Eating Meat: Wrecking The Planet And Creating A Global Food Shortage

'Livestock are one of the most significant contributors to today's most serious environmental problems.'

Henning Steinfeld, (2006) senior UN Food and Agriculture Organization (FAO) official

Animal Farming and Global Warming

'Production of meat and dairy has a much bigger effect on climate change and other environmental impacts than that of most grains, pulses and outdoor fruit and vegetables.'
UK government (2007)

The FAO states that animal farming is responsible for 18 per cent of all global greenhouse gas emissions, including 37 per cent of methane emissions (produced by the digestive system of ruminant animals) – a gas with more than 20 times the global warming potential of carbon dioxide (FAO 2006). Animal farming also creates 65 per cent of another potent greenhouse gas, nitrous oxide, which has 296 times the global warming potential of carbon dioxide (FAO 2006). Most of this comes from manure. And it's not just animals reared for their meat who produce greenhouse gases; on average, a dairy cow belches out 500 litres of methane every day (Callard 2007). The transportation of animals, farm supplies and feed – along with the heat and electricity used by slaughterhouses and farms – further increase the contribution to global warming.

The FAO report on livestock farming also shows that the impact of animal farming on global warming worldwide is greater than that of the transport sector – air, sea and land combined.

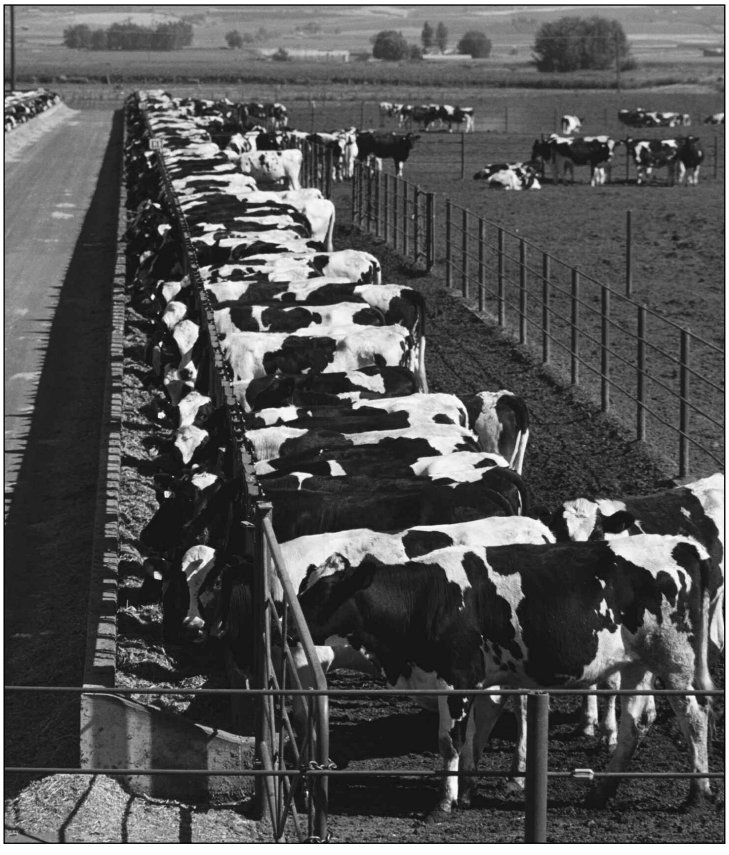
The United Kingdom currently produces approximately 12.5 tonnes of carbon-equivalent emissions per person, per year. This must be reduced to around 3 tonnes by the year 2030 if we are to limit the disastrous effects of climate change. Removing meat and dairy products entirely from your diet could reduce individual carbon footprints by 1.5 tonnes per year (Eshel & Martin 2005).

Water Pollution and Consumption

'The world's future water supply is a problem that's … greater than we've begun to realise … We've got to reduce the amount of water we devote to growing food. The world is simply running out of water.'
Anders Berntell, (2004) Director of the International Water Institute.

The meat and dairy industries are among the biggest contributors to the problem of water scarcity, through both over-use and pollution.

Animal wastes – including antibiotics and hormones, chemicals from tanneries, fertilisers and pesticides used to spray feed crops – leach or are discharged into the water table. The liquid waste from dairy farms is hundreds of times more polluting than human sewage (Gold 2004).



www.animalaid.org.uk • tel: 01732 364546

factfile

ANIMAL AID

factfile

www.animalaid.org.uk • tel: 01732 364546

Liquid slurry from farmed animals contains high levels of nitrogen and phosphorus, since animals can only absorb limited amounts from their food. Up to 80 per cent of dietary nitrogen is excreted in faeces and urine and ends up polluting groundwater and aquatic ecosystems (Gold 2004). Excess nitrogen and phosphorus cause algae to grow on water surfaces. This chokes other surface plant life and blocks light from reaching below the water's surface, causing loss of life (eutrophication).

