

Food Statistics Pocketbook 2012 (in year update)



**Food
Statistics
Pocketbook
2012 - in year update**

Department for Environment, Food and Rural Affairs

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National Statistics

National Statistics

The following statistics are “National Statistics” (official statistics that comply with the national statistics code of practice).

Chapter 1: Food Chain

1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8.

Chapter 2: Prices and Expenditure

2.1, 2.2, 2.4, 2.5, 2.6.

Chapter 3: Global and UK Supply

Chapter 4: Environment

4.5, 4.6.

Chapter 5: Waste

Chapter 6: Dietary Health

6.2, 6.3, 6.4 (HSE), 6.5, 6.6, 6.7, 6.8, 6.9, 6.10 (HSE), 6.12, 6.13.

Chapter 7: Safety and Confidence

Further information on National Statistics can be found on the UK Statistics Authority website.



Foreword

This publication provides a concise round-up of statistics on food covering the economic, social and environmental aspects of the food we eat (excluding agriculture).

It contains a mixture of National Statistics, official statistics and unofficial statistics. Unofficial statistics are used where there are gaps in the evidence base.

Chapters are:

1. Food Chain (beyond agriculture)
2. Prices and Expenditure
3. Global and UK Supply
4. Environment
5. Waste
6. Dietary Health
7. Safety and Confidence

Although published in 2012 the pocketbook contains statistics for different time periods, but always using latest available data at the time of release.

An in-year update published on April 10th 2013 revised the following:

Chapter 1: Food Chain

1.1, 1.2, 1.4, 1.5, 1.8.

Chapter 2: Prices and Expenditure

2.1, 2.5, 2.6, 2.8.

Chapter 3: Global and UK Supply

3.4, 3.5.

Chapter 6: Dietary Health

6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.12, 6.13.

Foreword

Economic Definition

The UK food sector is defined as food manufacturing, food wholesaling, food retailing and non-residential catering. In terms of the standard industrial classification (SIC 2007) it is defined as:

Food Manufacturing:	10 & 11
Food Wholesaling:	46.17 & 46.3 less 46.35
Food Retailing:	47.11 & 47.2 less 47.26 & 47.81
Non-residential Catering:	56

The deductions are to remove non-food items as far as possible.

The agri-food sector is the food sector plus agriculture and fishing. Agriculture and fishing are shown in several charts for comparison.

Data sources

Data comes from Government surveys run by the Office for National Statistics and Defra and from a wide range of other sources including Government agencies and commercial organisations. Further information on data sources, including webpage links, can be found at:

<http://www.defra.gov.uk/statistics/foodfarm/food/pocketstats/>

Foreword

Glossary

Net capital expenditure

This is calculated by adding to the value of new building work, acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.

Gross Value Added (GVA)

GVA is the difference between output and intermediate consumption for any given sector / industry. This is the difference between the value of goods and services produced and the cost of raw materials and other inputs which are used up in production.

Total Factor Productivity (TFP)

Productivity measures the efficiency at which inputs are converted into outputs. Total Factor Productivity provides a comprehensive picture of growth.

Food Security

Some indicators from the Food Security Assessment are covered in “Prices and Expenditure” (2.1, 2.2), “Global and UK Supply” (3.1, 3.6, 3.7, 3.8) and “Safety and Confidence” (7.1, 7.2, 7.5).

Foreword

Related Publications:

“Family Food in 2011”

“Agricultural in the United Kingdom”

“Total Factor Productivity of the United Kingdom Food Chain”

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Key Statistics

Economy

- The agri-food sector contributed £96.1 billion or 7.3% to national Gross Value Added in 2011, and 3.3 million or 14% of national employment in Q3 2012.
- Total Factor Productivity in the food sector (excluding agriculture) grew in 2011 by 0.7% having risen gradually since 2002 with food manufacture and food wholesale leading the growth.
- Food and drink sales in public sector organisations accounted for £2.1bn (6.5%) of total sales in the food service sector in 2011.

Food Supply & Prices

- Food prices have risen 12% in real terms over the last five years taking us back to 1997 in terms of cost of food relative to other goods.
- Median income after housing costs fell 12% between 2002-03 and 2010-11 for low income decile households while rising in all other income groups.
- Compared to the EU: Food prices rose 32% in the UK between 2007 and 2012 while rising only 13% in France and Germany.
- In 2011, 25 countries together accounted for 90% of UK food supply. Just over half of this (51.8%) was supplied domestically from within the UK.
- The total value of food and drink exports fell slightly in 2012 to £18.2 billion but is still £5.6 billion more than in 2005 measured in 2012 prices.

Key Statistics

Environment and Waste

- Around 195 million tonnes of CO₂e were emitted within the UK from domestic food chain activity in 2010.
- Emissions by UK households from food shopping, storage and preparation were the same in 2010 as in 2002 at 18.8mt CO₂e, having peaked in 2006 at 21.4mt CO₂e.
- Estimated total UK food and drink waste is around 15 million tonnes per year, with households generating 7.2mt/year of which 4.4 is avoidable.
- Overall 15% of edible food and drink purchases are wasted at a cost of £480 per year for an average household.
- Levels of food and drink waste by commercial and industrial businesses in the food sector were almost halved between 2002-03 and 2009, down 49%.
- In 2011, around 4 million UK households received a food waste collection service, twice as many as in 2010. This equates to nearly 16% of all households in the UK (in 2011).

Health & Food Safety

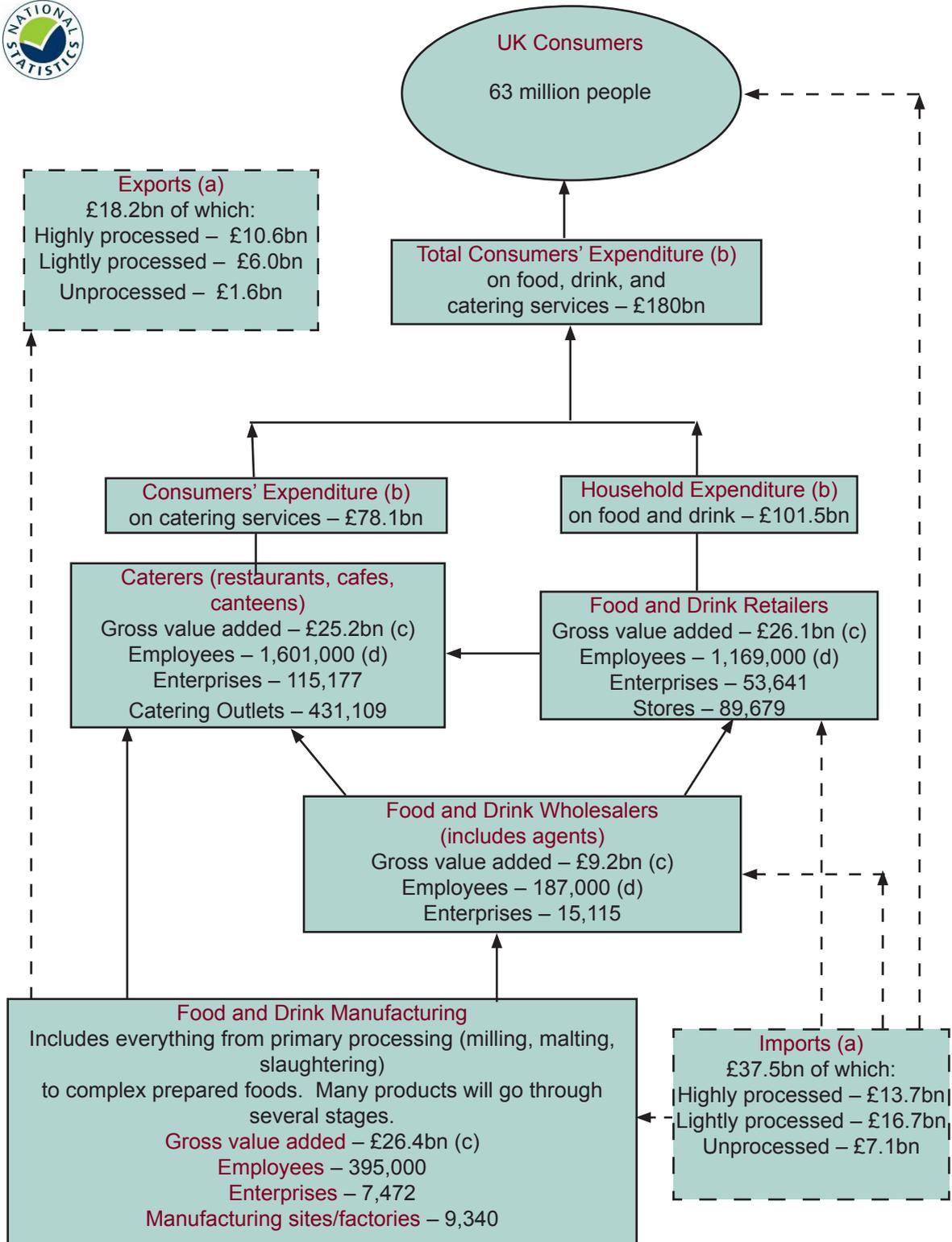
- Fruit and vegetable consumption is falling. The lowest 10% of households by income purchase the least fruit and vegetables at an average of 2.9 portions per person per day in 2011, 14% less than in 2007.
- In England in 2011 the obesity rate across all adults was 25%, with a further 37% overweight. The obesity level in adults has remained stable since 2008.
- Trends in foodborne illnesses are mixed, with salmonella, listeria and E.coli cases reducing while campylobacter cases increase.

Key Statistics

- The FSA dealt with seven high level incidents in 2011. These included the implications of the Fukushima nuclear emergency on UK imports and outbreaks of E.coli in Germany and France.
- In May 2012 the main food issue of concern to respondents was food prices at 63%, an increase from 60% in November 2011.

Chapter 1: Food Chain

1.1: Economic summary of the UK food chain beyond agriculture¹



Food Chain

1.1: Economic summary of the UK food chain beyond agriculture¹

(a) Overseas trade data is final for full year 2012 from HM Revenue and Customs. (Data may not equal total due to rounding). Dashed lines indicate main trade flows.

(b) Consumers' expenditure, properly known as household final consumption expenditure, is provisional from the Office for National Statistics for full year 2011 and is calculated at current prices. (Data may not equal total due to rounding).

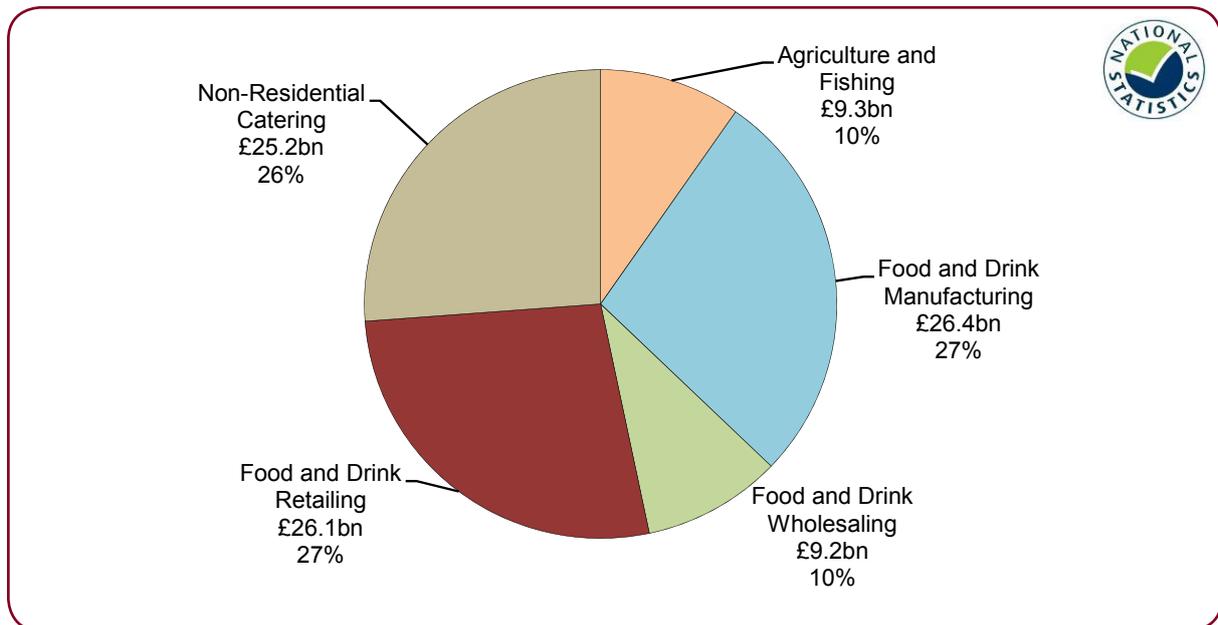
(c) Gross value added (GVA) is the difference between the value of goods and services produced and the cost of raw materials and other inputs used up in production. GVA figures are from the Annual Business Survey and are finalised data for full year 2011, which is calculated at basic prices (market prices less taxes plus subsidies).

(d) Employee data for grocery retailers is for Great Britain only and is for Q3 2012 from the Office for National Statistics. Food and drink wholesaling includes an estimate of employment by food and drink wholesaling agents from the Annual Business Survey. (Employee data is rounded).

¹ Excludes sectors downstream from food and drink manufacturing such as the food and drink supply industry (food processing machinery).

Food Chain

1.2: Gross value added of the UK agri-food sector, 2011



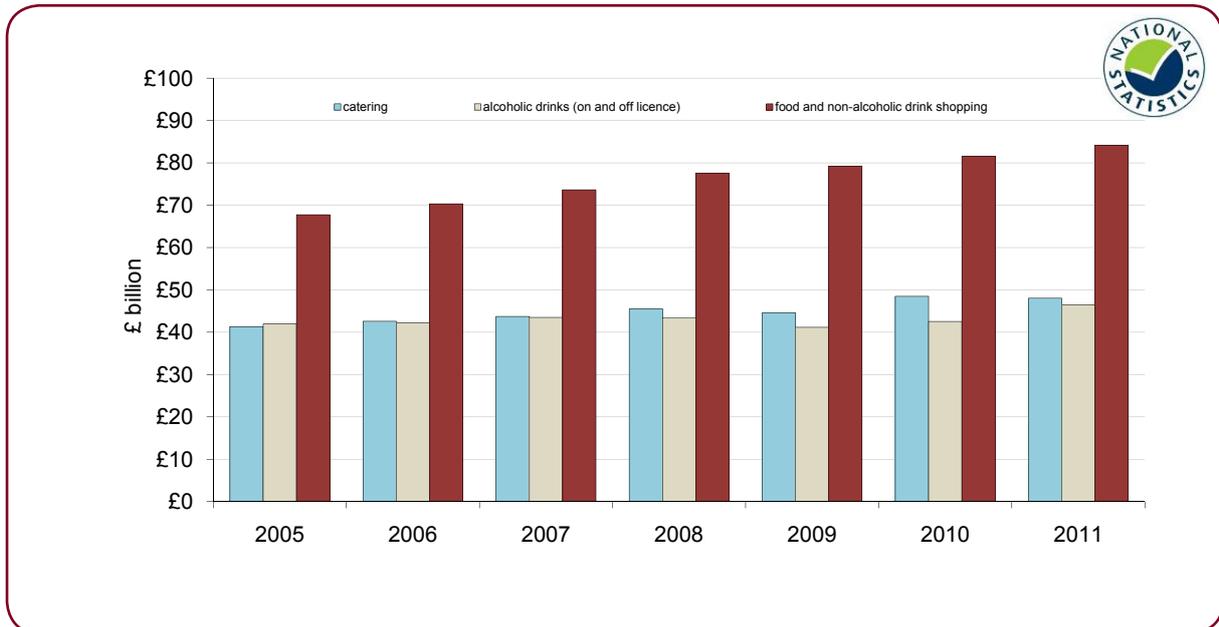
Source: Annual Business Survey (ONS) & Agriculture in the United Kingdom (Defra).

