

## **Why be a Vegan? How to be a vegan! Haslemere Talk May 2018.**

According to the Vegan Society, the number of UK vegans has risen to over 542,000 people, up by 360% in 10 years!

**Climate.** The FAO estimates that the livestock sector is responsible for 14.5% of human-induced greenhouse gas (GHG) emissions (Gerber et al., 2013). Studies suggest that 'business-as-usual' will lead to agriculture's GHG emissions being so high by 2050 that they alone will push global temperatures to increase by almost 2°C (Bajželj et al., 2014; Bailey et al., 2014).

Springmann et al. (2016) compared the health impacts in 2050 of a reference diet based on FAO projections with three alternatives: (i) a healthy global diet based on WHO/FAO Expert Consultations and recommendations by the World Cancer Research Fund, (ii) a vegetarian diet and (iii) a vegan diet (Springmann et al., 2016) The researchers estimate that, compared with the reference diet, adoption of a healthy global diet would have monetized environmental benefits due to reduced GHG emissions of \$234 billion per year. **Adoption of the vegetarian and vegan diets would have benefits, compared with the reference diet, of \$511 and \$570 billion per year respectively.**

An Oxford study examined diets in the United Kingdom and found that greenhouse gas emissions per individual decreased as meat consumption decreased. People who ate meat frequently had greenhouse emissions that were twice as high as vegans. The GHG emissions in kilograms of carbon dioxide equivalents per day (kgCO<sub>2</sub>e/day) were **7.19 for high meat-eaters** (> = 100 g/d), 4.67 for low meat-eaters (< 50 g/d), 3.91 for fish-eaters, 3.81 for vegetarians and **2.89 for vegans.** (Peter Scarborough 2014).

A systematic review of 14 papers on diet and GHG emissions by Elinor Hallström showed that the vegan diet had the greatest impact on reducing GHG emissions (around 55%). This was followed by vegetarian diets and healthier diets in which less meat was eaten. The same diets had a similar impact on reducing demand for agricultural land, with the vegan diet reducing demand on land by nearly 60% (Hallström 2014).

**Environment.** Producing animal products is energy-intensive; **one calorie of beef requires 40 calories of fossil fuel, one calorie of milk requires 14, while one calorie of grains only requires 2.2** (Dietary

Guidelines Advisory Committee, 2015). Although many animal products have a larger environmental impact than plant products, meat has the largest impact (Nelson et al., 2016). Many studies have indicated that reducing meat consumption could conserve land, energy and water and decrease greenhouse gas emissions, as well as improve health (Nelson et al., 2016).

Globally food production accounts for 60-70% of total biodiversity loss (Kok et al., 2014). The European Commission states that the livestock sector may be the leading player in the reduction of global biodiversity through its demand on land (European Commission, 2011). The contribution of livestock farming to the present global loss of biodiversity is estimated to be around 30% (Westhoek, 2011).

In Europe the livestock sector accounts for 23%–47% of the nitrogen river load to coastal waters, and 17%–26% of the phosphorus river loads (Liep, 2015).

**Resources.** Studies show that for every 100 calories of cereals fed to animals, just 17-30 calories are delivered to the human food chain as meat (Lundqvist et al., 2008; Nellesmann et al., 2009).

A University of Minnesota paper indicates that the efficiency rates may be even lower for some animal products. It concludes that for every 100 calories of grain that we feed to animals, we get only about 40 new calories of milk, 22 calories of eggs, 12 of chicken, 10 of pork, or 3 of beef (Cassidy, 2013). The paper also looks at protein conversion. It reports that for every 100 units of protein contained in grain fed to animals, we receive only about 43 units of protein from milk, 35 from eggs, 40 from chicken, 10 from pork, or 5 from beef.

**Soya.** Around 85% of the global soybean crop is crushed to produce meal and oil, with about 78.5% resulting in soy meal and about 19% oil, with the remaining 2.5% lost in processing (The Nature Conservancy, 2012). In fact 98% of global soybean meal is used as animal feed (Soyatech, 2015). Soya contains around 38% protein — twice as much as pork, three times more than eggs and 12 times more than milk (WWF, 2016a). The obvious thought here is: what a great protein source for humanity! Yet people mainly consume soya indirectly through their consumption of meat, dairy products, eggs and fish! Just a small amount of soya is processed to make soya flour, or products like tofu and soya

milk, soya-based meat substitutes and soy sauces, and it is an ingredient in some household products.

