for local food chains:

> **The Minister of State, Department for Environment, Food and Rural Affairs (Jim Fitzpatrick**): We provide a range of assistance to local food chains, including helping regional and local food producers to overcome various barriers to market. We have funded meet-the-buyer events for both retailers and the food service sector. We also support farmers markets and farm shops, and encourage the use of food hubs and shared distribution facilities.[15]

6 European Commission challenges Swedish buy local campaign

Sweden planned to launch a "buy local" campaign as part of its Climate Smart Food programme. However, in September 2009 the European Commission complained and called for the campaign to be changed:

> The Commission says that any message to "buy local" produce contradicts EU free movement principles and cites two previous cases where an Irish and a British scheme were blocked for the same reasons. At the beginning of the 1980s Ireland launched a "Buy Irish" campaign and the UK scheme had been designed to boost consumption of locally grown fruits. Sweden now has until the 26 November to align its plans with EU rules or convince the Commission that the scheme does not run counter to free movement principles.[16]

---

[14] HC Deb 4 June 2009 cc614-5W
[15] HC Deb 29 October 2009 c426
[16] "Commission halts Swedish buy local climate campaign", *Agra Europe*, 18 September 2009