- The agri-food sector contributed £96.1 billion or 7.3% to national Gross Value Added in 2011, an increase of 7.8% on 2010.
- The food sector (excluding agriculture) is showing resilience to the economic downturn with an increase of 6.3% in GVA in 2011. There were rises of 7.4% in food wholesaling, 4.7% in food manufacturing and 14.6% in non-residential catering. Food retailing changed little at 0.4% up on 2010.
- Longer term, the food sector (excluding agriculture) increased by 48% between 2000 and 2011 while the whole economy increased by 61%. The food sector has less scope for growth as there is a limit to consumer intake capacity and therefore it relies largely on quality improvements.
- There was a net increase in registered enterprises in the food sector of over 2700 in 2011 following a net reduction of over 1100 in 2010, with most changes in non-residential catering. Indications are positive for 2012 with increases in employment in non-residential catering, retailing and manufacturing see Chart 1.4.

² Business Demography, Enterprise Births, Deaths and Survivals, ONS 2012.

Food Chain

1.3: UK Consumer expenditure on food³, drink and catering



Source: Consumer Trends (ONS).

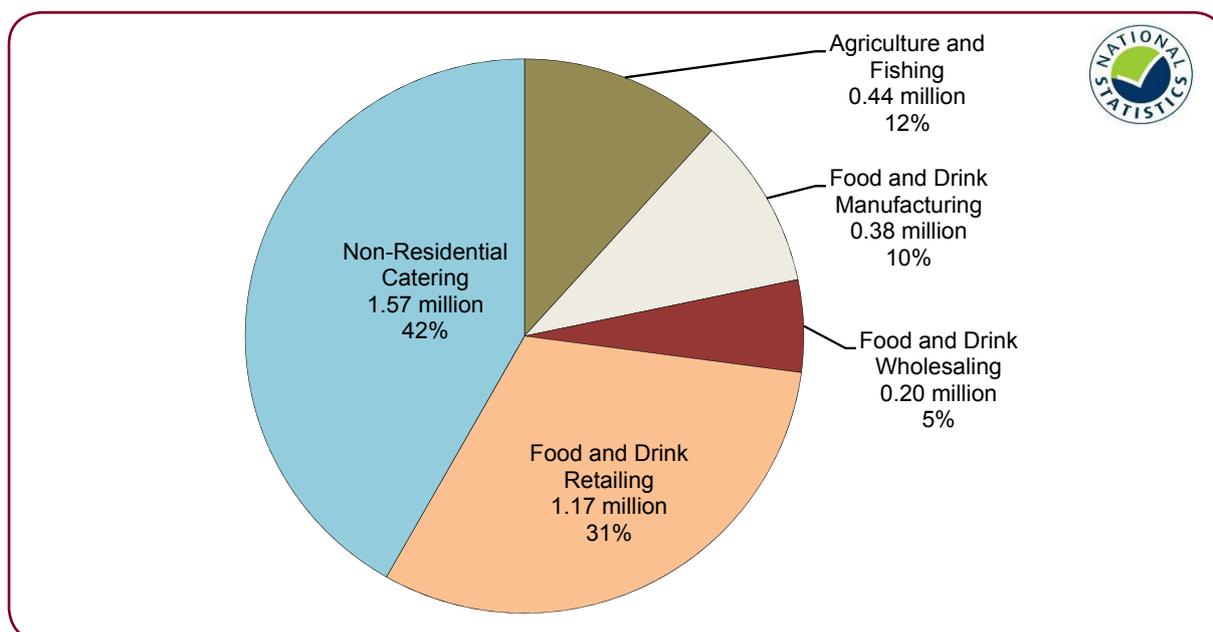
- Consumer expenditure on food, drink and catering has continued to rise despite the economic downturn. There was a rise of 3.5% in 2011 to £179 billion.
- In 2011 expenditure on alcoholic drinks showed the largest increase, up 9.1%, while spend on food increased 3.1%. Catering showed a slight decrease of 0.9%.
- Spend on food shopping has increased 14% since 2007 and accounted for more than half of spend in the sector in 2011.
- Spend on all alcoholic drinks fell 5.4% between 2007 and 2009. Yearly increases in off-licence spend were countered by a 10.5% fall in on-licence spend between 2007 and 2011.
- In 2012, market research⁴ suggests that consumers are eating out more often than in the previous two years but that spending across the sector has declined.

³ 'Food' includes non-alcoholic drinks. 'Drink' is alcoholic drinks.

⁴ QuickBite survey, Horizons June 2012.

Food Chain

1.4: UK food sector employees, GB basis⁵, Q3 2012



Source: Labour Market Trends (ONS)⁶ and June Survey (Defra).

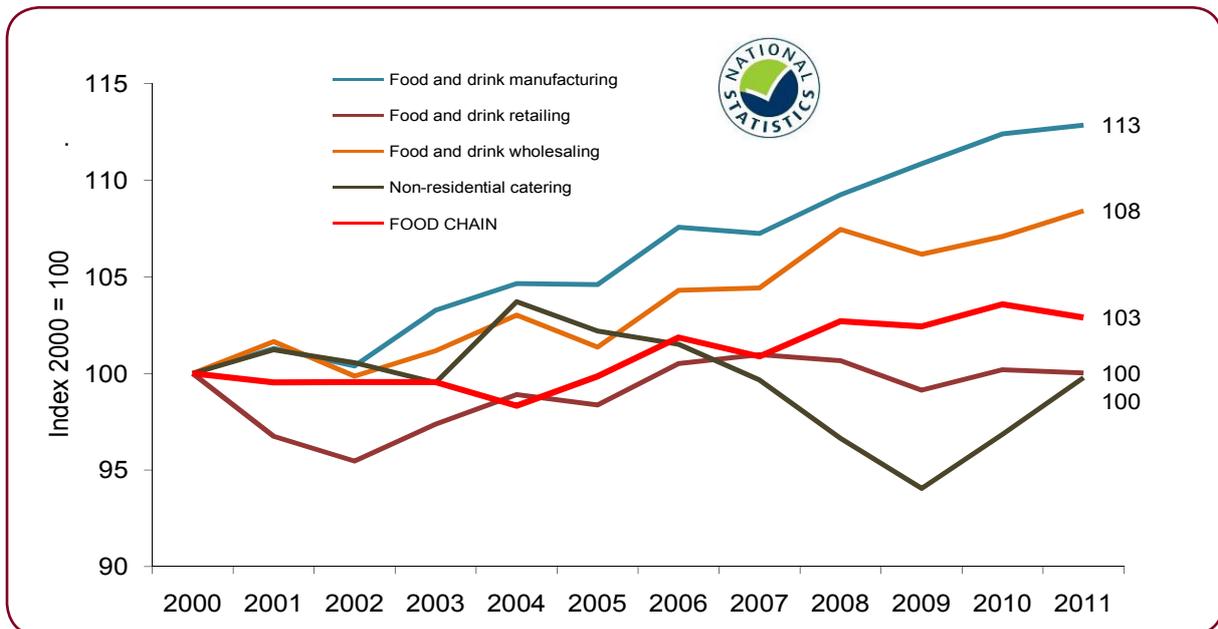
- The food sector in GB employed 3.3 million people in Q3 2012 (3.8 million if agriculture and fishing are included along with self employed farmers). It covered 13% of GB employment in Q3 2012 (14% if agriculture and fishing are included along with self employed farmers).
- Employment in the food sector rose 196,000 between Q3 2011 and Q3 2012, an increase of 6.3% driven by the non-residential catering and retailing sectors.
- An increase of 130,000 employees between Q3 2011 and Q3 2012 puts non-residential catering at a new employment high following six successive quarterly increases.
- Women accounted for 57% of employees in food retailing and 53% in non-residential catering in 2012. Men accounted for 65% of employees and 69% of hours worked in food manufacturing. In 2012, 51% of food sector jobs were part time.

⁵ Data for the food sector is not available for Northern Ireland, but numbers are likely to be small.

⁶ Wholesaling, manufacturing and retailing include tobacco.

Food Chain

1.5: Trends in the total factor productivity (TFP) of the UK food sector⁷



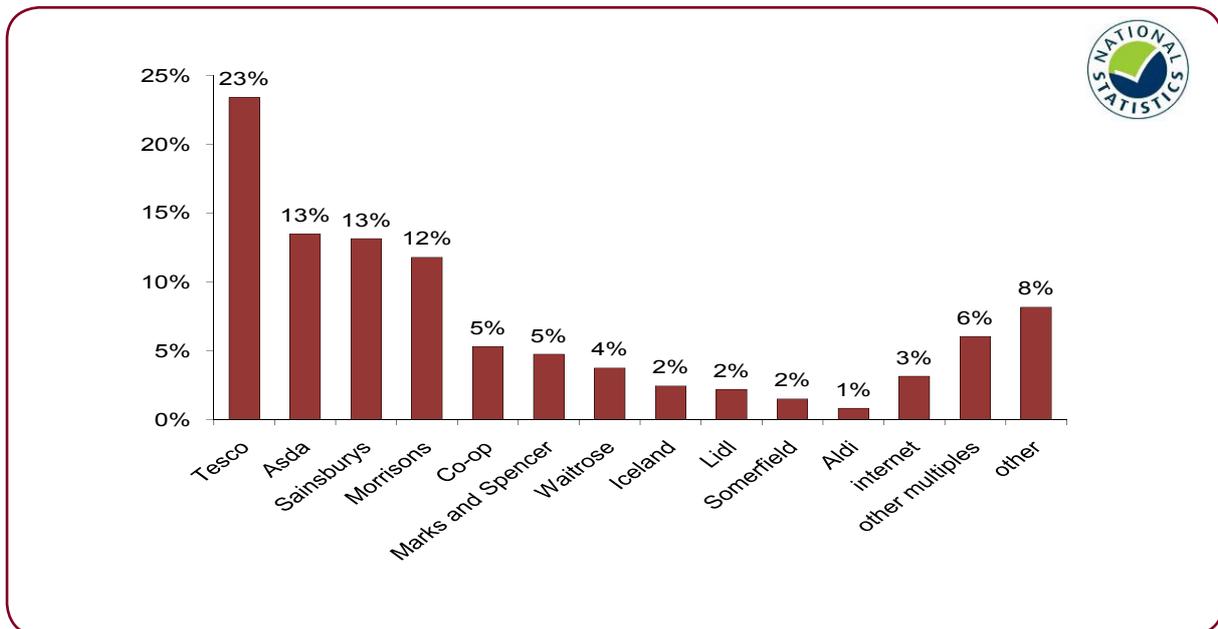
Source: Total Factor Productivity of the United Kingdom Food Chain 2000-2011, Defra, January 2013.

- Total factor productivity of the food sector excluding agriculture grew in 2011 by 0.7% having risen gradually since 2002 with food manufacture and food wholesale leading the growth.
- Comparing 2011 with 2010 all sectors of the food chain, except food retail, saw year on year increases in productivity. Productivity of food retail was unchanged on 2010.
- Benchmarking against a wider economy measure shows the average annual growth in the food chain between 2002 and 2011 was 0.7% compared to 0.2% in the wider economy.
- The calculation is based on reliable data on business sales and costs, employment by industry and on price indices all collected by the Office for National Statistics.
- Non-residential catering showed productivity growth of 3.0% for the second year running. Food and drink manufacture had the largest gains in productivity in 2011, due to a larger fall in the volume of inputs than outputs.

⁷ Wholesaling includes tobacco (SIC 46.35).

Food Chain

1.6: UK grocery market shares 2010



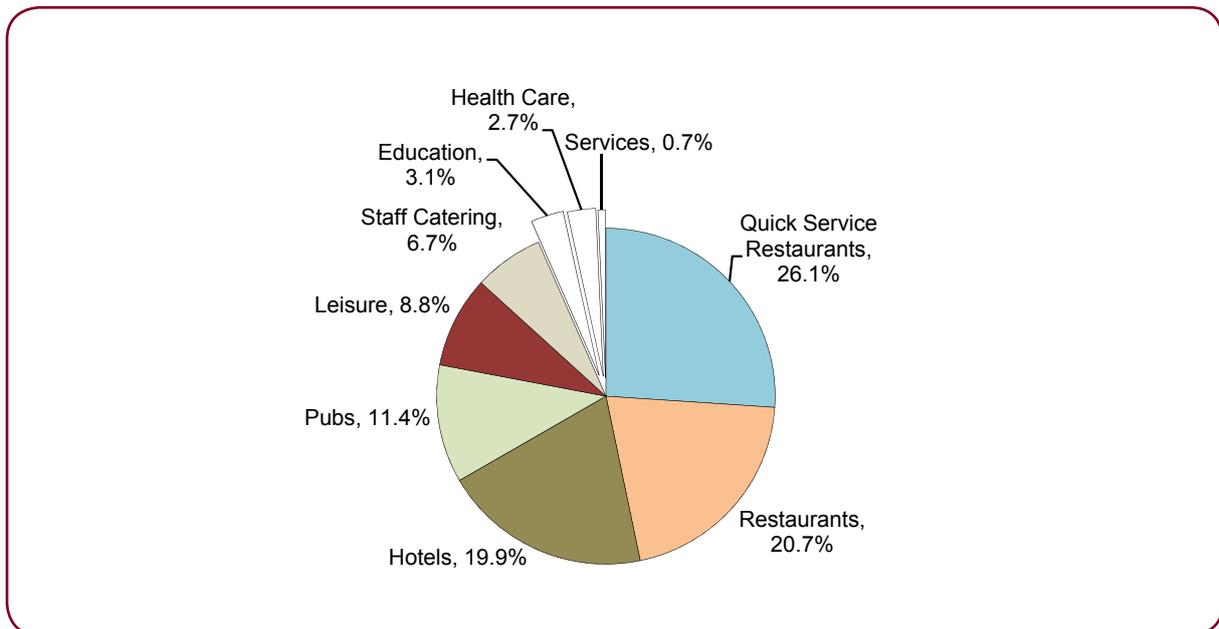
Source: Living Costs and Food Survey (LCFS) 2010, (Defra/ONS).

