

Compassion in World Farming would like to comment on Question 9.

Compassion in World Farming believes that **a significant part of any sustainable solution needs to be a reduction in meat consumption** in developed countries, since the direct and indirect impact on the climate of current levels – especially if extrapolated by developing countries adopting Western dietary patterns – will not be sustainable.

We attach a poster presenting the argument, which is broadly in line with the more detailed 2015 Chatham House report summarised here:

<https://www.ciwfdocs.org/docs/~D115976>

In Britain, at present, sections of meat farming are indirectly subsidised through farm support payments, inadvertently masking the overall cost and thereby encouraging meat consumption. This is counter-productive in climate change terms, and it would be helpful for the CCC to **recommend a shift in support away from intensive meat production sectors** as part of the Government's agenda to focus subsidy on "public goods".

In addition, moves to reduce livestock emissions must not undermine AW. Some suggest using grain and concentrates to replace forage in ruminant diets in order to reduce methane emissions. This approach would have a damaging impact on animal health. Higher grain levels in the diet may have a detrimental effect on cow health and welfare (e.g. laminitis). An EFSA report and other research show that diets that are rich in cereals can have an adverse impact on bovine health.

High-concentrate feed is inappropriate for ruminant animals whose digestive systems are designed for fibrous food, such as grass and silage. EFSA points out that feeding a large proportion of concentrate feed can lead to transient acidosis of the ruminal environment.^[1] Recurrent acidosis may eventually lead to ruminitis and abscesses in the liver and other tissues. Moreover, sub-acute ruminal acidosis has been linked to other signs of poor animal welfare such as loss of body condition, laminitis, and high herd culling rates.^[2] In our view, dietary changes that are likely to have a detrimental impact on animal health and welfare should not be put into use.

Increasing productivity per animal: Some suggest improving the productivity of dairy cows as a way of reducing greenhouse gas emissions per litre of milk produced. This could result in serious health and welfare problems. EFSA Scientific Opinion highlighted the dangers of pushing cows to high milk yields. Its principal conclusion is that "Long term genetic selection for high milk yield is the major factor causing poor welfare, in particular health problems, in dairy cows".

^[1] Scientific report of EFSA prepared by the Animal Health and Animal Welfare Unit on the effects of farming systems on dairy cow welfare and disease. *Annex to the EFSA Journal* (2009) 1143, 1-284

^[2] Scientific report of EFSA prepared by the Animal Health and Animal Welfare Unit on the effects of farming systems on dairy cow welfare and disease. *Annex to the EFSA Journal* (2009) 1143, 1-284

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Emissions from livestock and the Role of Diets in driving Climate Change

Di Leonardo F and Stevenson P.

Compassion in World Farming, Italy & UK

federica.dileonardo@ciwfonlus.it

Our meat-heavy diets could make it almost impossible to meet the Paris targets

The FAO estimates that the livestock sector is responsible for 14.5% of human-induced GHG emissions.^[1]

Main sources of livestock's emissions

Source	% contribution to livestock sector's emissions
Production of feed including: Manufacture of fertilizers uses large amounts of fossil fuels which results in sizeable CO ₂ emissions ^[2] Application of fertilizers to animal feed crops leads to substantial emissions of nitrous oxide ^[3] Manure deposition on pasture Land use change – including expansion of pasture & soy for animal feed into forests ^[2]	45%
Enteric fermentation by ruminants	39%
Manure storage & processing (not including application & deposition)	10%

Source: FAO, 2013 ^[1]

All sectors must reduce their emissions if we are to meet the Paris targets, but on a business-as-usual basis

emissions from food & agriculture will increase substantially [4] [5]

Policy-makers focus on technical mitigation measures and increased productivity in order to reduce agriculture's emissions. However, such measures will be insufficient on their own to prevent an increase in farming's GHG emissions; they certainly will not be able to achieve a reduction [5], [6]. Our consumption patterns will have to change as well [7].

Livestock generally produce more emissions per unit of nutrition produced than plant-based foods [4]. Hilal Elver, the UN Special Rapporteur on the right to food says: **"The world's current consumption pattern of meat and dairy products is a major driver of climate change and climate change can only be effectively addressed if demand for these products is reduced"** [8].