**Health.** UK gov't says a woman needs 36g protein a day and a man 44g. But average intake is 65g for a woman and 85 for a man. We already get 25g a day from fruit veg, cereals and nuts so if we eat a bit more we'll meet our protein requirements.

The gov't's Eatwell Guide 2016 says reduce protein by 24% and dairy by 29%. It says reduce red meat and processed meat by 79 %, reduce cheese by 85%, milk by 10% and **increase** other proteins like beans and lentils by 86%.

When dairy fat was replaced with the same number of calories from vegetable fat or polyunsaturated fat, the risk of cardiovascular disease dropped by 10% and 24%, respectively. (Study by Harvard Chan School researchers published in The American Journal of Clinical Nutrition which investigated the relationship between dairy fat intake and risk of cardiovascular diseases, such as heart disease and stroke.2016)

In 2015, the Int'l agency for Research on Cancer (IARC) says **red meat is probably carcinogenic to humans – colorectal and prostate and pancreas cancers. Processed meat was classified as carcinogenic to humans** based on sufficient evidence in humans that the consumption of processed meat causes colorectal cancer.

In a study of 127,536 US women and men, replacing 5% of energy from saturated fats with equivalent energy from polyunsaturated fat, monounsaturated fat or whole grains was associated with a 25%, 15% and 9% lower risk of coronary heart disease, respectively (Li et al., 2015)

Red meat, especially processed red meat, is also associated with type 2 diabetes (Pan et al., 2011).

Chicken? A University of Florida study ranked the top 10 pathogen-food combinations and concluded that campylobacter in poultry was the most damaging in terms of both cost of illness and loss of Quality Adjusted Life Years (QALYs), a measure of health-related quality of life (Batz et al., 2011). Salmonella in poultry was the fourth most damaging. The study found that contaminated poultry has the greatest public health impact among foods. It is responsible for over \$2.4 billion in estimated costs of illness annually and loss of 15,000 QALYs a year.

## PLANT-BASED PROTEIN SOURCES:

1/2 cup chickpeas: 7 g

1/2 cup lentils: 9 g

1/2 cup firm tofu: 10 g

1 cup quinoa, cooked: 8g

1/4 cup almonds: 7.4 g

1 whole grain bagel: 12 g

2 slices sprouted grain bread: 14 g

1 whole wheat English muffin: 8 g

1 cup soy milk: 8-12g

1 medium orange: 1.2 g

1 cup broccoli: 2.6 g

## **Vegan lifestyle guide from the Vegan Society website:**

<https://www.vegansociety.com/resources/nutrition-and-health/nutrition-overview>

The tips below will help you to get the most out of your vegan lifestyle:

Make sure that your diet contains a variety of fruit and vegetables – eat a rainbow!

Choose higher fibre starchy foods, such as oats, sweet potato, wholemeal bread, wholewheat pasta and brown rice

Include good sources of protein in most meals, such as beans, lentils, chickpeas, tofu, soya alternatives to milk and yoghurt, or peanuts

Eat nuts and seeds daily, especially those rich in omega-3 fat

Eat calcium-rich foods daily, such as calcium-fortified products and calcium-set tofu

Ensure that your diet contains a reliable source of vitamin B12 (either fortified foods or a supplement)

Ensure that your diet contains a reliable source of iodine (arguably a supplement is the best option)

Everyone in UK should consider a vitamin D supplement during autumn and winter, and year-round supplementation should be considered by people who do not regularly expose their skin to sunlight, and those with darker skin

Use small amounts of spread and oil high in unsaturated fats, such as vegetable (rapeseed) and olive oils

Season food with herbs and spices instead of salt

Drink about six to eight glasses of fluid a day

Consider a supplement containing long chain omega-3 fats from microalgae, particularly for infants and those who are pregnant or breastfeeding

Check out our information about vitamins B12 and D, calcium, iron, zinc, selenium and omega-3 fats to make sure that you are getting enough

Keep active

Maintain a healthy weight, or lose some weight if it is above the healthy range

The Vegan Society markets a vitamin and mineral supplement called VEG 1, which is designed to provide vegans with reliable intakes of vitamins B12 and D, iodine and selenium.

NB. I recommend visiting Compassion in World Farming's website: [www.ciwf.org](http://www.ciwf.org) – lots of info in our publications/research bit.

Also 2 books by our CEO, Philip Lymbery: *Farmageddon and Dead Zone – where the wild things were*, both pubd by Bloomsbury.

Joyce D'Silva