- The combined market share of food and non-alcoholic drinks of the largest four food and drink retailers has remained unchanged at 62% in 2010. Tesco commanded the largest market share at 23%, down from 25% in 2009.
- Internet food shopping increased to a new high of 3.1% of sales of food and non-alcoholic drinks in 2010, from 2.5% in 2009.
- Data comes from the Living Costs and Food Survey which is fully representative of UK household food shopping.
- Alternative market share estimates for 2012 from the Kantar Worldpanel⁸ are more up to date although not restricted to foods and not as representative. In 2012 compared to 2011 (based on 12 weeks ending 10 June) Kantar Worldpanel indicates little overall change in the market shares. Tesco, Morrisons and the Co-op each reduced their share by 0.4%; Aldi increased its share by 0.5% whilst Asda and Sainsbury remained unchanged.

⁸ Kantar Worldpanel is a market research company, providing up to date statistics on sales by the grocery sector. Market shares also include sales of non-food.

Food Chain

1.7: Public sector food procurement and sales of food and drink in the UK food service sector, 2011



Source: *Horizons for Success (2011)*⁹.

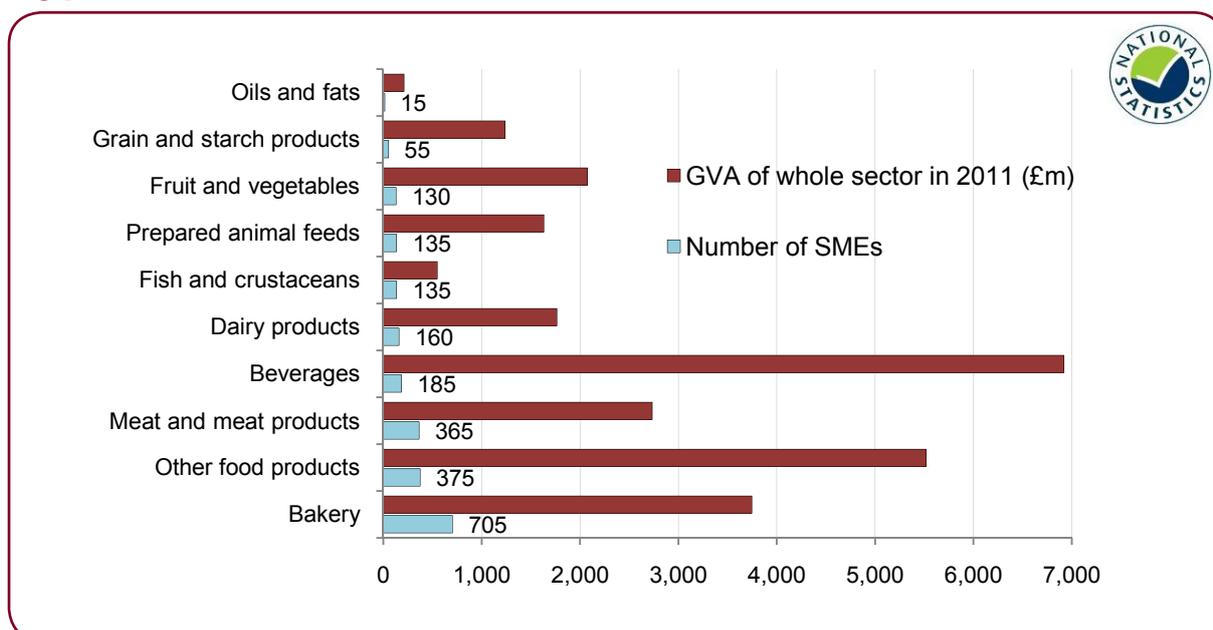
- Food and drink sales in public sector organisations accounted for £2.1bn (6.5%) of total sales in the food service sector in 2011. Much is in the form of complete meals, with the public sector accounting for 2.4bn (30%) of food service meals. Education, healthcare and services are the major public sector contributors.
- In 2011 the introduction of Government Buying Standards (GBS) for food and catering services¹⁰ introduces a suite of criteria covering three areas of sustainable procurement:
 - foods produced to higher sustainability standards,
 - foods procured and served to higher nutritional standards, and
 - procurement of catering operations to higher sustainability standards.

⁹ Horizons for Success is a commercial data source using a wide variety of data sources. It is not possible to put a precise figure on the accuracy of the data.

¹⁰ Greening Government Commitments: Operations and Procurement, Defra 2011.

Food Chain

1.8: UK food and drink manufacturing statistics by product type¹¹



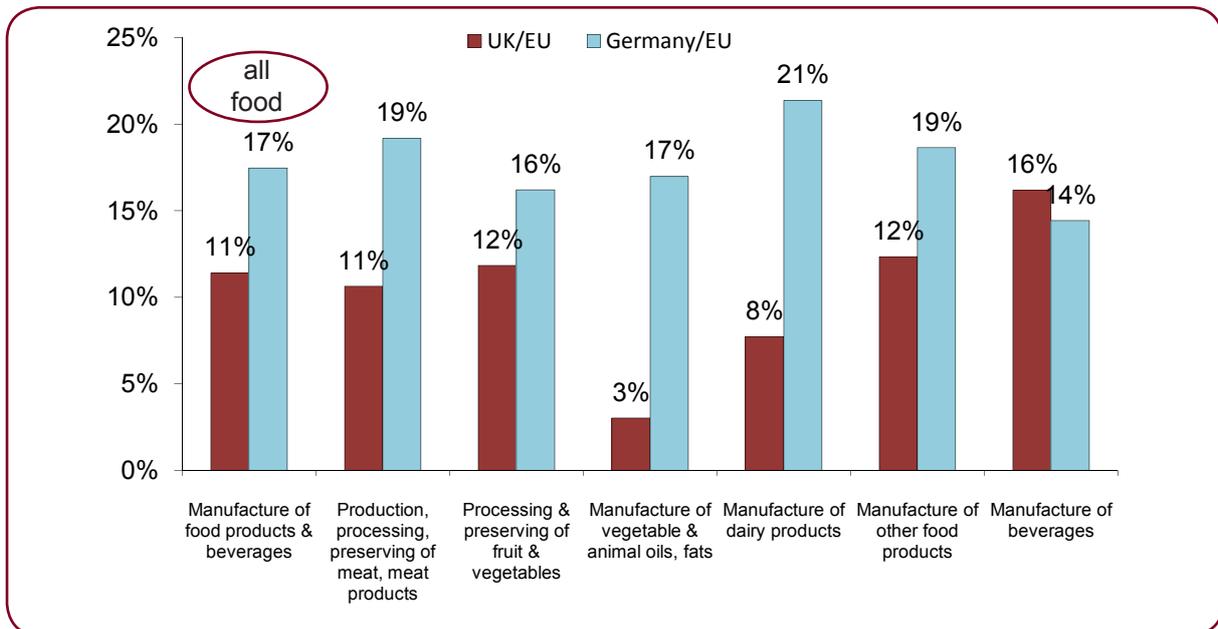
Source: Annual Business Survey (ONS), November 2012.

- There were about 2260 small and medium sized enterprises (SMEs) in the food and drink sector with turnover of around £19 billion and 105,000 employees at the start of 2012.
- In the food sector (excluding beverages) SMEs accounted for 26% of employment and 25% of turnover.
- Of the 2260 SMEs, almost a third (31%) are in the manufacture of bakery and farinaceous products.
- Beverages is the largest manufacturing group with a gross value added (GVA) of £6.9 billion in 2011, covering 26% of the food and drink sector.
- Alcoholic beverages had a GVA of £5.8 billion in 2011 a rise of 22% on 2010.

¹¹ For disclosure reasons some small contributions (less than 4% overall) to food and drink manufacturing GVA have been treated as zeros.

Food Chain

1.9: UK and Germany shares of output in the EU food and drink manufacturing sector in 2007

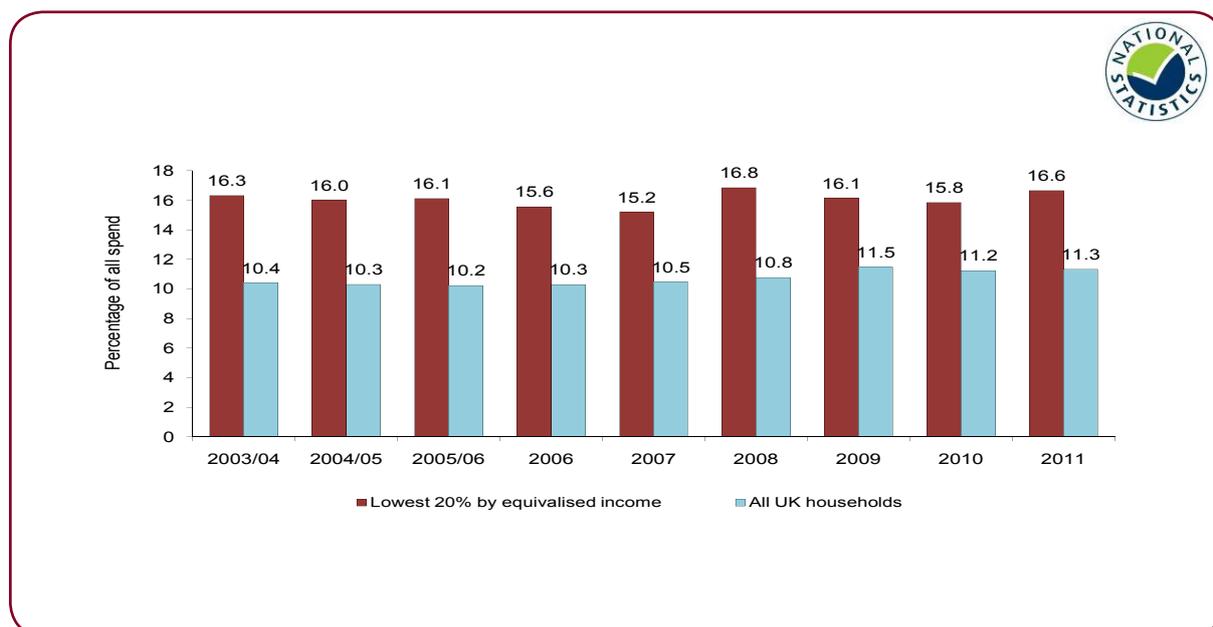


Source: Eurostat.

- The UK accounted for 11% of EU food and drink manufacturing in 2007, with higher rates in beverages at 16%, fruit and vegetables at 12% and other food products at 12%.
- Germany commanded 17% of EU food and drink manufacturing in 2007 with higher rates of 21% for dairy, 19% for meat processing and 19% for other food products.
- The UK covered 16% of EU output of beverages in 2007 and made a larger contribution than Germany.
- The UK accounted for 16% of EU gross value added in food and drink manufacturing and 9.4% of employment in the sector (including working proprietors).
- Labour productivity in food and drink manufacturing, as measured by gross value added per person employed, is higher in the UK than in France but lower than in the Netherlands.

Chapter 2: Prices & Expenditure

2.1: Trend in share of spend going on food and drink¹ in low income and all UK households, 2003-04 to 2011



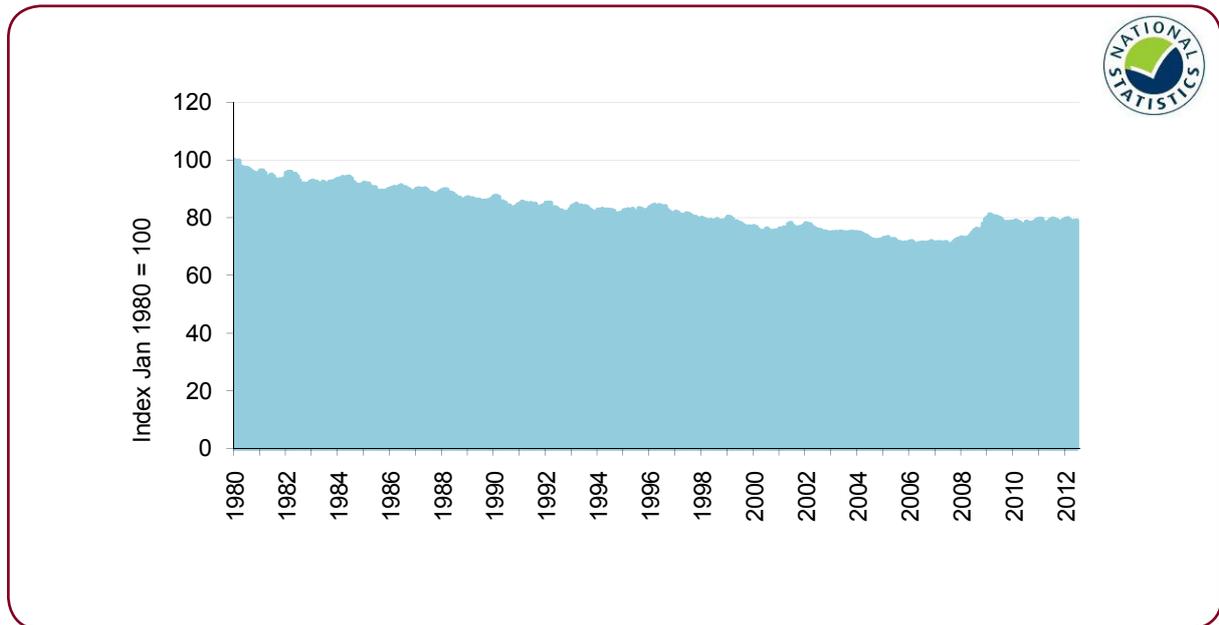
Source: *Living Costs and Food Survey, Family Spending table 3.2e, ONS, December 2012.*

- The relative affordability of food can be measured by the share of the household budget that goes on food. Low income households are of particular concern as they tend to have a greater percentage of spend going on food.
- Food is exerting greater pressure on household budgets since 2007 when food prices started to rise in real terms.
- Averaged over all households 11.3% of spend went on food in 2011, 0.8 percentage points above the 2007 level.
- For households in the lowest 20% by equivalised income 16.6% of spend went on household food, 1.4 percentage points above 2007.
- Energy content of food purchases in income decile 2 fell by 15% between 2007 and 2011.

¹ Excludes alcoholic drinks.