Studies show that, on a business-as-usual (BAU) basis, GHG emissions from food and agriculture will be very much higher in 2050 than now [4], [5]. Bajželj *et al* (2014) conclude that only a 50% reduction in food waste and a move to healthy diets – which in many countries involves substantial reductions in meat and dairy – can lead to a reduction in food's emissions by 2050 compared with the present [5].

Figure 1: Emissions from food & farming in 2050 under various scenarios: Bajželj *et al*, 2014 [5]

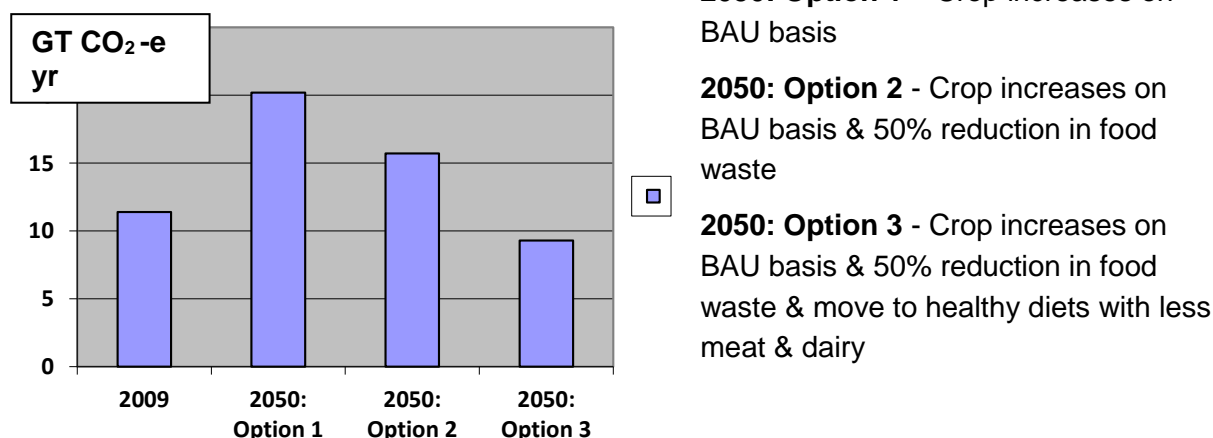
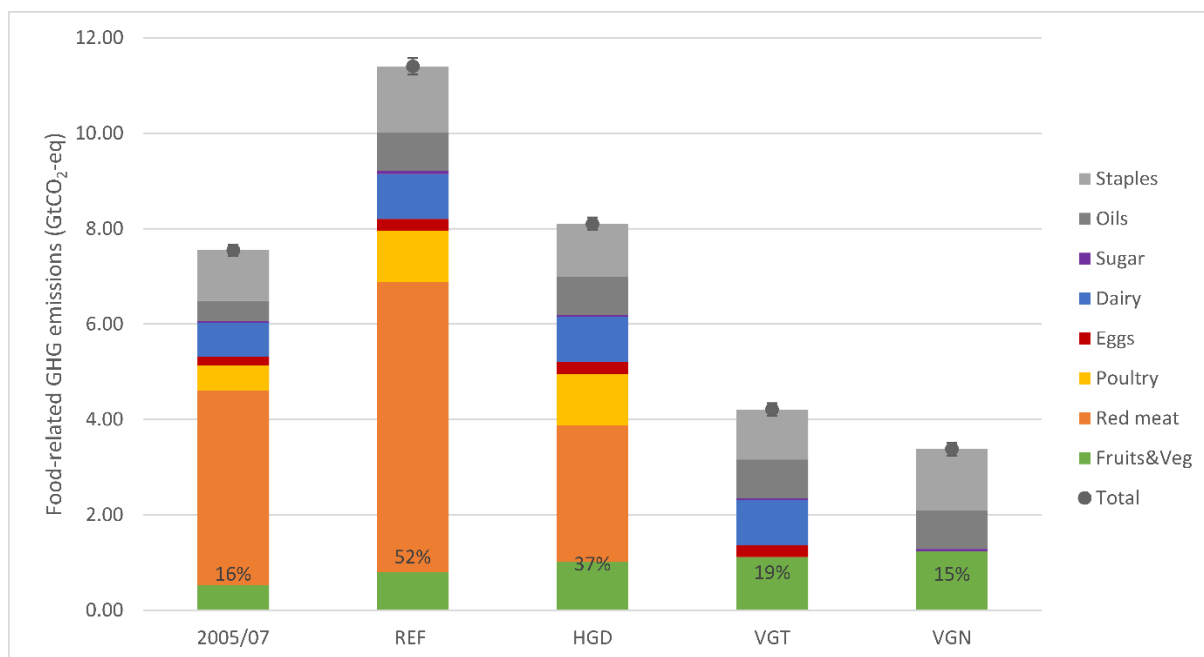


