

# Dairy farming and climate change

## **We drink more milk than the Earth can sustain:**

- Nearly 400 pints of milk a year in various forms (including cheese, butter, yoghurt, whey products, etc.) is the average in the UK
- This is a feature of the rich countries: the majority world gets by on about a fifth of our milk consumption
- Britain lives, according to the lowest estimates, a “three-planet lifestyle”: this is the scale of resources the world would need to produce what we in the UK consume if everyone adopted our way of life
- Industrial-scale milk production to feed our 400-pint habit is a significant part of this ecological footprint, but one we can all painlessly reduce

## **How does milk production affect the environment?**

- Climate change, water scarcity, degradation of farmed land, habitat destruction, carbon sequestration and more are worsened by dairy farming
- Dairy cows place a considerable demand on the Earth's resources: 1000 litres of water are needed for a single litre of milk, and 5000 for a kilogram of cheese
- As ruminant animals digesting grass with their famous four-chambered stomachs, cows belch out huge amounts of methane, and their rotting manure releases nitrous oxide: both are potent greenhouse gases
- 40% of methane emissions and 65% of nitrous oxide are from farmed animals, with the world's dairy herd taking a substantial share of this
- Methane has 23 times the 'blanket factor' of CO<sub>2</sub> and nitrous oxide 296 times
- 1kg of CO<sub>2</sub> is emitted in the production of each litre of milk
- There's a rare bonus where methane is concerned: it only stays in the atmosphere for a fraction of the time that CO<sub>2</sub> does, so reducing methane emissions by reducing dairy production would have a more immediately beneficial effect on climate change than an equivalent CO<sub>2</sub> saving
- Growing crops and feeding them to humans directly is much more climate-friendly than producing milk, and vast amounts of land would be freed up if there were fewer dairy cows to be fed
- Land used to feed cattle is either suited for growing crops to feed humans directly, with far less land being needed, or by allowing thinly-carpeted pasture to return to its natural state, carbon could be locked up in the ecosystem by all the new growth
- The loss of cow manure to fertilise crops would not be the problem you might imagine: nitrogen-fixing plants in crop rotation systems and composted material from other sources has always been used anyway, and the consequences of loss of manure would be far outweighed by the reduction in arable land needed to grow crops to feed the cattle that produced it

## **Dairy is not much better than beef!**

- The ecological footprint of a kilogram of cheese is 60% that of a kilogram of beef: a cow producing dairy products all her life will be harder on the climate and the environment as a whole than one reared for slaughter
- Cheese has twenty times the ecological footprint of most fruit and vegetables, because of the huge inefficiency involved in converting plant food to animal food via a cow

- Each dairy cow has to be kept lactating constantly, which means annual pregnancies and the early slaughter of newborn calves so we can drink their milk instead: dairy cows are always eating for two, whether a calf or a consumer
- Cattle are not fed simply on grass: 50% of their energy and 70% of their protein comes from grains and pulses, which could be used to feed people directly
- The Food Climate Research Network estimates that just 500g of cheese is equivalent to your total daily fair share of the world's resources for **all** your needs: heat and light, transport, food of all kinds, material goods and more
- Milk production for vegetarians relying on lots of dairy produce instead of plant foods could be responsible for as much as a quarter of their food's ecological footprint: reducing dairy is as essential as reducing meat

## What are the alternatives?

- Soya milk and other plant milks (from rice, oats, and more) taste better, are more readily available and more nutritious than you might think!
- Crucially, they avoid most of the environmental damage caused by dairy farming
- Plant milks can be easily substituted for cows' milk: in your tea, on your cereal, and anywhere else you currently use milk
- Cheese, yoghurt and other dairy substitutes are also readily available: vegans eat them all the time!
- Cows' milk is simply not necessary for good health: vegan diets have long been recognised as healthy despite the myths, and the widespread obesity, heart disease and a long list of other ailments seen everywhere in the meat-and-dairy-eating population mean there's a lot more to worry about in the fat-rich diets we're all familiar with!
- If you're concerned about the food miles associated with soya, which can't be grown much further north than the Mediterranean, you could try oat milk, but remember that up to 90% of the world's soya harvest currently goes straight into the mouths of livestock in order to be inefficiently converted into meat and milk, so a vegan world that used this nutritious crop directly would need a lot less of it.

All of this is before we even consider the huge problems of animal welfare and human health associated with the dairy industry. We hope you'll agree that the environmental consequences of dairy production can't be ignored in the fight against climate change; and since those of us in charge of our own food-buying can have an impact in other ways, whether it's buying local and organic or avoiding meat, the situation we face forces us to consider just as carefully the implications of continuing to consume unsustainable quantities of milk.

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DUAR can help you with useful resources and advice gained from personal experience in using alternatives to dairy produce. See our website for more information and don't be afraid to get in touch if you need a hand!

Sources include: UNFAO (2007), FCRN (2006)  
Detailed references are available on request.

Durham University Animal Rights, June 2008  
<http://www.dur.ac.uk/animal.rights>

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