Prices & Expenditure

2.2: UK trend in food prices in real terms, January 1980 to July 2012²



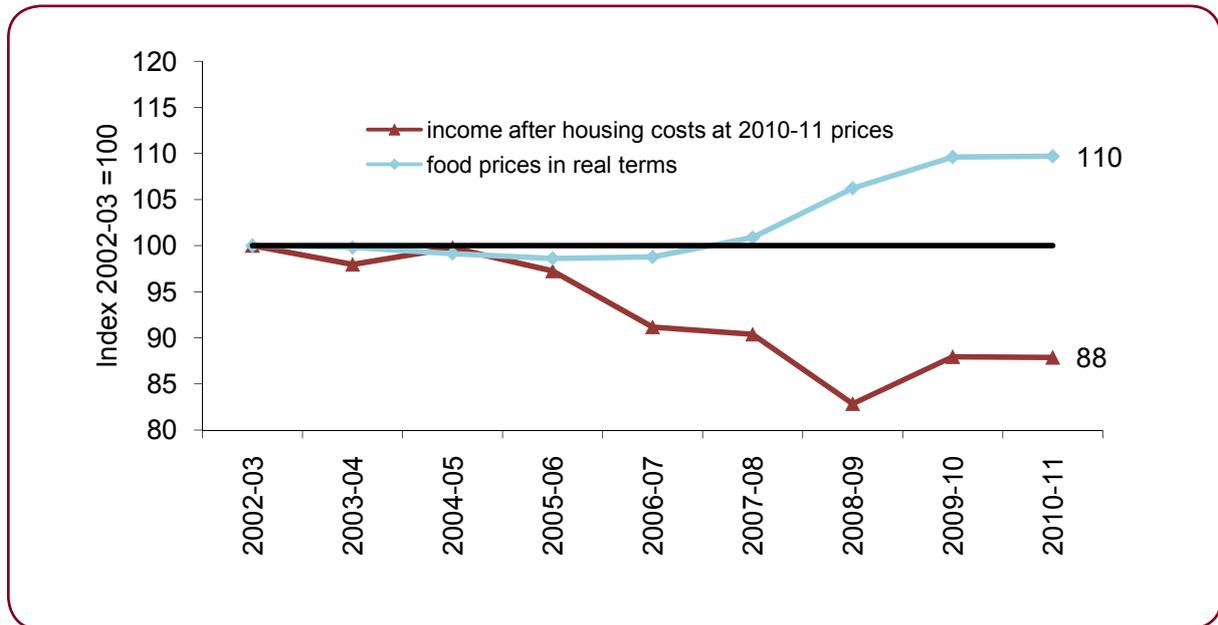
Source: Consumer Price Indices (ONS).

- Food prices have risen in real terms by 12% over the last five years, following a long period in which they fell.
- The last five years has taken us back to 1997 in terms of the cost of food relative to other goods.
- Three successive spikes in the price of agricultural commodities since 2007 have led to higher retail food prices. They have not returned to low price levels of pre-2007.
- Oil prices also rose over this period, and inflation was higher than historically, but food prices have risen above inflation.
- Those on lower incomes tend to buy different food items to those on average or high incomes but food prices for these different shopping baskets have risen at about the same rate.
- A rise in food prices is more difficult for low income households to cope with because those on low incomes spend a greater proportion of their income on food - a rise in food prices has a disproportionately large impact on money available to spend elsewhere.

² Excludes alcoholic drinks and catering.

Prices & Expenditure

2.3: Income decline after housing costs, low income decile (UK)

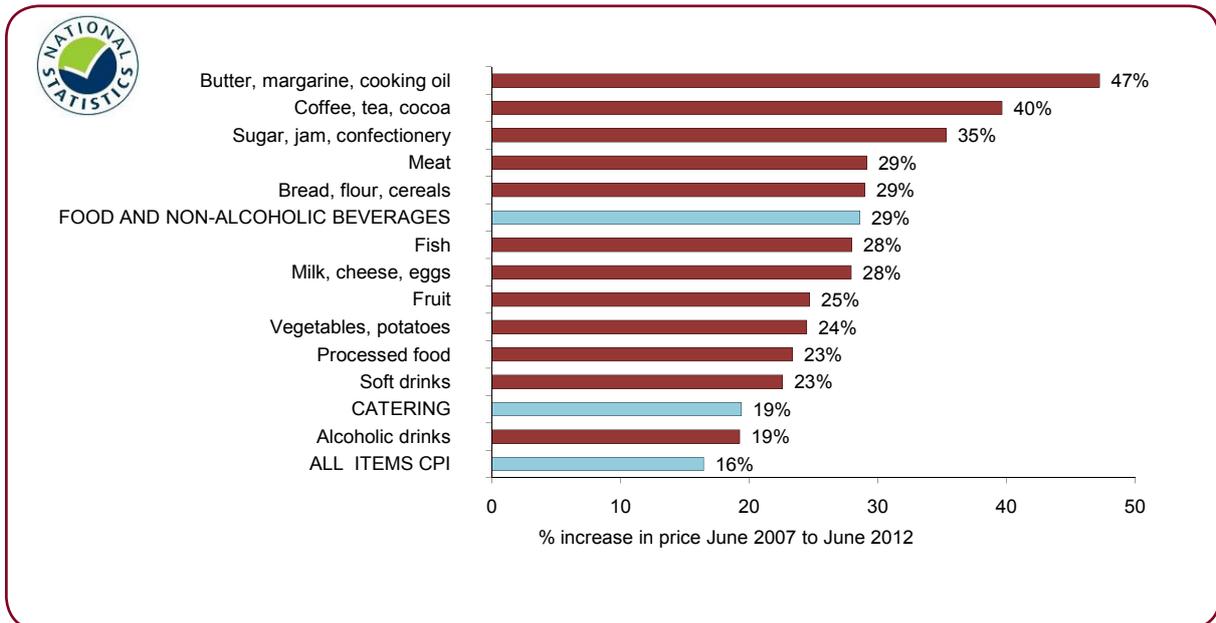


Source: *Living Standards, Poverty and Inequality in the UK, 2012*; Institute for Fiscal Studies.

- Median income after housing costs fell 12% between 2002-03 and 2010-11 for low income decile households while rising in all other income groups.
- Falling income (after housing costs) and rising food prices produced a double effect, reducing food affordability by over 20% for lowest income decile households.
- The most commonly used threshold of poverty in the UK is having an income which is less than 60% of the median. In 2010-11 poverty levels measured this way fell by 1%. The reduction was driven primarily by incomes at the lower end of the income distribution falling less than incomes around the median.

Prices & Expenditure

2.4: UK retail price changes by food group, 2007 to 2012

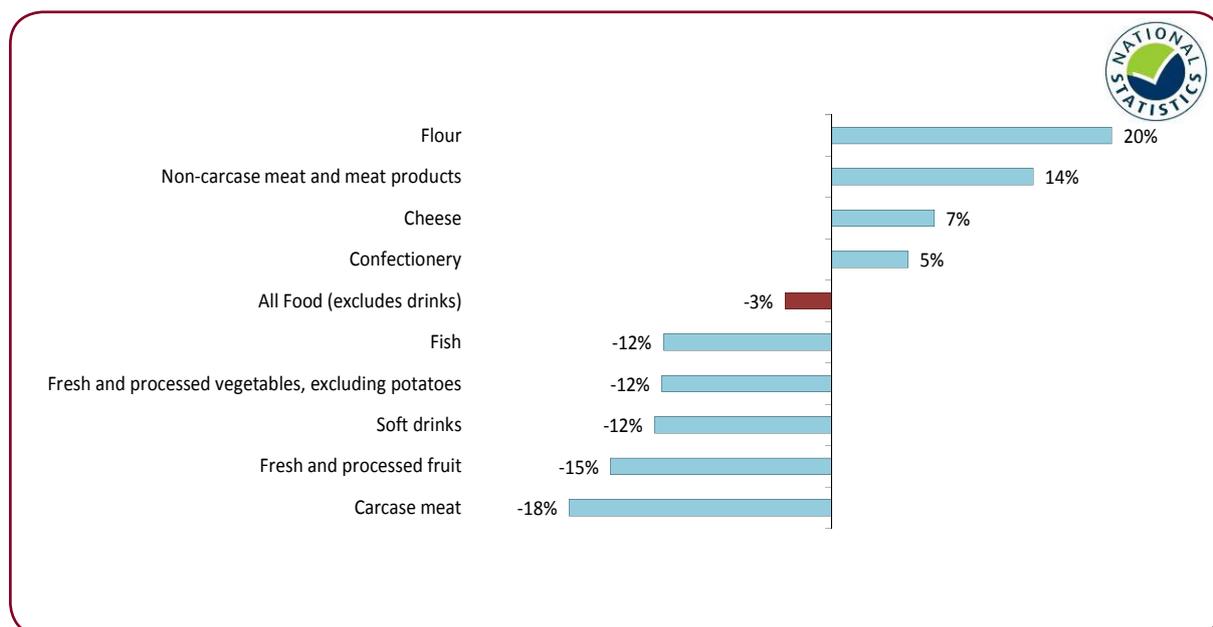


Source: Consumer Price Indices (ONS).

- All foods have risen in price since 2007, with rises ranging from 19% to 47%.
- Butter, margarine and cooking oils have risen most since June 2007.
- Fish, fruit and vegetable prices have risen by around 25% since June 2007
- The price rises initially affected milk, cheese, eggs, oils and fats in 2007, then moved on to bakery, cereals and meat in 2008. In 2009, sugar, confectionery and coffee prices rose and in 2010, the price of soft drinks caught up.
- Food price rises had a strong effect on food shopping for low income households:
 - becoming sensitive to price rises in alcoholic drinks,
 - becoming sensitive to price rises in meat,
 - cutting back on fruit and vegetables (less so if they traded down to cheaper foods).

Prices & Expenditure

2.5: Percentage change in food purchases 2007-2011, by low equivalised income decile (UK)



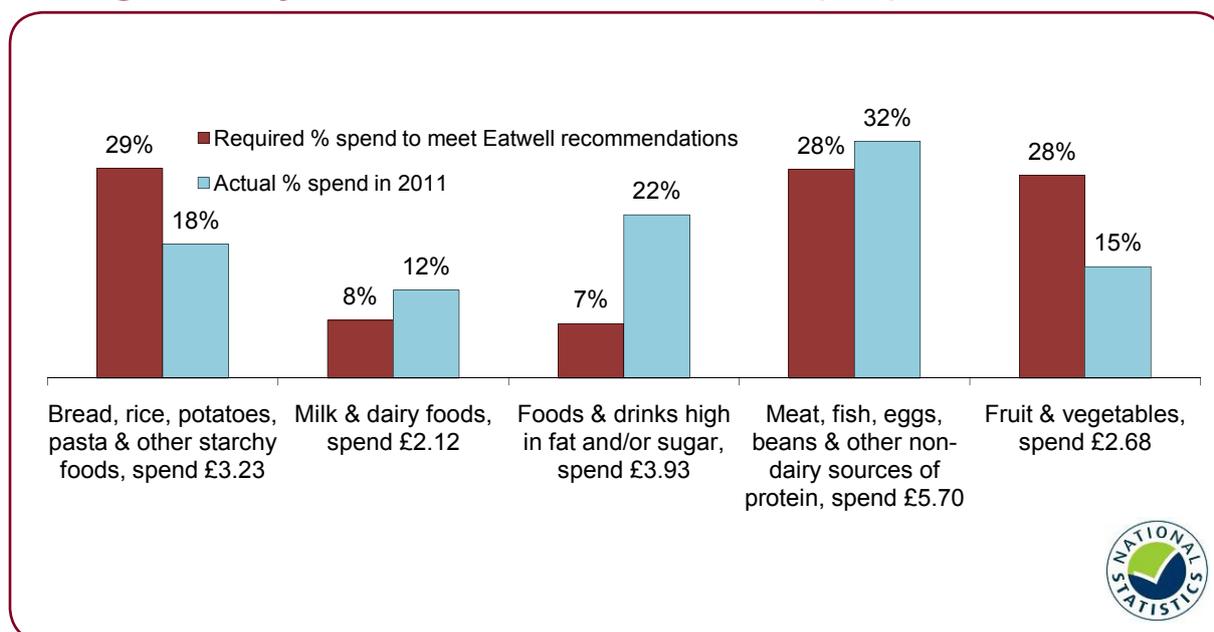
Source: *Family Food in 2011*, Defra, December 2012.

- Food purchases for the household by low income households (decile 1 and decile 2) had around 5% less energy content than the average.
- In 2011 compared to 2007 lowest income households (decile 1) bought:
 - 18% less carcass meat, 15% less fruit, 12% less vegetables, 12% less fish and 12% less soft drinks;
 - 20% more flour, 14% more non-carcass meat and meat products, 7% more cheese and 5% more confectionery.
- While trading down to cheaper products has helped many people offset some of the food price rises, low income households have not managed to trade down, possibly as they were already buying cheaper products.
- The lowest 10% of earners slightly reduced the proportion of their total expenditure that was spent on recreation, health and transport and increased the proportion spent on food, energy and education³.

³ Based on data from Family Spending 2008 and Family Spending 2011, (ONS).

Prices & Expenditure

2.6: Percentages of food budget spent on Eatwell Plate categories by low income households (UK)⁴



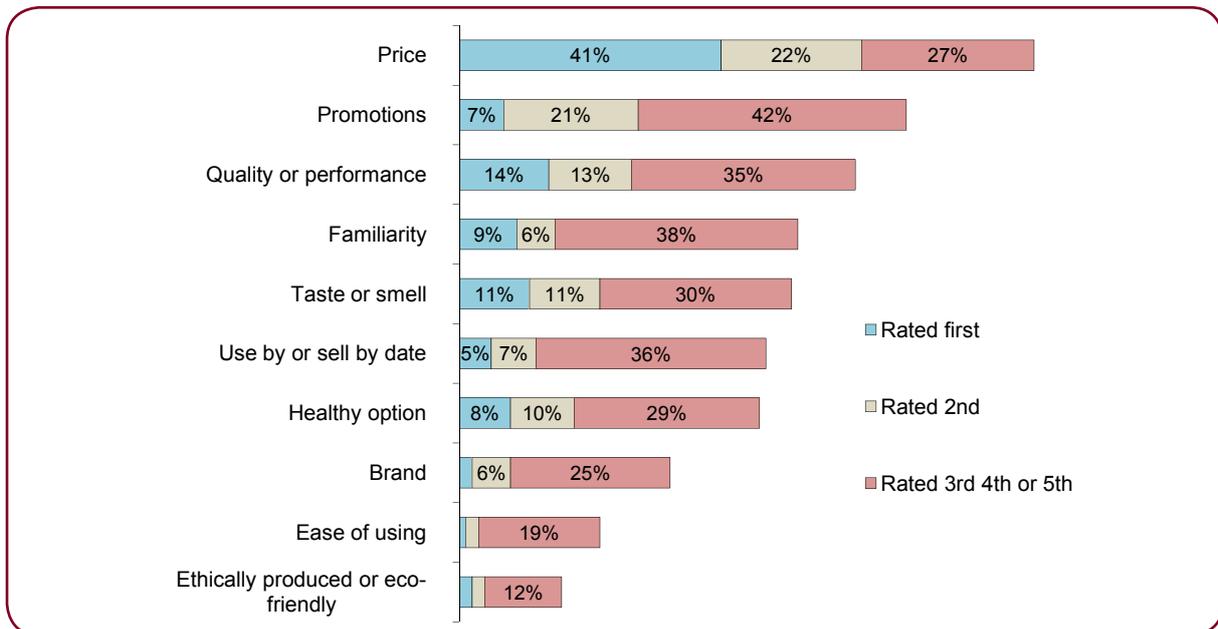
Source: Family Food in 2011, Defra, December 2012.

