



Eating less meat may slow climate change

A recent research paper published in the *Lancet*, (Food, livestock production, energy, climate change, and health, Sept 2007, McMichael *et al.*) suggests that to prevent increased greenhouse gas emissions both the average worldwide consumption level of animal products and the intensity of emissions from livestock production must be reduced. Livestock production accounts for 18% of total greenhouse gas emissions, these can be broken down further with 25% of this due to the enteric fermentation by ruminants, 30.5% manure and 35.4% deforestation and desertification.

World food systems provide 85% of the world's population with an adequate/excessive supply of protein and energy. In some countries the total energy input into food production now greatly exceeds food energy yield. The current global average meat consumption is 100g per person per day, with 90g proposed as a working global target with not more than 50g coming from red meat (ruminants). Figures from the Meat and Livestock Commission (2006), suggest that the UK average consumption of red meat per person per day is 123g. The authors concluded that in order to avert dangerous climate change effective measures include reducing the consumption of meat (especially ruminant red meat) and milk from the current high levels in high-income countries. What we choose to eat is one of the biggest factors in the personal impact we have on the environment.

A study by Baroni *et al*, 2006, examined the impact of a typical week's eating and showed that plant-based diets are better for the environment than those based on meat. All non-vegetarian diets required significantly greater amounts of environmental resources, such as land and water. By feeding grain and vegetables directly to people (rather than livestock) we can increase the amount of food available to everyone. For further information as to 'Why it's green to go vegetarian' visit www.vegsoc.org/environment or call us on 0161 925 2000 to request a copy of our booklet.

Researchers report that a little meat is good for the environment

In contrast, a recent publication in the journal *Renewable Agriculture and Food Systems* (Cornell University, Peters *et al*, 2007) suggests that a vegetarian diet is not necessarily the most efficient in terms of land use. Whilst a low-fat vegetarian diet is very efficient in terms of how much land is needed to support it, it is thought that adding some dairy products and a limited amount of meat may actually increase this efficiency. The researchers measured the impact of fat and meat consumption on land requirements of food production in New York State. Analysis was confined to this geographic area to simplify the modelling procedure and to examine the state's ability to reduce environmental impact by supplying food locally. The researchers compared 42 diets with the same number of calories and a core of grains, fruits, vegetables and dairy products, but with varying amounts of meat and fat to determine each diet's "agricultural footprint". They found that an individual following a low-fat vegetarian diet will need less than half (0.44) an acre per person per year to produce their food compared to a high-fat diet with a lot of meat requiring 2.11 acres. Increasing meat in the diet increased land requirements when applied to a fixed geographical area, (per capita), while increasing total dietary fat increased land requirements of low meat diets but reduced the land needed for high meat diets. Higher meat diets used a larger share of the available cropland suited only to pasture and perennial crops. The authors explanation for a vegetarian diet not necessarily being the most efficient in terms of land use is due to fruits, vegetables and grains needing to be grown on high quality cropland. Meat and dairy products from ruminant animals are supported by lower quality, but more widely available, land that can support pasture and hay.

Dramatic changes in global meat production could increase risk of diseases

According to the Food and Agriculture Organisation (FAO) the risk of disease transmission from animals to humans will increase in future. This is due to a number of factors, such as an increase in human and livestock population, dynamic changes in livestock production, emergence of worldwide agro-food networks and

significant increase in the mobility of people and goods. As the global population increases so does the demand for meat. Pig and poultry are the fastest growing industries in their annual production rates with pigs rising by 2.6% and poultry rising by 3.7%, as a consequence the vast majority of the latter are produced in houses with 15,000 – 50,000 birds. The likelihood for transfer of pathogens will be increased by the movement of animals and intensive farming with these animals producing large amounts of waste (much of this is disposed on the land without any treatment, an infection risk for wild animals/birds). The FAO livestock policy expert advises that the excessive concentration of intensive animal production should be avoided. The pathogens of concern at present are Foot and Mouth disease, Avian Flu H5N1 (a highly pathogenic virus of major global concern) and most recently, Bluetongue.

Scheme launched to 'dispose' of lambs

The Scottish Government has launched a welfare disposal scheme for light lambs (those up to 25kg in weight) which, due to the recent Foot and Mouth outbreak in England, could not be moved. This has left hundreds of thousands of sheep stranded on the hills facing starvation. The Chief Veterinary officer, Charles Milne, stated that "There is a need to do something for the light lambs on the hills which have only 30% of their summer carrying capacity at this time of year. The grass has stopped growing and there is no simple way to get feed to them". Farmers choosing to adopt this scheme will be paid £15 per lamb slaughtered, the scheme is set to run for 10 weeks and will involve 18 collection centres and 4 abattoirs, with up to 24,000 lambs being collected daily. Some of the lamb carcasses will be used for bio diesel but the remainder will be rendered or incinerated.



