



The Food  
Foundation

# The affordability dichotomy: how do we ensure that healthy and sustainable diets are affordable and accessible for all?

Rebecca Tobi RNutr, Senior business and investor engagement manager

September 2023

[foodfoundation.org.uk](https://www.foodfoundation.org.uk)

[@Food\\_Foundation](https://twitter.com/Food_Foundation) [@FoodFoundationUK](https://facebook.com/FoodFoundationUK) [thefoodfoundation](https://linkedin.com/company/thefoodfoundation) [@food.foundation](https://instagram.com/food.foundation)

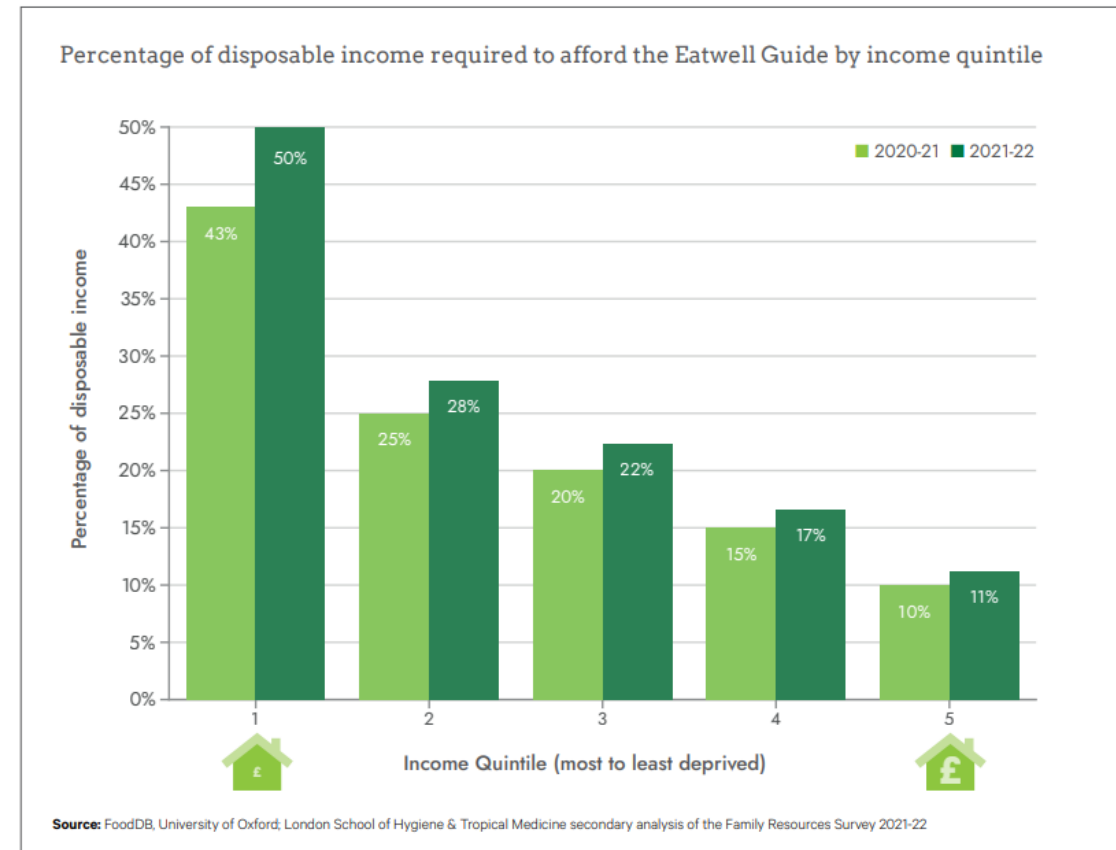
# Shifting the UK population towards more sustainable diets is essential for reducing emissions

- In the UK, emissions from the food system account for 19% of our domestic greenhouse gas emissions (closer to 30% when emissions from imports are included) [NFS, 2021]
- Shifting diets has a key part to play. In the UK, meat accounts for the largest proportion of greenhouse gas emissions (GHGEs) associated with diets (32%), with dairy products contributing another 14% [Rippin et al, 2021]
- **Huge co-benefits for both people and planet.** Eatwell Guide adherence is estimated to result in a 30% reduction in GHGEs and a 7% reduction in mortality risk [Scheelbeek, 2020]