- The eatwell plate shows the types and proportions of foods that should be eaten to make a well-balanced, healthy diet (See Chart 6.1 and Chart 6.2 for more detail).
- The lowest income households (decile 1) spent 32% of their food budget, £5.70 per person per week, on meat, fish, eggs, beans and other non-dairy sources of protein. They spent 22% on food and drinks high in fat and/or sugar.
- Based on the same overall actual spend, low income households could shift to the eatwell proportions by spending (per person per week):
 - £2.20 more on fruit and vegetables,
 - £1.82 more on bread, rice, pasta and starchy foods,
 - £0.68 less on meat, fish and eggs,
 - £0.72 less on milk and dairy and
 - £2.62 less on foods high in fat and/or sugar.

⁴ Households in decile 1, by equivalised income, Family Food in 2011.

Prices & Expenditure

2.7: Factors influencing consumer product choice⁵



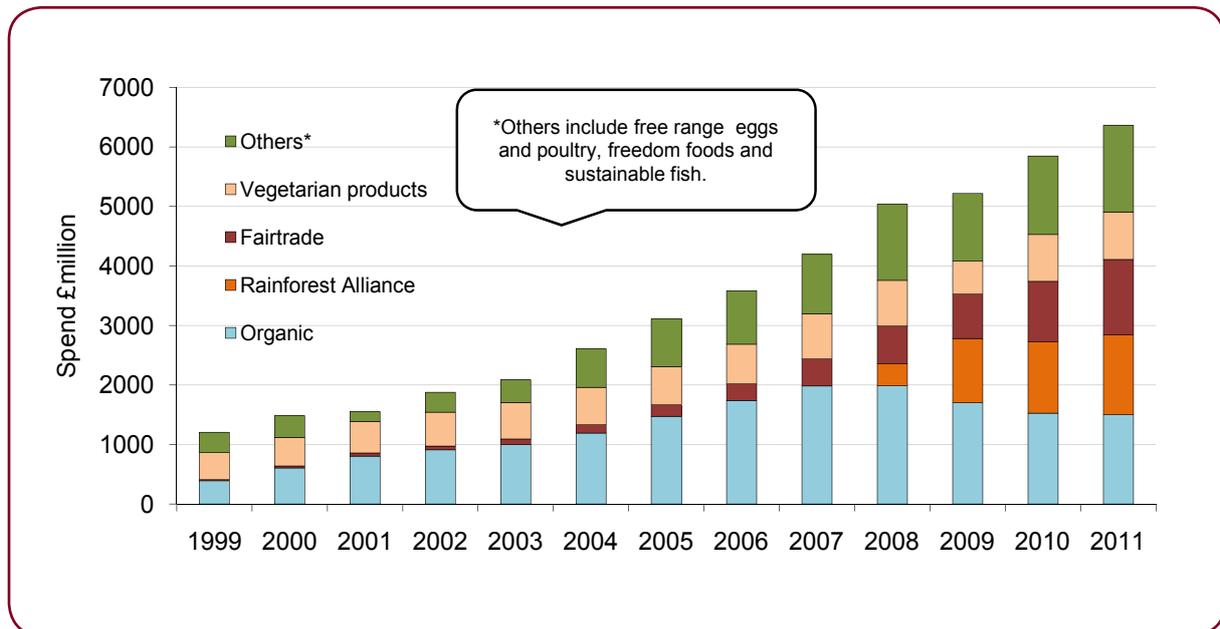
Source: IGD ShopperVista 2012.

- Price is increasingly important in driving product choice, with 41% of shoppers naming it as the most important factor and 90% listing it within their top five influences.
- Promotions are highly influential with 70% listing it in the top 5 factors.
- Less importance is placed on healthy options, with only 8% of shoppers naming it as the most important influence and only 47% listing it within the top five.
- More shoppers placed familiarity and taste/smell within their top five factors than healthy options.
- Brand names still have a sway in many purchase decisions, with 33% of shoppers naming in their top 5 influences and 2% as the most important.
- Ethically produced products were considered least important with 16% of shoppers naming it in their top 5 influences.

⁵ IGD ShopperVista 2012, base: sample of 1000 main shoppers, fieldwork July 2012. Sample is managed to be representative of main grocery shoppers but may contain unquantifiable biases.

Prices & Expenditure

2.8: UK trend in sales of ethical produce



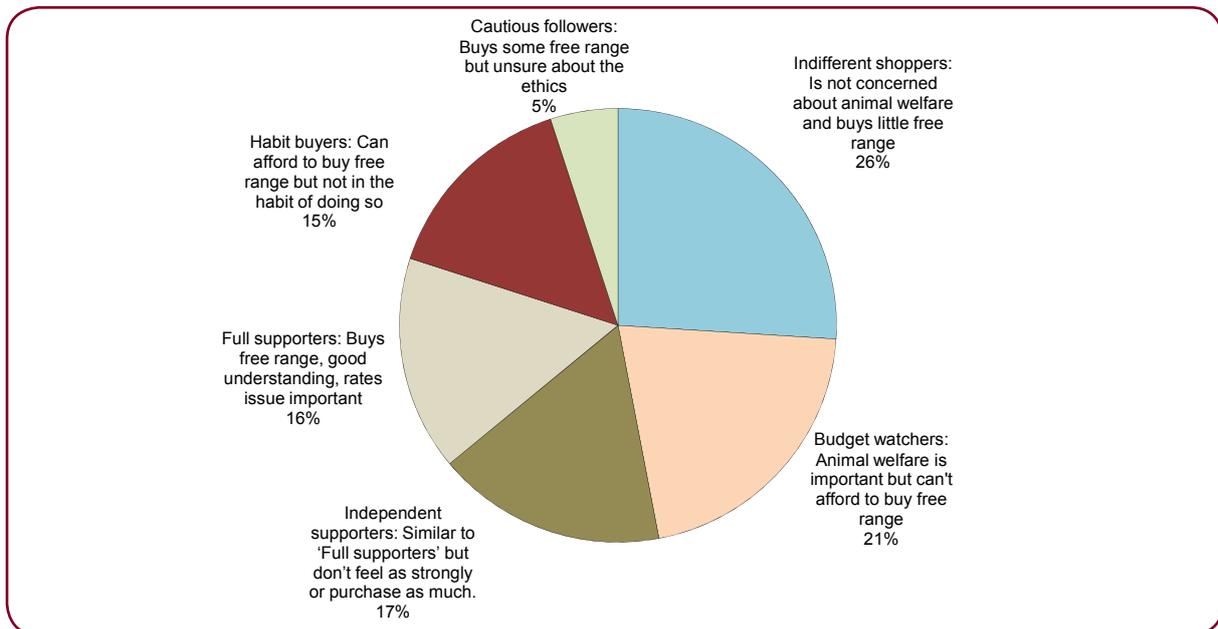
Source: Ethical Consumerism Report (ECR) 2012. The Co-operative Bank.

- Sales in “ethical” food and drink, including organic, fair-trade, free range and freedom foods accounted for £6.4 billion in 2011⁶, 7.5% of all household food sales.
- Sales of ethical produce increased 52% from £4.2 billion in 2007 to £6.4 billion in 2011, despite the economic downturn.
- Sales of Fairtrade products rose by 24% in 2011, accounting for 17% of the ethical food sector.
- Sales of organic food and drink have fallen 24% since their peak in 2008. In 2008, this sector accounted for 33% of all ethical food and drink sales. In 2011 this had fallen to 20% of total ethical sales, but still contributes the largest share.
- Sales of sustainable fish rose by 32% in 2011 to £0.3 billion.
- Figures are determined by the Ethical Consumerism Report by The Co-operative Bank based on administrative data held by ethical labelling organisations and trade associations.

⁶ Excludes food and drink boycotts.

Prices & Expenditure

2.9: Consumer segmentation into types of shopper for free-range chicken and eggs

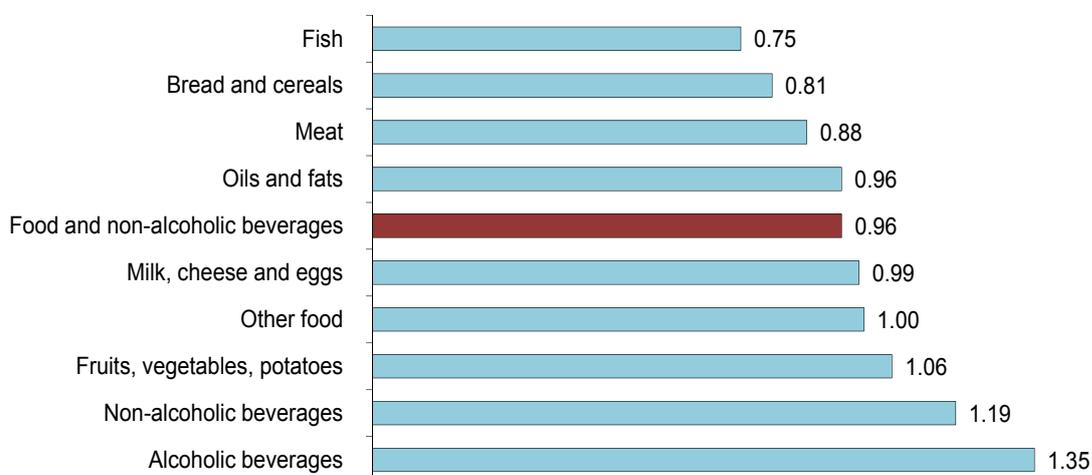


Source: *Attitudes and behaviours around sustainable food purchasing*, Defra 2011.

- Price is a major barrier for free range chicken and eggs with 21% of households classed as Budget Watchers. Although sympathetic to animal welfare they purchased relatively few free range eggs, lower than any other group.
- Budget Watchers and Habit Buyers, making 36% of the population, have good awareness and understanding of animal welfare but have barriers to purchasing free range.
- Full Supporters and Independent Supporters could be viewed as being engaged with the issues giving an estimated 33% of the population as engaged.
- An estimated 25% of the population, classed as Indifferent Shoppers, are not engaged with the issues of animal welfare.
- Of those classed as Full Supporters, 85% purchased free-range eggs at least half the time.
- Defra's study was based on a survey of 3,000 households in Kantar's Household World Panel in 2010.

Prices & Expenditure

2.10: Food prices in the UK compared to France in 2011



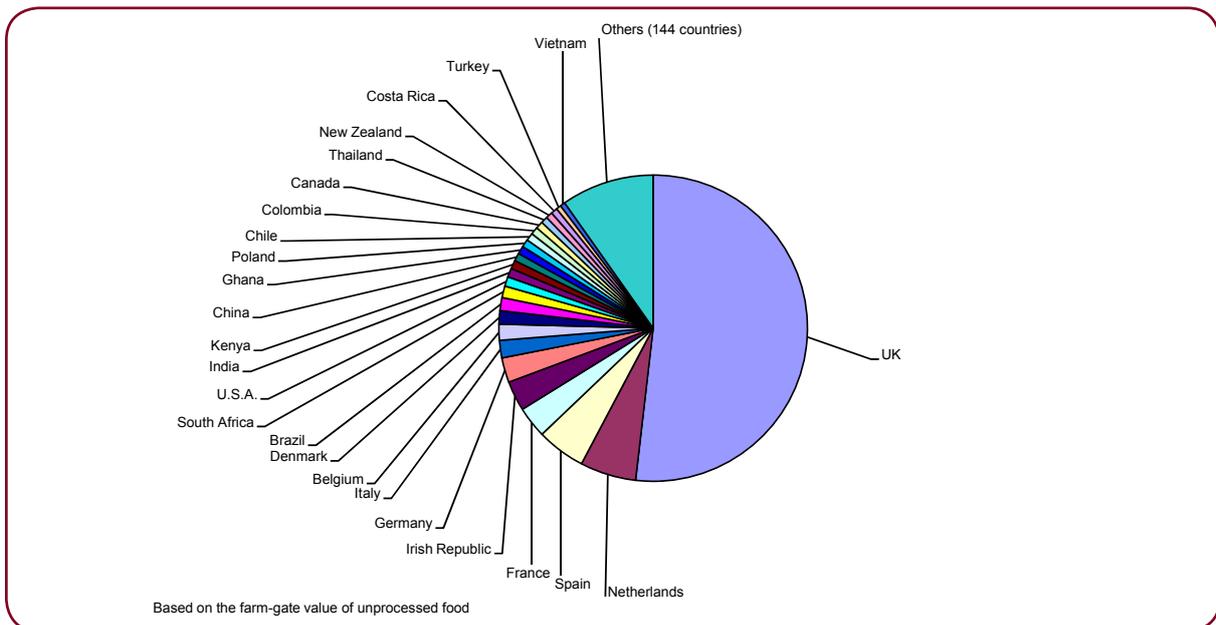
Source: Eurostat.

- Based on purchasing power parities⁷, food and non-alcoholic drinks were 4.4% cheaper in the UK than in France in 2011.
- Alcoholic beverages were 35% more expensive in the UK than in France, with prices in the UK highest in the EU apart from Ireland and the Scandinavian countries.
- Fish was particularly cheap in the UK in 2011 compared to other countries, and 25% cheaper than in France.
- Fruit and vegetables including potatoes were 22% more expensive in the UK than the EU average and 5.8% more than France.
- Within the EU, only Germany, Ireland, Austria and Sweden were more expensive than the UK for fruit and vegetables.
- Norway and Switzerland were more expensive for fruit and vegetables than any EU countries.
- Food prices rose 32% in the UK between 2007 and 2012 while rising only 13% in France and Germany.

⁷ Purchasing power parities compare prices in different countries after removing the effects of exchange rate differences.

Chapter 3: Global & UK Supply

3.1: Origins of food consumed in the UK, 2011



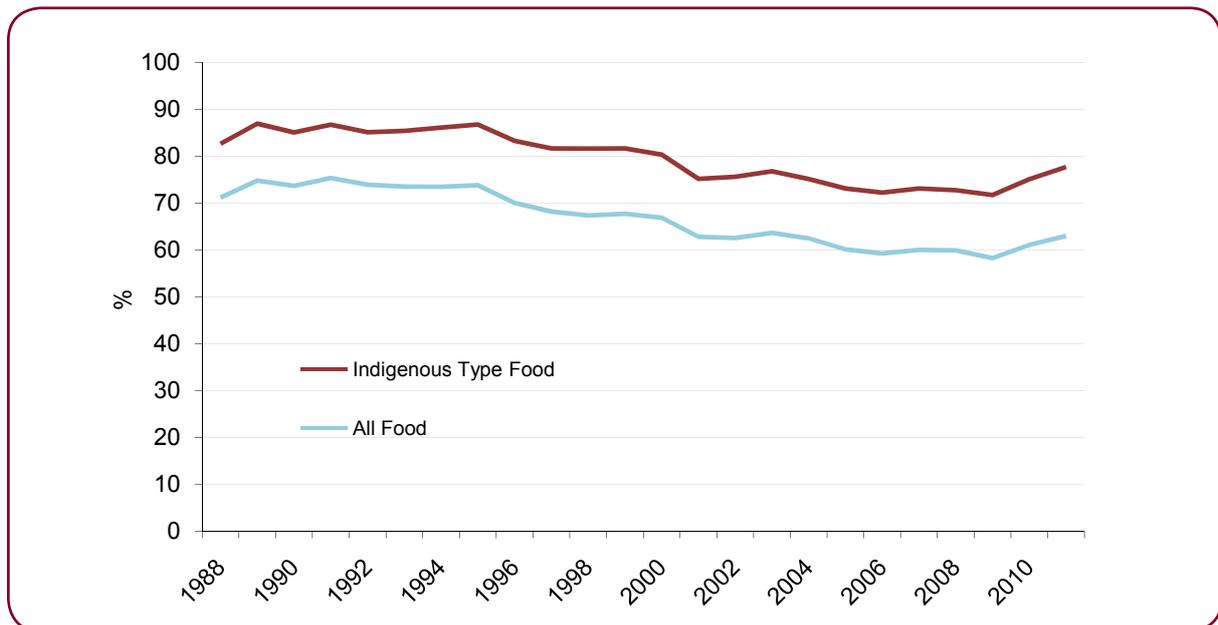
Source: Defra.