Bluetongue

Bluetongue infects domestic and wild ruminants such as sheep, cattle, goats, deer and camelids. It is caused by a virus transmitted by midges. The virus is spread by the movement of infected midges that go

on to bite susceptible animals in a new area, or by movements of infected animals that are subsequently bitten by midges. Infected animals experience discomfort, with flu-like symptoms, and swelling and haemorrhaging in and around the mouth and nose. They can also go lame and have difficulty eating. Bluetongue has not been seen in the UK before and DEFRA tests confirm that it is the same strain as the one circulating in parts of northern Europe since August 2006. At the time of going to press, laboratory tests have detected 34 cases of Bluetongue in the UK. Premises are all under restrictions and the infected animals have been slaughtered. A Bluetongue Temporary Control Area has been set up to control movements in Suffolk, Norfolk, Essex, Nottinghamshire, Leicestershire, Lincolnshire, Cambridgeshire, Northamptonshire and Bedfordshire. Epidemiological investigations are being carried out to assess the situation. This disease has been declared an official outbreak by governmental officials.

RSPCA farm animal welfare survey reveals 'pig ignorance'

The results from a light-hearted Freedom Food survey carried out online by the RSPCA to mark Farm Animal Week (24th to 30th September) showed a clear lack of knowledge about farm animals. Freedom Food believes that most people are aware of their own pet's intelligence but aren't so sure when it comes to farm animals. For example, the vast majority of people (88%) did not think that pigs were intelligent, when studies have shown that they are more intelligent than dogs and just as easy to train. The more individuals know about animal welfare the more they can understand and care about what animals have to endure and therefore as consumers can make more informed choices when buying food.

The number of threatened marine species grows

The 2007 World Conservation Union (IUCN) Red List of Threatened Species shows that excessive and destructive fishing activities play a primary role in oceans biodiversity loss. Out of over 41,000 species on the IUCN Red List, over 1,500 use the marine environment. Out of these around 30% are at risk with 80 threatened with extinction. The IUCN's Red List is widely recognised as the most reliable evaluation of the world's

species. Carl Gustaf Lundin (Head of ICUN's Global Marine Programme) states that "Habitat destruction, pollution, climate change and other human-induced disturbances explain why biodiversity is disappearing. However, over-fishing and destructive fishing practices represent by far the most important threat to the marine environment. Fishing operations, from local, often illegal, dynamite fishing to large-scale industrial fishing, have devastating effects and will lead to further extinctions."

Sheep 'battery farmed' for their wool

In Australia, sheep may be kept in single pens or sheds for up to 5 years just so that humans can use their wool. The sheep are fed a minimal diet and confined to protect their fleeces in order to produce the finest micron wool, which is highly valued and fetches record prices (100 times more money than regular wool) from fashion designers in Europe, particularly Italy. The RSPCA and Animals Australia have called for the single penning of sheep to be banned on cruelty grounds whereby the sheep do not have a proper social or physical environment, with the animals showing signs of stress and boredom by swaying, bar chewing and pulling at their own wool.



The ability to digest starch could have spurred human evolution

A recent scientific paper published in Nature Genetics (Perry et al 2007) has reported that compared with primates, such as Chimpanzees, humans possess more copies of a gene that makes the enzyme salivary amylase to break down starch into digestible sugars. It is thought that these high-carbohydrate diets may have been crucial for the feeding the larger brains of humans. Their investigation involved testing people

with different numbers of amylase genes. When they started looking at undergraduates and then progressed to sample populations in Africa, Asia, Europe and the Arctic they noticed a trend. They found that cultures with diets that included high levels of starch tended to have more copies of the amylase gene than cultures consuming fewer starches. Through comparing the human and chimp genomes it is suggested that the mutilation of this gene came hundreds of thousands of years ago, or more. The researchers believe that our earliest human ancestors began searching for new food sources, other than fruit, such as starches stored by plants in the form of underground tubers and bulbs.



Research highlights risks of potential British Airfreight Ban for Organic Foods

New findings by the International Trade Centre (ITC) show that developing countries exporting organic produce could lose their share of an estimated £32.6 million if Britain's leading organic certifier, the Soil Association, decide not to accept fruit and vegetables that arrive by plane. The Soil Association certifies 70% of the UK's organic produce and will be shortly deciding whether they recommend a ban on importing those items which have travelled by aircraft. An ITC expert on trade and environment, who commissioned the study, states that "a ban could have profound economic impacts on local communities in some of the world's poorest countries". The report notes that the livelihoods of at least 21,500 people will be seriously compromised if the ban takes effect and is enforced by retailers. Organic imports consist mainly of exotic fruits, around 50% of the total, with peas and beans around a third and salad vegetables one sixth. Of the 160,000 tonnes imported last year, only 5,000 came in by air (3%). The ITC report suggests that year-round demand cannot be met without importing some categories of fresh produce by air. Those that are diced, chopped or prepared in other ways cannot be imported by other means.