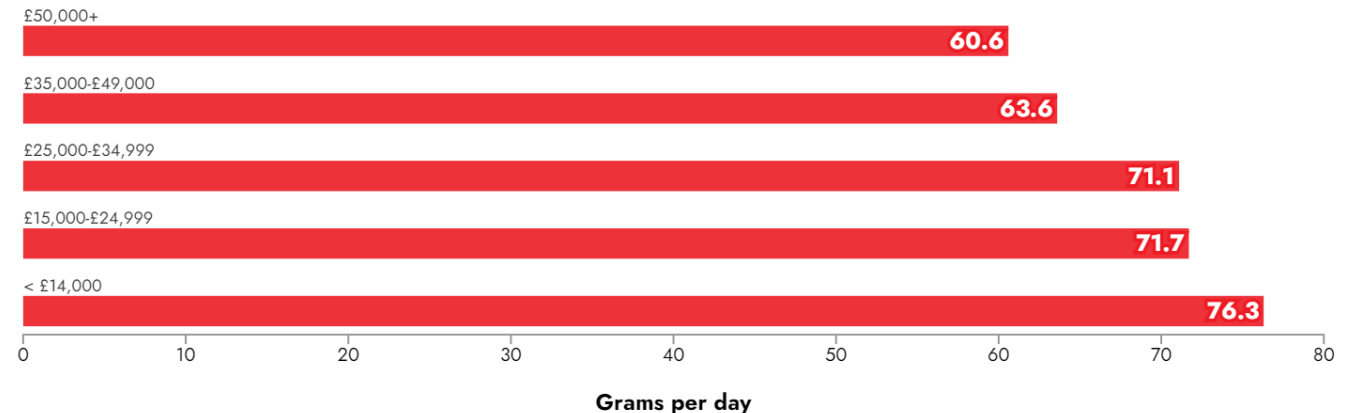
# But we need to ensure sustainable diets are accessible and affordable for everyone

- Dichotomy: Britons spend c 8% of their total household expenditure on food as a % of total spending on goods and services. This is less than many other countries [Euromonitor, 2018]. However, this is **an average**.
- Currently, eating in line with the EWG (a more healthy & sustainable diet vs. current average) is proportionately much more expensive for lower income groups [Food Foundation, Broken Plate, 2023]
- Modelling studies using UK diet and price data suggest that it is possible for costs to remain within existing food budget constraints were diets to transition towards lower emissions
- **However, such studies are often based on averages**, despite the changes required for low-income groups being greater than for high-income groups [Reynolds et al, 2019]



# Red meat and dairy intake is patterned by socio-economic status

- On average lower income groups eat more red and processed meat than higher income groups. National Diet and Nutrition Survey (NDNS) data shows that the lowest earning households consume 15-7 g/d more red and processed meat (RPM) than the highest-earning households
- RPM intake associated not just with income, but also with level of education and occupation
- Analysis of Family Food Survey data shows that the poorest 10% of the population bought 16% more milk products than the wealthiest 10%. In contrast they purchased 46% less cheese than the wealthiest 10%

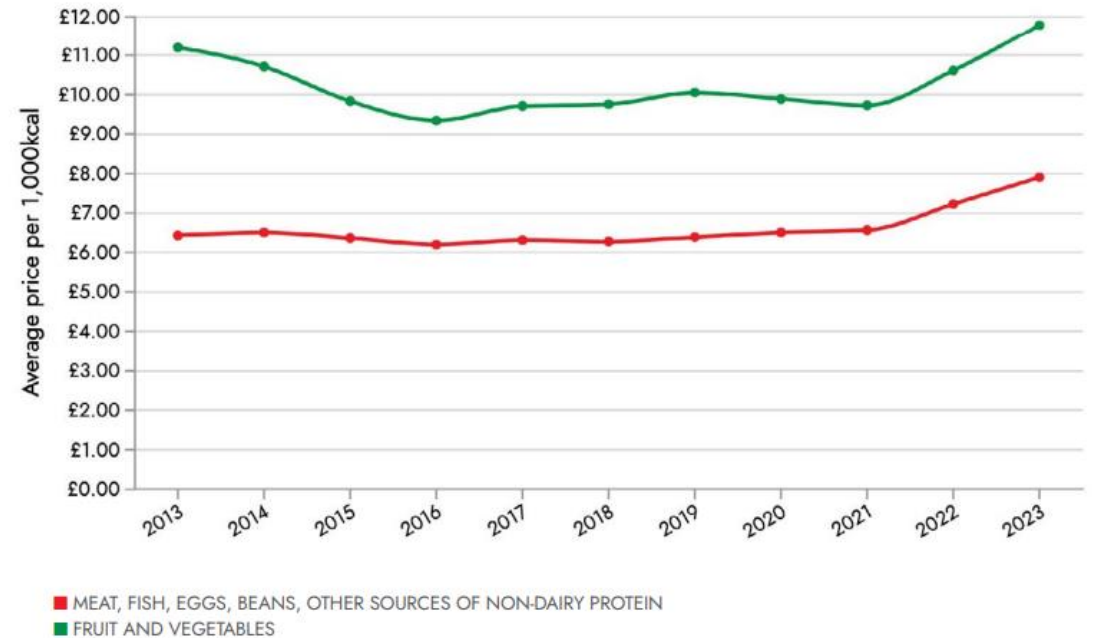


Maguire, E. R. and Monsivais, P. et al (2015)

# Vegetable intake is even more strongly associated with socio-economic status

- Low income families eat at least a portion less per person per day than high income families [Peas Please, 2021]
- Vegetables are a more expensive source of calories than meat and fish, and often require more preparation and cooking time, as well as skill to prepare
- Fruit and vegetables are the most expensive Eatwell Guide food category by a significant margin, costing on average £11.79 per 1,000kcal [Broken Plate, 2023]
- More expensive source of calories compared to protein (likely skewed lower by inclusion of beans) and HFSS foods.