- Sourcing food from a diverse range of stable countries, in addition to domestically, enhances food security¹.
- Based on the farm-gate value of unprocessed food;
 - Twenty five countries accounted for 90% of UK food supply in 2011. The UK supplied over half (51.8%). The leading foreign suppliers were the Netherlands (5.9%), Spain (5.1%), France (3.3%), Irish Republic (3.2%) and Germany (2.6%).
 - Three countries accounted for 90% of dairy product and bird's egg supply (UK supplied 83%).
 - Four countries accounted for 90% of meat and meat preparation supply (UK supplied 82%).
 - Nine countries accounted for 90% of supply of cereals and cereal preparations (including rice). The UK supplied 62%.
 - Twenty five countries accounted for 90% of fruit and vegetable supply (UK supplied 23%).

¹ UK Food Security Assessment, January 2010 (Defra).

Global & UK Supply

3.2: UK Food production to supply ratio, 1988-2011

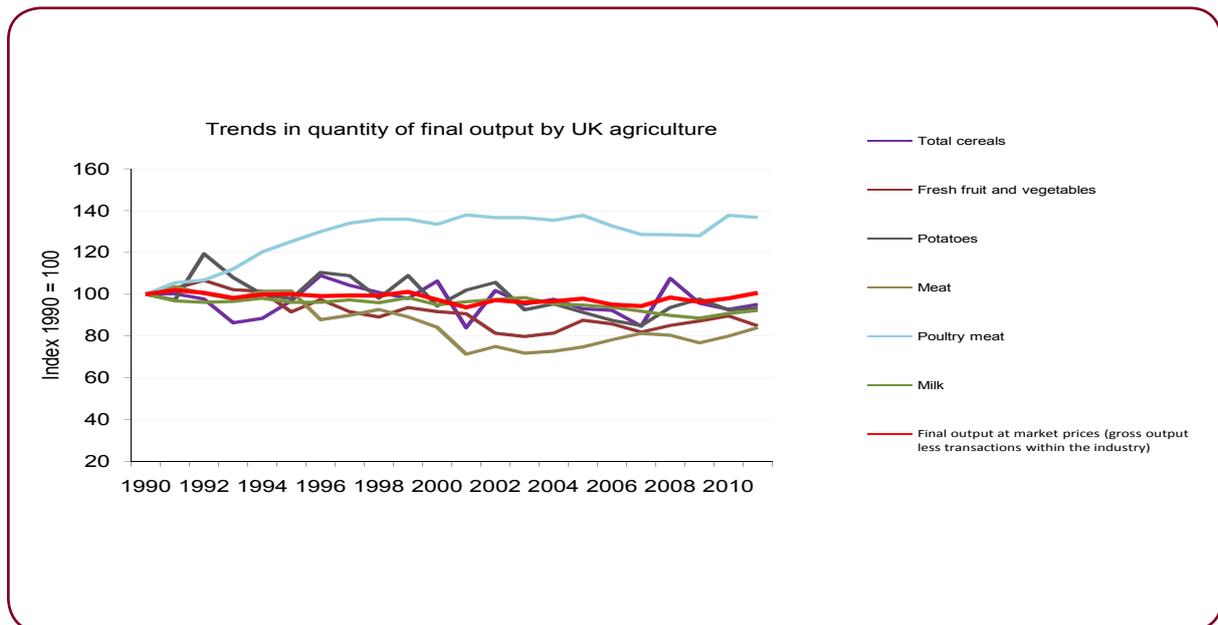


Source: *Agriculture in the United Kingdom 2011*, Defra.

- Food Production to Supply Ratio, which is calculated as the farm-gate value of raw food production (including for export) divided by the value of raw food for human consumption was 63% for all food in 2011 and 78% for indigenous type food.
- This compares with 61% and 75% respectively in 2010. This increase on 2010 is a result of increases in the value of domestically produced oilseed, beef, milk and wheat.
- The production to supply ratio provides a very broad indicator of the ability of UK agriculture to meet consumer demand.
- A high food production to supply ratio fails to insulate a country against many possible disruptions to its supply chain.
- Production potential is more relevant at EU level than United Kingdom level, and the EU as a whole has a food production to supply ratio of over 90%.
- Further trade liberalisation is unlikely to materially affect food security within the EU.

Global & UK Supply

3.3: Trends in UK food production²



Source: *Agriculture in the United Kingdom 2011*, Defra.

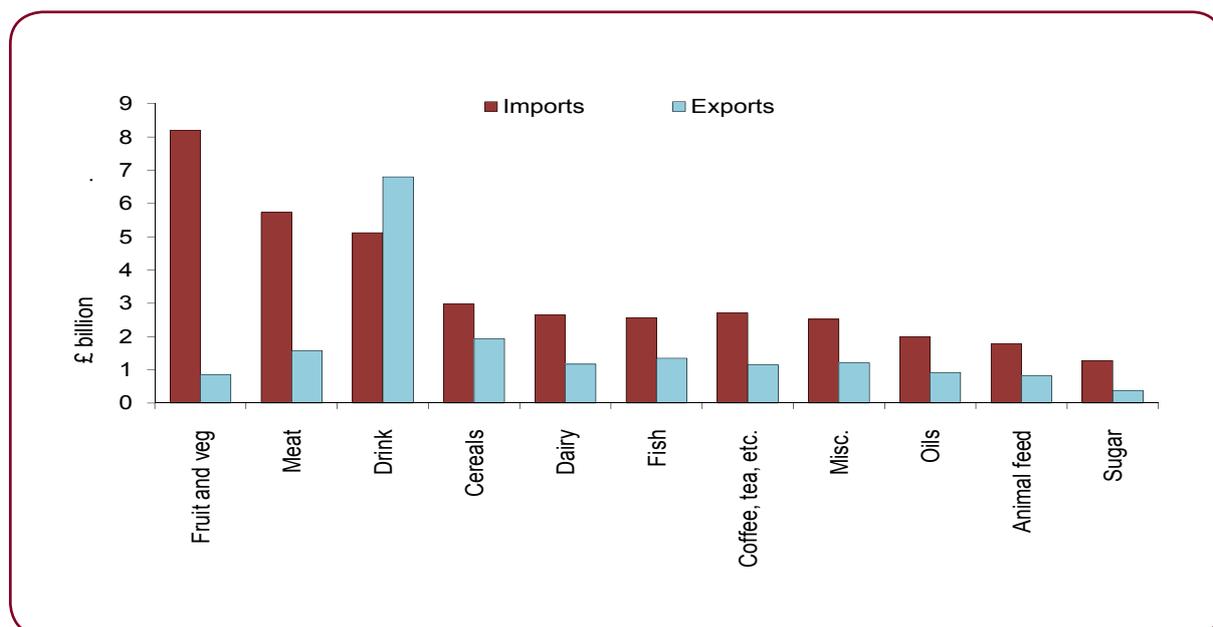
- Final output³ of UK agriculture is a proxy for UK food production. It rose 3% in 2011 but shows no overall trend, standing at 1% above 1990 levels.
- Total UK cereal production has fluctuated, with significant dips in 2001 & 2007 linked to adverse weather conditions. Favourable planting conditions in autumn 2009, plus strong market prices, led to an increase in the area of wheat planted. The overall area of cereals decreased by 2% in 2010, driven mainly by a reduction in the area of malting barley, the result of poor market conditions.
- Since 1990 there have been large increases in production levels of poultry meat, part of a longer term upward trend since the late 1970's. Although production dipped during the 2000's, in 2010 and 2011 it was almost back to 2005 levels.
- Red meat production showed a downward trend through much of the 1990's, driven by a combination of factors including the beef export ban. Since 2002 there has been a slight upward movement but levels still remain lower than those in the early 1990's.

² 2011 figures are provisional.

³ Gross output less transactions within the industry.

Global & UK Supply

3.4: UK trade in different food groups, 2012⁴



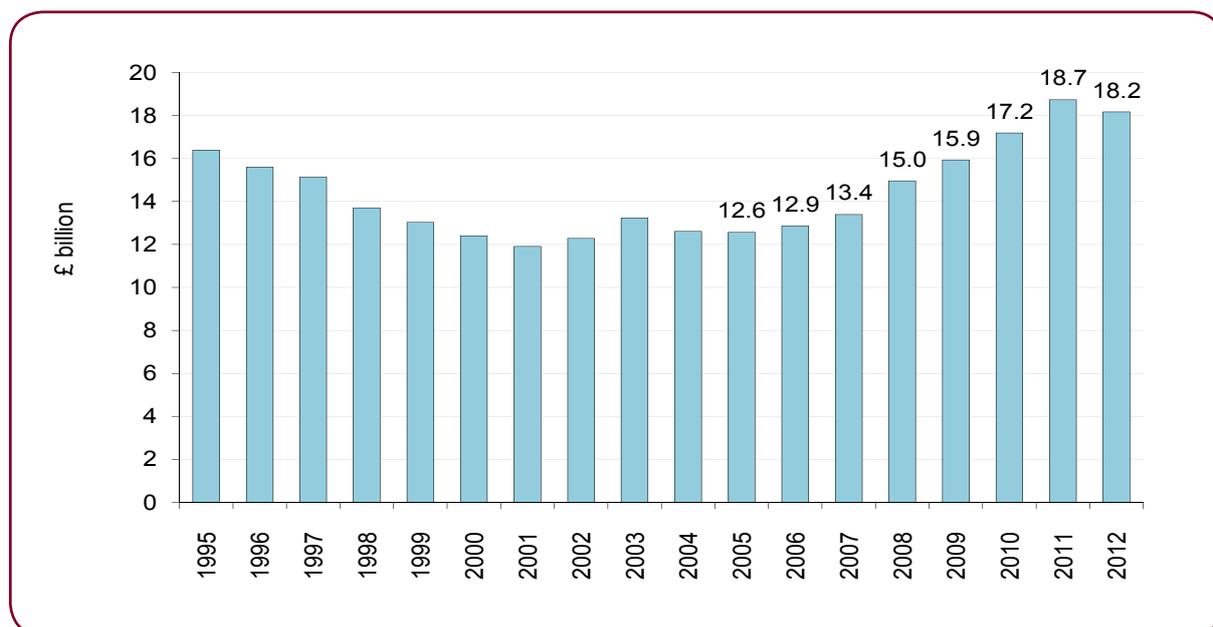
Source: HM Revenue and Customs.

- The value of imports is greater than the value of exports in each of the broad categories of food, feed and drink except 'Drink' which had a trade surplus of £1.68 bn in 2012, largely due to exports of Scottish Whisky.
- Drinks are the largest export category by far with an export value of £6.8 bn in 2012. Exports (at 2012 prices) rose 25% between 2009 and 2011, but fell slightly (2.9%) in 2012. The increases were largely in the existing markets of USA, France and Singapore, but also in Brazil and Mexico.
- Cereals is the next largest export group with an export value of £1.9 bn followed by the meat and fish categories at £1.6 and £1.4 bn respectively.
- 'Fruit and vegetables' has the largest trade deficit. In 2012 imports cost £8.2 bn while exports were worth £0.9 bn, giving a trade gap of £7.3 bn.

⁴2012 figures are provisional.

Global & UK Supply

3.5: Trend in exports of food, feed and drink⁵



Source: HM Revenue and Customs

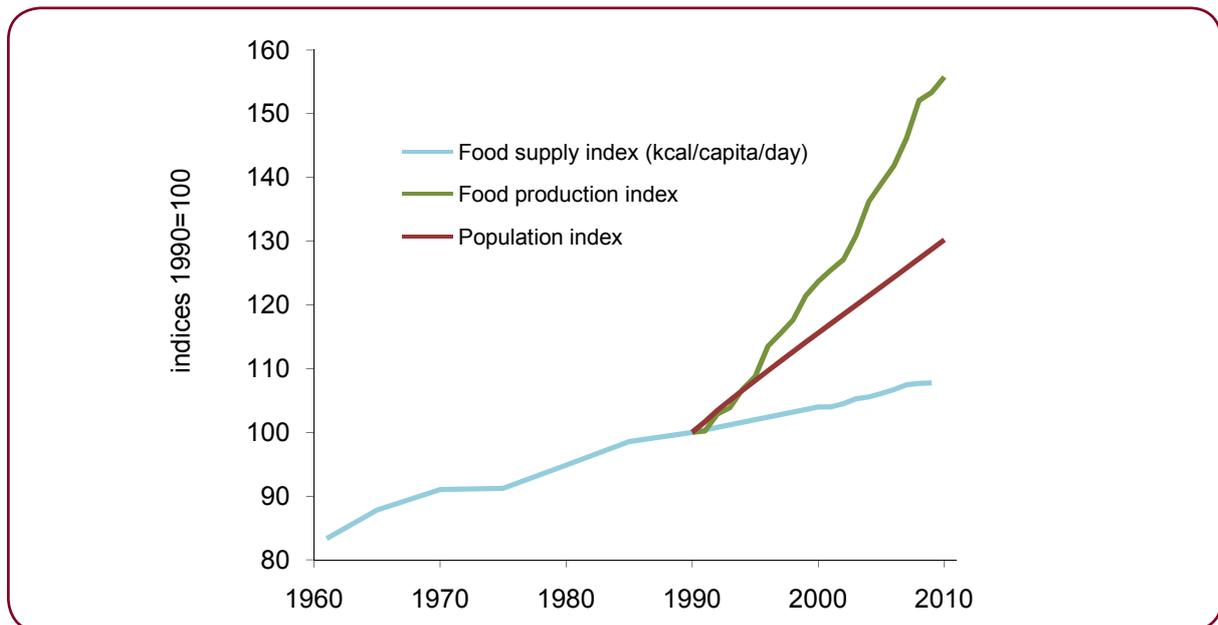
- The total value of food and drink exports fell slightly in 2012 to £18.2 billion but is still £5.6 billion more than in 2005 measured in 2012 prices.
- Exports of most types of food and drink fell in 2012. Wheat had the greatest reduction at £0.15 billion. Exports of wheat, wine, whisky and beef were worth £5.46 billion or 30% of food and drink exports in 2012.
- The trade deficit in food, feed and drink rose in 2012 and is £2.31 billion more than in 2005 measured in 2012 prices.
- Export values increased in 2012 for pork (by 7.1%) and egg and egg products (by 20%).
- In 2010, around 5,000 traders⁶ were recorded as exporting food, feed and drink to the EU and around 4,000 exporting outside the EU. Most (about 60% exporting to EU and 80% exporting outside the EU) export less than £250k per annum but make up a small amount of total exports (less than 10%). These are likely to be small and some micro enterprises.

