

Our Carbon Footprint



Food and Our Carbon Footprint

Background information:

Many people would be surprised to learn that food production is responsible for up to 1/3 of all global warming emissions, making food the number one contributor to household emissions! It is therefore the single most important area to focus on if we are to reduce our carbon footprint.

In the early 1990s the concept of eating locally produced food, or reducing 'food miles' was promoted as an easy way to reduce Our Carbon Footprint. In many countries there was great emphasis placed on these food miles. Unfortunately food miles are an inadequate way of assessing the total environmental impact of food. Research has shown that this transportation of food from the producer to retailer is of minor importance in food's carbon footprint.



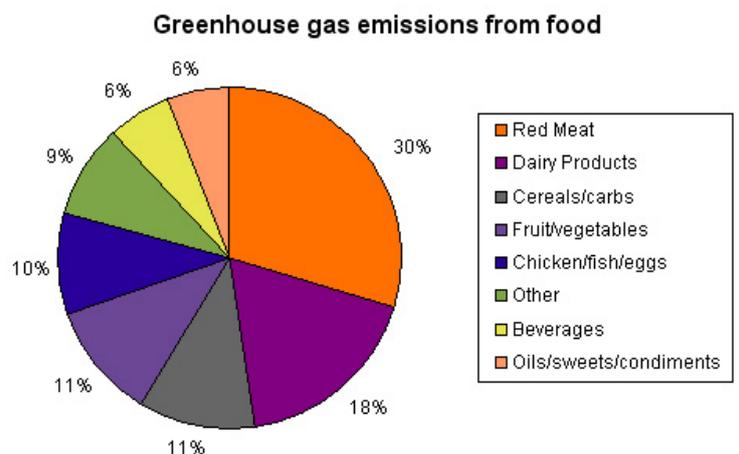
Ground breaking research in the United States has shown that food miles account for only 4% of the total carbon emissions of food. Therefore even if you were able to buy all your food locally you would only be having a very minor impact on your overall carbon footprint.

Agricultural production on the other hand accounts for the vast bulk of the food system's greenhouse gas emissions. In fact a massive 83% of all food related emissions occur before the food leaves the farm gate! If we are to substantially reduce our carbon footprint then this area is the best place to have the biggest impact.

So we need to look at our carbon footprint across the whole food supply chain by tracking greenhouse gas emissions through all phases of a food's production, transport, and consumption. In other words analysing the entire life cycle of the food. Areas that can be focussed on and modified to reduce associated emissions include techniques for planting, cultivation, irrigation, pesticides, fertiliser, farming practices, equipment maintenance, harvesting, processing, packaging, refrigeration, storage and even cooking. These all need to be addressed to truly reduce our carbon footprint.

What you can do:

Eat lower on the food chain. Meat is the most energy-intensive of all foods to produce. Red meat is around 150% more greenhouse gas intensive than chicken or fish. And many times more intensive than a vegetarian diet. One of the simplest things that we can do is swap one meal a week away from red meat to chicken or fish, or even vegetarian. This replacing of one meal a week reduces our carbon footprint by more than if we bought every single product locally.



from http://news.mongabay.com/2008/0602-ucsc_liaw_food_miles.html



Avoid food wastage. 15-30% of all food purchased is thrown away before it is eaten. Therefore by only buying what you are likely to eat you can reduce Our Carbon Footprint by up to 30%. That is a dramatic reduction! Not only that but you will save money. In Australia \$5.3 billion of food was thrown away in 2004.



Minimise shopping trips, or even better use public transport or walk to the shop. Consumers driving to the supermarket or farmers market can create more greenhouse gas emissions in that trip than what would have been produced if the product was shipped from the other side of the world.

Avoid air freighted food. Air transport generates many times more greenhouse gas emissions per tonne of food than all other forms of transport. Shipping and rail are by far the most carbon footprint friendly. Trucks whilst nowhere near as good as rail or ship are still many times better than air transport. For example agricultural products from Australia transported by sea to England can produce equivalent emissions as comparable products travelling by road to England from southern Europe.



Fresh is best. Buy less processed food, generally processed food uses more energy and water to produce. Buy fresh fruit and vegetables rather than canned or frozen. Keeping food frozen and/or refrigerated can greatly increase Our Carbon Footprint. Don't forget this goes for home grown veges also. If you grow something and keep it frozen for a month or two you have undone all your good work.

Less packaging. The process of making and applying the packaging to food generates greenhouse gas emissions. Try to buy food that limits the amount of packaging used.



Organic food can sometimes help. In most, but not all instances organic food has a lower carbon footprint than conventionally grown food. But be careful as sometimes the production of organic food can be worse for overall greenhouse emissions than non organic. For example one study found that organic wheat generates 27% less greenhouse gasses than conventional wheat, while organic poultry generates 45% more greenhouse gasses than non organic poultry! Organic food does of course have other environmental benefits not related to carbon footprints.

Less ingredients is best. The majority of food that we purchase is a mixture of many ingredients. Each of these ingredients generates greenhouse gasses in their production. Choose food that has fewer ingredients. All salt, sugar, flavourings, preservatives, colourings etc. increase the carbon footprint of food.

Compost all food scraps rather than have them trucked to a landfill site and dumped.

Watch your cooking method. The way you cook your food can have a large impact on Our Carbon Footprint. For example avoid slow cooked food that sits on the stove for an hour or two. A better alternative might be a quick 5mins in the wok. This uses many times less energy, thereby reducing Our Carbon Footprint.

Home appliances. Watch the efficiency of home appliances. Think of all the appliances that you use in the storage, preparation, cooking and cleaning of food and its related items. How much energy they use all adds up to increase Our Carbon Footprint. A good example is don't leave the fridge or freezer door open for any longer than a few seconds. If replacing an appliance buy a higher energy rated version.



These are just some things that we can do to reduce our food related carbon footprint. It should be noted that the actual climate impacts of food production are much larger than just emissions of greenhouse gasses. There are many more things that have not been touched on in this analysis, for example the effects of deforestation to produce food, issues of water use, soil erosion, impacts of chemicals etc.

Helpful websites:

<http://pubs.acs.org/doi/full/10.1021/es702969f>

<http://www.worldwatch.org/node/6064>

This fact sheet is part of NRM Education's "Our Carbon Footprint" education session. For more information about this session, please visit our website at:

www.nrmeducation.net.au



NRM Education proudly delivers the Australian Sustainable Schools Initiative - SA as well as the Waterwatch and Weed Warrior Programs. We acknowledge the support of Local Government and, in particular, those Councils who are working in partnership with NRM Education and the AMLR NRM Board. KESAB environmental solutions is also a key partner and we recognise their ongoing support.