FIGURE 4: THE AVERAGE PRICE OF FOOD AND DRINK PER 1,000 CALORIES BY EATWELL GUIDE



Food Foundation, 2023. The Broken Plate report.

# Alternatives to animal foods: pulses

- Consumption of pulses does not appear to notably vary by socio-economic group
- Average household pulse purchases in the UK are low across all socio-economic deciles; individuals purchase an average of just 28g per person per week
- Time, knowledge, and the perceived difficulty of cooking with pulses are the main barriers to increased consumption rather than price [Henn et al., 2022]
- Pulses offer a cheaper protein alternative to meat when there are not additional barriers to cooking

FIGURE 5: AVERAGE PURCHASE OF PULSES PER DECILE PER WEEK PER PERSON

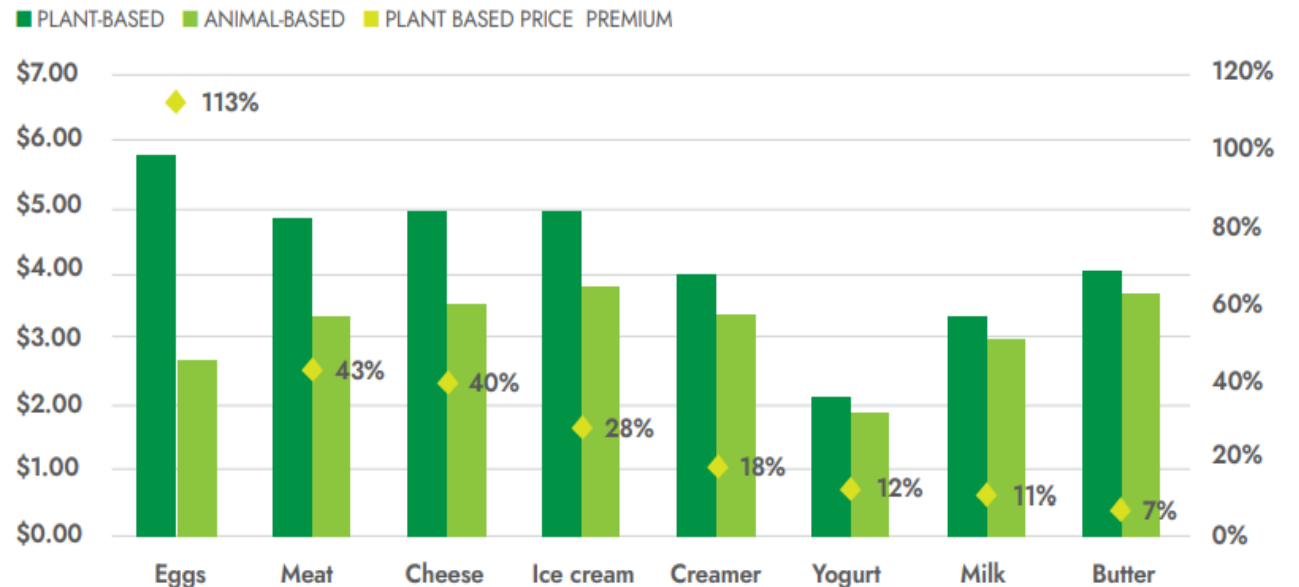


Food Foundation, 2023. Low income, low emissions? Is reducing the emissions footprint of UK diets achievable for different income groups?

# Alternatives to animal foods: plantbased alternatives

- In the UK plant-based meat products are currently priced at a premium - approximately 32% higher than their meat alternatives
- Prices expected to decline as the market grows. In the UK, the proportion of people consuming plant-based alternatives doubled between 2008/2011 and 2017/2019 (from 6.7 to 13.1%) [Alae-Carew, et al., 2022]
- However, high income households are more likely to purchase plant-based alternatives than those on a lower income
- Lack of convenient options: Eating Better's sandwich survey showed plant-based sandwich options were the most expensive (£3.25 on average)

FIGURE 7: THE AVERAGE UNIT PRICE OF PLANT BASED VS. ANIMAL BASED PRODUCTS BY FOOD CATEGORY



Source: The Good Food Institute

# Alternatives to animal foods: dairy alternatives

- Dairy alternatives come with a significantly smaller environmental footprint than their dairy counterparts and, if fortified, largely match dairy's content of calcium, iodine and vitamin B2 and can be fortified to contain vitamin D
- Like alternative meats, plant-based milk alternatives in the UK are more expensive than dairy milk [Broken Plate, 2022]
- By contrast, dairy milk is just £1.00 per litre on average based on cow's milk sold in 2 pints



Food Foundation, 2023. Low income, low emissions? Is reducing the emissions footprint of UK diets achievable for different income groups?