⁵ 2012 figures are provisional.

⁶ Traders include food companies directly trading and intermediaries representing many food companies. For EU trade this excludes companies below £250 thousand turnover.

Global & UK Supply

3.6: Trend in world food production per capita



Source: UK Food Security Assessment (Defra) updated with FAO⁵ balance sheets.

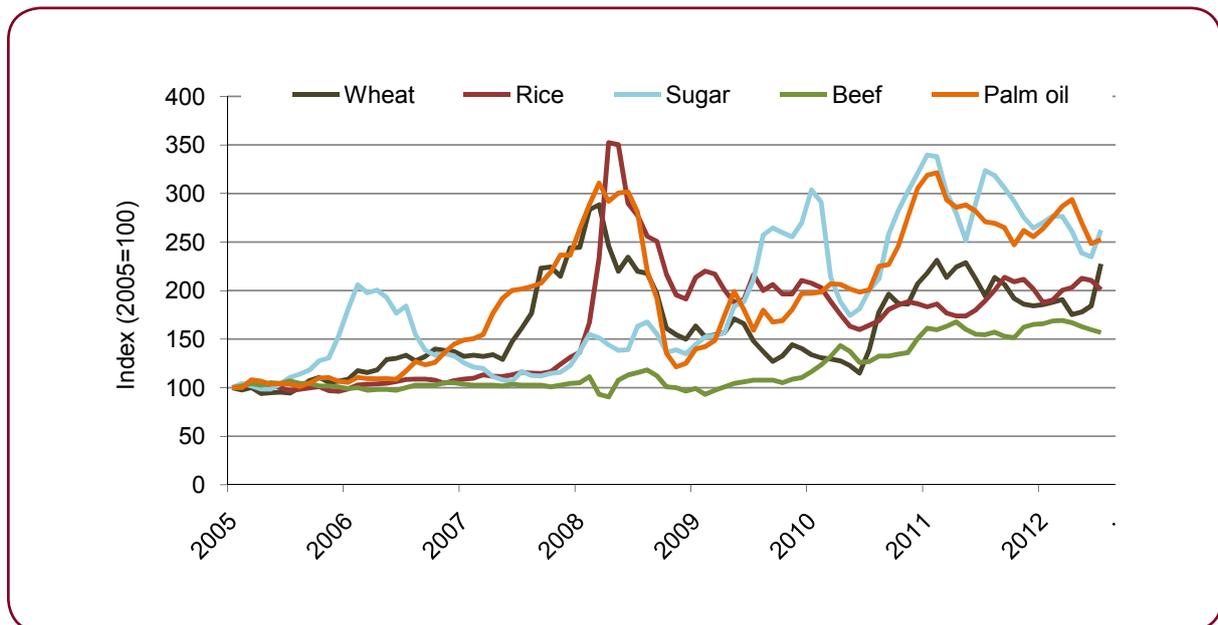
- Global production of food relative to population is a fundamental indicator of global food security.
- Growth in the productive potential of global agriculture has so far exceeded the growth in effective demand.
- World population is currently growing 1.1% per year and increased 30% between 1990 and 2010. Food production has grown at a faster rate, currently 1.6% per year, and was 56% higher in 2010 than in 1990.
- Domestic food prices in developing countries remain 25% higher relative to non-food consumer prices than in early 2005. While incomes in developing countries have continued to rise, the sharp increase in food prices will have limited gains for many households such as the urban poor, where food often represents more than half of their total expenditures⁶.

⁵ Food and Agricultural Organisation of the United Nations (FAO).

⁶ Global Economic Prospects, World Bank June 2012.

Global & UK Supply

3.7: World agricultural commodity prices to July 2012



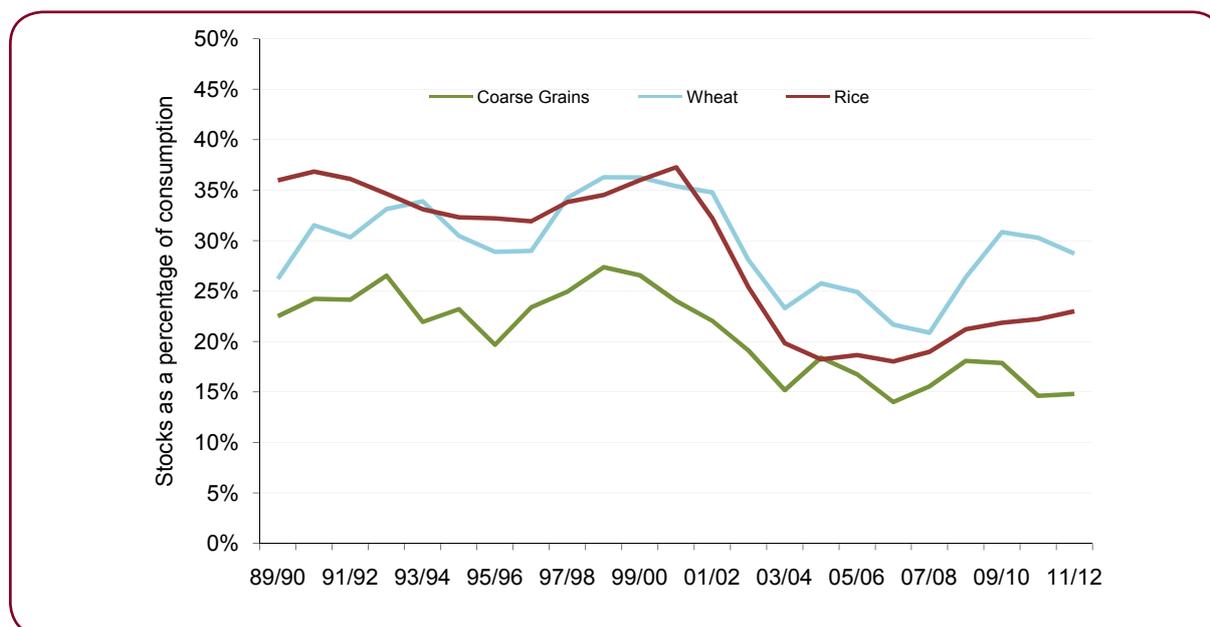
Source: United Nations Conference on Trade & Development (UNCTAD).

- Wheat prices rose 30% between April and July 2012, caused by a major drought in the US “corn belt” and poor wheat harvests elsewhere.
- Wheat prices peaked in March 2008, May 2011 and again in July/August 2012. The first was the most severe, doubling the wheat price within a year. The second and third spikes took prices back up to 80% of the first peak.
- Sugar prices peaked in Jan 2011, over 150% higher than in Dec 2008. Sugar prices were 23% lower in July 2012 than in the peak in Jan 2011.
- Rice prices peaked in April 2008 having risen threefold over 8 months. The price in July 2012 was 22% higher than a year previously but 43% below the 2008 peak.
- Palm oil prices peaked in Feb 2011 rising 60% in 7 months. The price in July 2012 was 21% lower than the 2011 peak.
- There are nearly 1 billion hungry people worldwide. More than 60% of the world’s hungry are women. One third of all child deaths globally are attributed to under-nutrition⁷.

⁷ Food Price Volatility, a Growing Concern; World Bank Stands Ready to Respond, July 2012.

Global & UK Supply

3.8: World grains stocks to consumption ratio to 2011-12



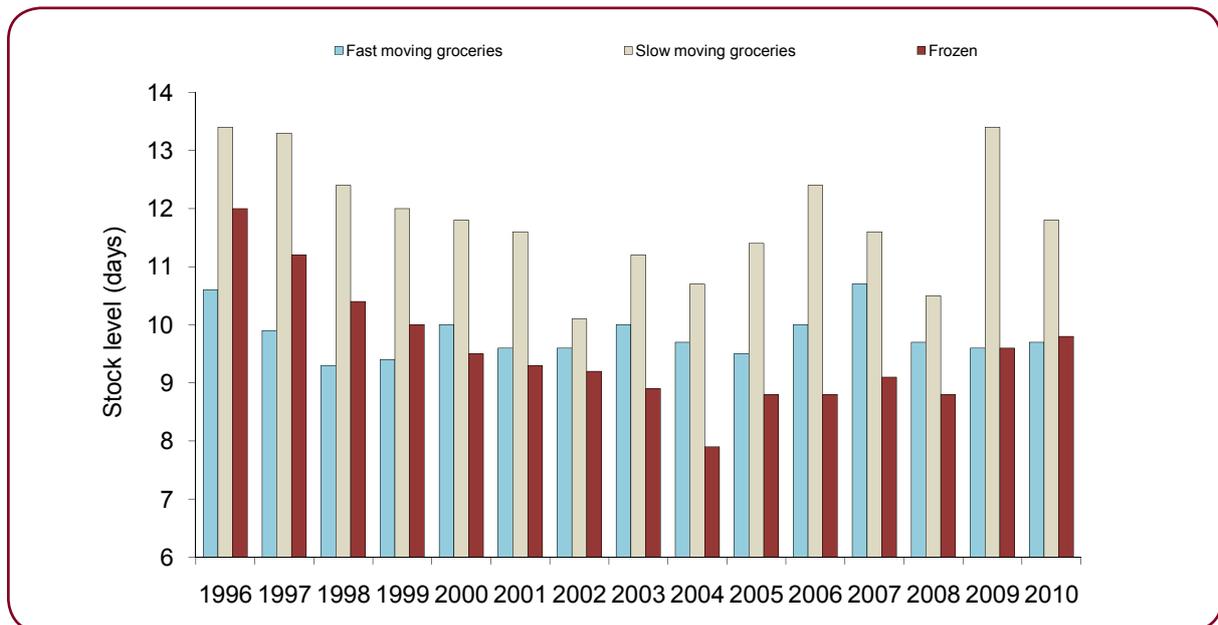
Source: International Grains Council (IGC), United States Department of Agriculture (USDA).

- Stocks to consumption ratios are an indicator of global resilience to food shortages and price stability. With low stocks, markets become sensitive to further supply shortfalls, which magnifies the price response.
- Wheat and rice stocks remain relatively high at the end of the 2011-12 crop year, although the downward trend in wheat stocks is projected to continue in 2012-13⁸. Rice stocks have been on an upward trend since 2008-09. Severe drought in the USA in 2012 significantly reduced global production of maize, so the coarse grain stocks-to-use ratio is expected to fall in 2012-13.
- Global cereal stocks dropped in the mid 2000s to a lower level than in the previous two decades, largely due to a reduction in stocks in China.
- Consumption (the denominator) is on a gradually rising trend, pushing the indicator onto a downward trend.

⁸ USDA projections.

Global & UK Supply

3.9: Average retailer warehouse stock levels (days) by grocery category⁹



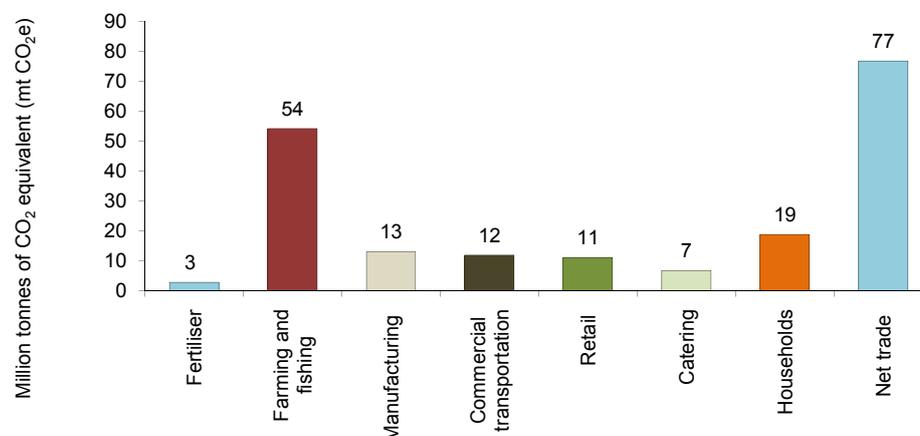
Source: IGD Research, 2012.

- In the last five years, the industry has largely reduced stock levels across the majority of categories, with a combined reduction of 0.7 days. Beer, wines and spirits recorded the greatest reduction at 3.7% over this period, equivalent to 2.9 days cover.
- This was also for a reduction for ambient slow moving groceries (SMGs). However there was a slight jump in 2009 reflecting the importance of on-shelf availability in a tough economic climate. In 2010, a reduction of 1.6 days cover returned levels to those of around 2007 at 11.8 days.
- Stock levels of fast moving groceries (FMGs), such as bread, milk etc remained fairly stable over this period at around 9 to 10 days cover. In 2010 industry average warehouse stock level for FMG was 9.7 days.
- Stock levels of frozen goods is the only category to show an increase over the five year period, increasing cover by one day to 9.8 days cover.

⁹ In general, produce, chilled and fresh categories do not have a warehouse stock-holding but are cross-docked directly from the supplier onto store deliveries. For this reason, these categories are not included.

Chapter 4: Environment

4.1: Greenhouse gas (GHG) emissions from the UK food chain, 2010¹



Source: Environmental accounts (ONS), Food Transport Indicators (Defra), Energy Consumption in the UK (DECC), British Survey of Fertiliser Practice (Defra), Consumption Emissions (Defra)².