Figure 2: GHG emissions from food & farming in 2050 under various scenarios: Springmann *et al*, 2016 [4]



Ref: reference diet in 2050 based on FAO BAU projections

HGD: Healthy global diets based on WHO/FAO Expert Consultations. The HGD includes max of 43g of red meat per person per day. **The healthy global diet would produce 29% less emissions in 2050 than the reference diet but, despite this, emissions from food and farming will be greater than in 2005-07. Only the VGT (vegetarian) and VGN (vegan) diets produce a reduction in emissions compared to 2005-07.**

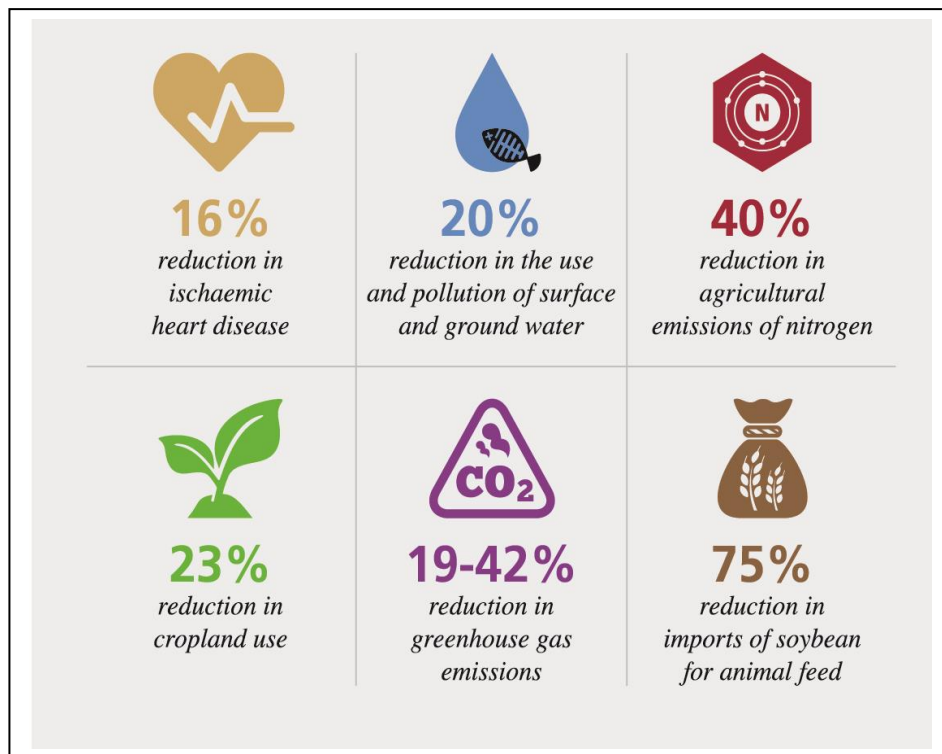
Business-as-usual will by 2050 lead to food & farming swallowing up 52% of the 'carbon budget' i.e. the maximum emissions that can be permitted if we are to meet the 'below 2°C' target ^[4] Substantial reductions in the consumption of animal products are needed to ensure that food does not increase its share of the emissions budget.

An increase in food's share of the carbon budget will put pressure on other sectors to shoulder more than their share of emission reductions – it will increase the cost of mitigation in other sectors or reduce the feasibility of meeting the 2°C limit.

A reduction in meat and dairy consumption would not only reduce GHG emissions but would have important health and environmental co-benefits. Studies show that reducing meat and dairy consumption by about 50% would lead to a lower incidence of heart disease and reduced use of arable land, freshwater, energy and pesticides as well as

reduced GHG emissions, nitrogen and phosphorus surpluses, deforestation and soil erosion [9], [10], [11].

Figure 3: An EU move to healthier diets with around 50% less meat would have multiple benefits



Source:
[9], [10],

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