# Additional barriers

- Appliance and fuel poverty. In the UK 1.9 million low-income households are without a cooker and 2.8 million without a freezer [Turn2Us, 2020]
- Limited availability of low emission foods in deprived communities (1 in 4 food outlets are fast food restaurants) [Broken Plate, 2023]
- Limited bandwidth and time. A greater amount of time spent on home food preparation is associated with an increase in vegetable consumption [Monsivais, et al, 2014]
- However, people working in low-paid jobs often have the least amount of protected time, with unpredictable shift patterns

Food Foundation, 2023. From Purse to Plate: what are the implications of the cost of living crisis on health.



# Potential solutions

Make low emission foods such as vegetables and pulses more affordable, available and appealing for everyone

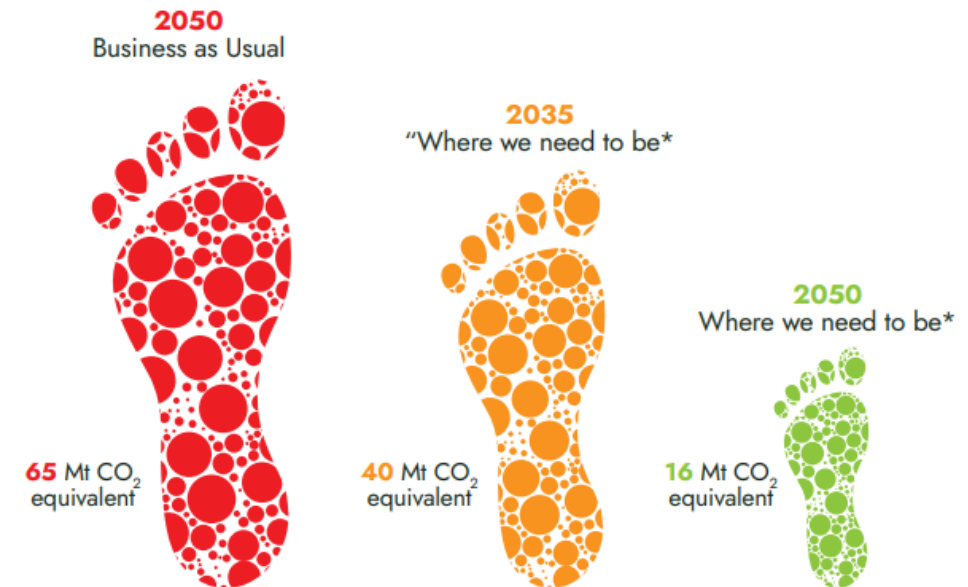
- Ensure a strategy for achieving a dietary shift forms part of the government's Net Zero strategy
- Strengthen government procurement rules for schools, hospitals, prisons, and other public spaces where food is served through a review of the Government Buying Standards for Food
- A horticultural strategy in each of the four UK nations
- Mandatory reporting for health & eco metrics

Make sure benefits and the living wage take into account the cost of a healthy and sustainable diet

**FIGURE 1: THREE SCENARIOS FOR 2050, INCLUDING THE DIETARY CO<sub>2</sub> EQUIVALENT NEEDED BY 2050 IF THE UK IS TO MEET ITS NET ZERO TARGET (UK CLIMATE CHANGE COMMITTEE)**

*\*includes 20% less meat consumption by 2035, 35% less meat by 2050, 60% less waste by 2050, and farmers using low-carbon practices.*

**Source:** UK Climate Change Committee, Sixth Carbon Budget, 2020



# Potential solutions

Make meat and dairy plant-based alternatives more affordable, available and appealing for everyone, and look to improve the nutrition profile of such alternatives

- Use fiscal incentives to rebalance the cost of the basket, for example extending the removal of VAT from plant-based milk alternatives to plant-based meat alternatives too, tiered VAT rates on low emission food served in the out of home sector
- Offer plant-based alternatives at price parity with animal based food alternatives

Research significant data gaps in the study of UK sustainable diets, including; analysis of the sustainability impacts of diets across all socio-economic groups, the costs of these diets, and assessment of how diets across each socio-economic group will need to shift to meet the UK governments net zero commitments





[foodfoundation.org.uk](http://foodfoundation.org.uk)

[@Food\\_Foundation](#) [@FoodFoundationUK](#) [thefoodfoundation](#) [@food.foundation](#)