As well as a major cause of pollution, animal farming is incredibly wasteful in its use of water and uses much more water than plant-based agriculture. Vast amounts are used for drinking water, growing crops to feed the animals (many more crops are needed to feed animals than if they were simply fed directly to people), and in processing the carcasses in slaughterhouses. Yet more water is used in an attempt to deal with the huge quantities of 'dirty' waste, generated by livestock farming. This includes manure, blood and unprofitable body parts.

Western diets, which depend largely on meat and dairy, are putting great pressures on the Earth's water resources. It takes only 1,000 litres to grow one kilo of wheat, yet 11,000 litres to produce just one quarter-pound beef burger, and between 2,000 and 4,000 litres for a cow to produce one litre of milk (Pearce 2006). A typical meat eating, milk drinking westerner consumes as much as a hundred times their own weight in water every day (Pearce 2006). Even the most water intensive plant-based crop uses far less water than the most water efficient form of animal agriculture.

Land Degradation and Rainforest Destruction

Animal farming uses 30 per cent of the Earth's entire land surface for grazing and to grow crops as feed (FAO 2006). In Britain, 70 per cent of all agricultural land is used as pasture and to grow crops to feed animals (FAO, 2004). Research has shown that if Britain went vegan, less than a quarter of the current farmland would be needed. (Spedding 1990).

Livestock farming also causes wide-scale land degradation, with about 20 per cent of global pasture land considered degraded through overgrazing, compaction and erosion (FAO 2006). This figure is even higher in the drylands where inappropriate policies and inadequate livestock management contribute to advancing desertification (FAO 2006). Animal farming also plays a destructive role in deforestation. In Latin America, some 70 per cent of former forests in the Amazon have been turned over to grazing (FAO 2006).

Soya production for animal feed is another major cause of deforestation. Around 75 per cent of global production is fed to farmed animals (Worldwatch Institute 2006). It is the demand for meat that drives the production of soya and, therefore, the destruction of the rainforest. Going vegan saves one acre of forest every year (Robbins 1992).

Pillaging the Oceans

Overfishing is the single greatest threat to the marine environment. Our eating habits are driving many aquatic species to the brink of extinction. Seventy-five per cent of the world's fisheries have been identified by the United Nations Food and Agriculture Organisation as fully exploited, overexploited or significantly depleted. Catch sizes regularly exceed sustainable levels, as the fish caught are too young to have begun breeding. Catch quotas introduced by governments to protect fish populations haven't worked as many fishing fleets practice 'high grading' – continuing to catch as many fish as possible and then throwing away those they don't want until they achieve their quota in premium size fish.

Many other animals are being driven to extinction because of 'by-catch' – non-target species who are caught in trawlers' nets and simply thrown back dead into the sea. An estimated 300,000 cetaceans (whales, dolphins and porpoises) die in fishing nets every year (Greenpeace).

Fish farms add to the problem. Industrial fisheries take small fish species from the wild and convert them into pellets for feeding to farmed salmon and trout. It takes five tonnes of ocean caught fish to produce one tonne of factory-farmed salmon (Clover 2004). These same small fish species may also be used as fishmeal in feed for other farmed animals or as oils in soft margarine.

Global Food Shortage

'Those who consume livestock products and fish are competing directly with those who need grain for food.'
Lester Brown, past president of the Worldwatch Institute, USA.

Almost half of the world's food harvest is fed to farmed animals and almost all of those calories go into simply keeping the animals alive. Only a small fraction of the calories consumed by farmed animals are actually converted into meat. An acre of cereal can produce five times more protein than an acre devoted to meat production; and legumes (beans, lentils and peas) can produce ten times as much (Seager 1995). Rather than adding to our capacity to feed the world's human population, putting animal products at the centre of food policy diminishes the possibility of doing so.

If we are to feed a growing human population, the only choice is to rely upon a plant-based diet.

References

Callard, S. (2007) Is It Worth It? Eating Less Meat. Telegraph Magazine.
Clover, C. (2004) The End of the Line: How overfishing is changing the world and what we eat.
Eshel, G. and Martin, P. (2005) Earth Interactions Vol. 10 pp. 1-17.
Food and Agriculture Organisation of the United Nations (FAO) (2004) The State of Food and Agriculture 2003 - 2004. Table A5, Land Use.
Food and Agriculture Organization of the United Nations (FAO) (2006) Livestock's Long Shadow.
Gold, M. (2004) The Global Benefits of Eating Less Meat. A Report for Compassion in World Farming Trust.
Greenpeace. www.greenpeace.org/oceans
Pearce, F. (2006) Earth: The Parched Planet. New Scientist, pp 32 – 36.
Robbins, J. (1992) Diet for a New America.
Seager, J. (1995) The State of the Environment Atlas.Spedding, C. (1990) Food for the 90's: The Impact of Organic Foods and Vegetarianism, pp. 231-41.
Worldwatch Institute (2006) www.worldwatch.org