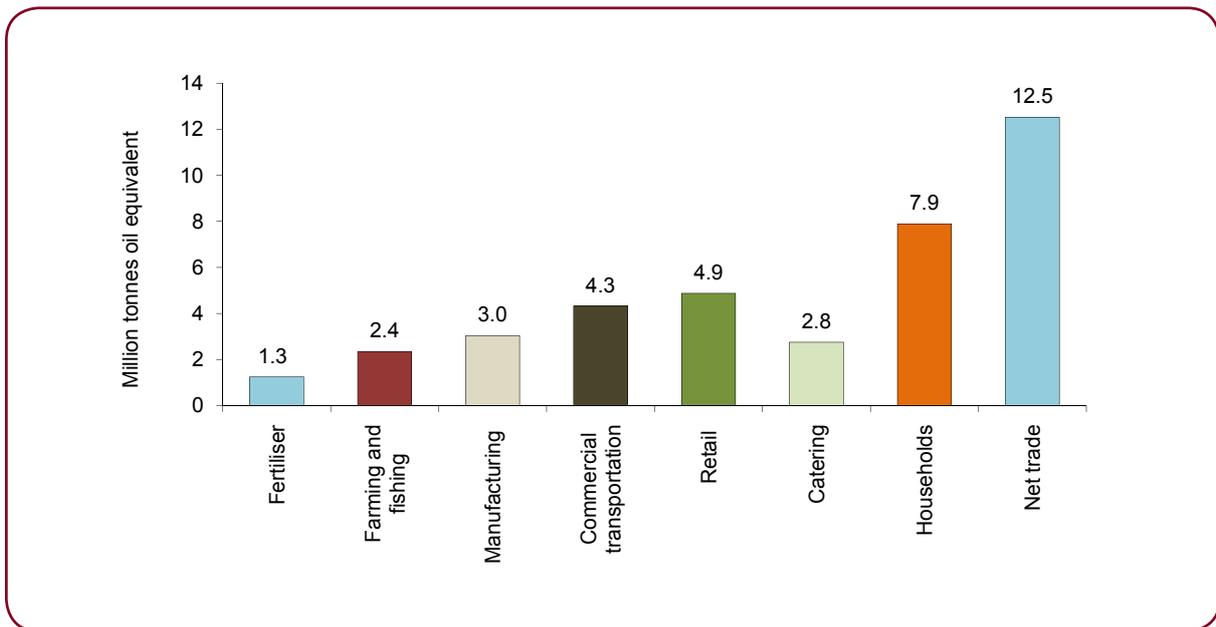
- Around 195 million tonnes of CO₂ equivalent GHGs (CO₂e) were emitted within the UK from domestic food chain activity in 2010, excluding emissions from non-fertiliser pre-farm production, food packaging, food waste and land use change.
- The largest contributor to emissions is net trade in food and drink which is estimated at 77 mt CO₂e². This is emissions from food imports less emissions from food exports.
- The UK farming and fishing sector was the second largest contributor, accounting for 54mt CO₂e. Enteric fermentation in ruminating animals and oxidisation of nitrogen in fertilisers is the source of most of these emissions. Fertiliser use accounted for a further 2.8mt CO₂e.

¹ GHG emissions from imports and exports, food packaging, food waste and land use change are not included. Manufacturing includes emissions from electricity use and excludes emissions from road freight transport. Household does not include emissions from heating water for washing up or dishwashers.

² Experimental data which may be subject to revision following review.

Environment

4.2: Energy use in UK food chain sectors, 2010³



Source: *Environmental Accounts (ONS)*, *Food Transport Indicators (Defra)*, *Energy Consumption in the UK (DECC)*, *British Survey of Fertiliser Practice (Defra)*, *Consumption Emissions (Defra)*⁴.

- Net trade is the largest contributor to energy use at 12.5 million tonnes of oil equivalent (Mtoe), or 32%⁴. This is energy use in food imports less energy use in food exports.
- Energy consumption in UK food production was the same in 2010 as in 2008, having dipped 3.5% in 2009.
- Natural gas accounted for 61% of total energy consumption in food and drink manufacturing in 2010⁵, followed by electricity (31%), petroleum (6.1%), fuel oil (1.2%) and coal (0.9%).
- Longer term energy consumption (excluding electricity) in food and drink manufacturing fell 16% between 1990 and 2010, with a 94% reduction in fuel oil use and an 86% reduction in coal. Natural gas use increased between 1990 and 2000 but has since fallen 18% to 2.4 Mtoe in 2010.

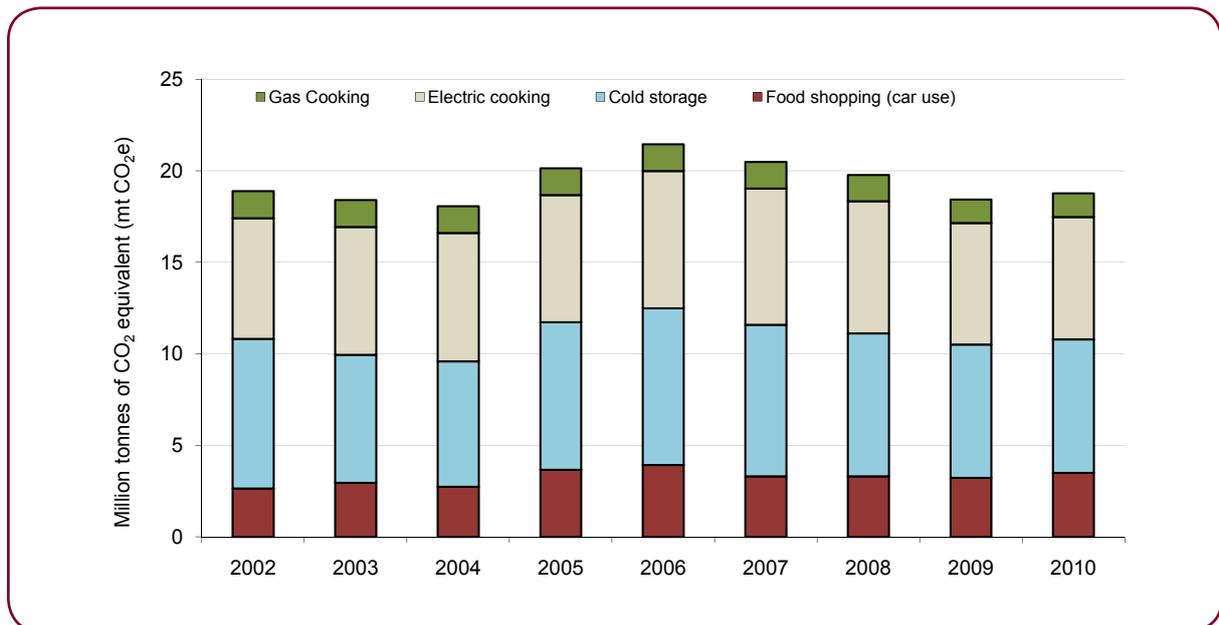
³ Household does not include emissions from heating water for washing up or dishwashers. Primary energy is the energy used in electricity production, not the amount of electricity used.

⁴ Experimental data which may be subject to revision following review.

⁵ Digest of United Kingdom Energy Statistics (DECC). Data excludes energy used to generate heat for all fuels except manufactured solid fuels and electricity.

Environment

4.3: Trends in food related greenhouse gas (GHG) emissions from UK households⁶, 2002-2010



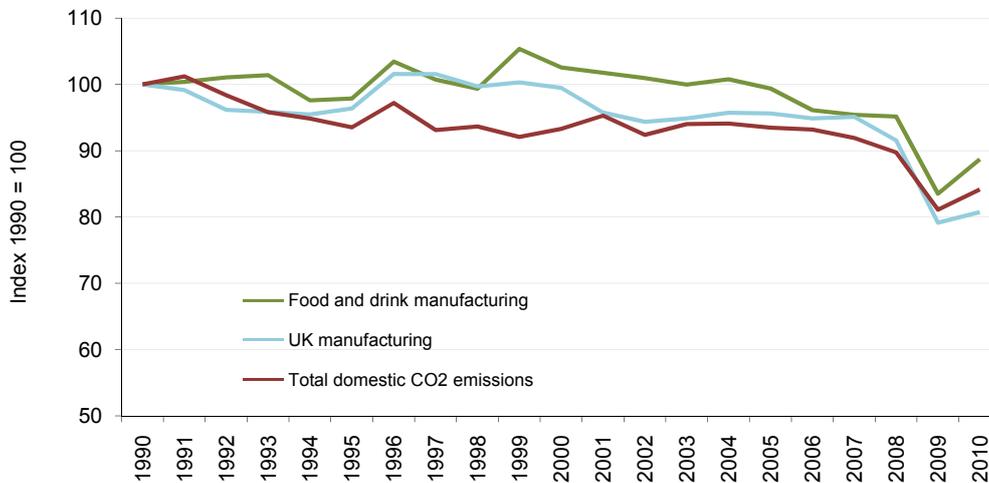
Source: Food Transport Indicators (Defra), Energy Consumption in the UK (DECC).

- GHG emissions by UK households from food shopping, storage and preparation were the same in 2010 as in 2002 at 18.8mt CO₂e, having peaked in 2006 at 21.4mt CO₂e.
- Cold storage and electric cooking are the largest contributors to household food emissions at 7.3mt CO₂e (39%) and 6.7mt CO₂e (36%) respectively in 2010.
- Food shopping emissions increased in 2010, rising 8.3% to 3.5mt CO₂e.
- Emissions from food shopping, storage and preparation are between 11% and 15% lower than their peaks in 2006.
- Total energy use from households (excluding driving) fell 6.6% between 2002 and 2010 to 7.9mtoe.

⁶ Household does not include emissions from heating water for washing up or dishwashers.

Environment

4.4: Trend in CO₂ emissions from UK food and drink manufacturing, 1990-2010⁷



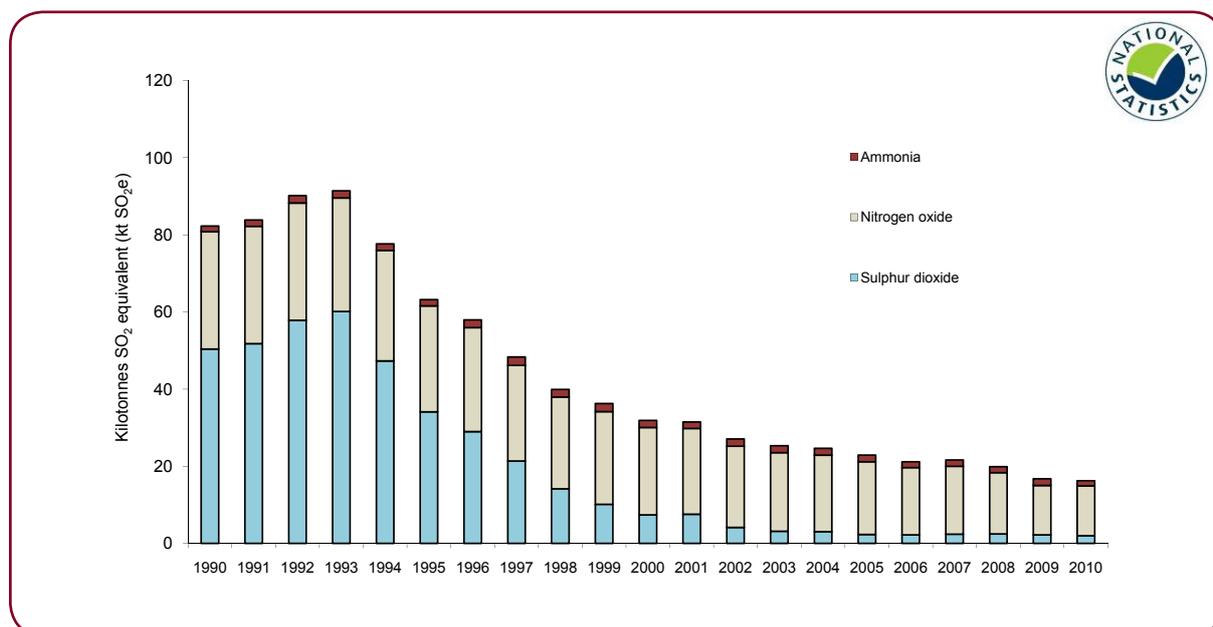
Source: *Environmental Accounts (ONS), Energy Consumption in the UK (DECC)*.

- CO₂e emissions from UK food and drink manufacturing have been on a downward trend since 1999. They were 16% lower in 2010 than in 1999 (11% lower than in 1990).
- The downward trend in CO₂e emissions from UK food and drink manufacturing is similar to the downward trend in total domestic emissions.
- The volume of output from food and drink manufacturing fell during the economic downturn leading to a reduction in the level of CO₂e emissions.
- An increase in the volume of outputs along with a prolonged period of exceptionally cold weather produced an increase in CO₂e emissions in 2010.

⁷ Manufacturing figures include the share of CO₂ emissions relating to electricity production using a constant emission factor. Total domestic CO₂ emissions include net emissions/removals from land use and land use change but with no allowance for EU Emission Trading Scheme purchases.

Environment

4.5: Trends in acid rain precursor emissions⁸ from UK food and drink manufacturing⁹ to 2010



Source: *Environmental Accounts (ONS)*.

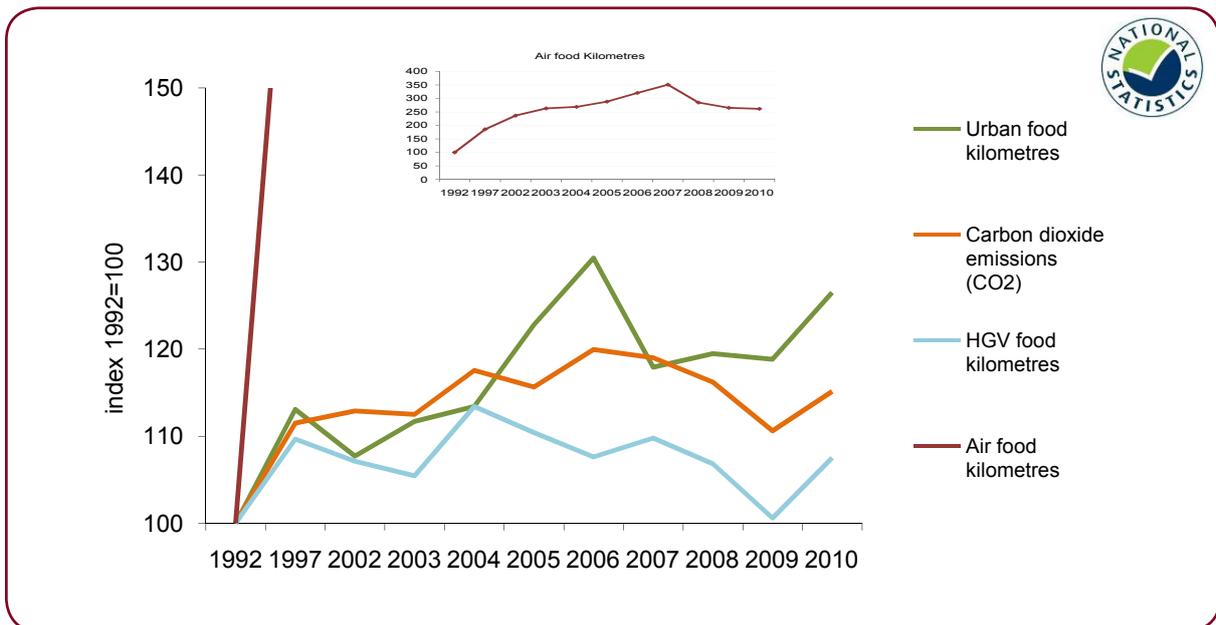
- Acid rain precursor emissions include sulphur dioxide (SO₂), nitrogen oxides (NO_x) and ammonia (NH₃).
- Total acid rain precursor emissions from food and drink manufacturing have fallen by 80% since 1990 and 2.9% since 2009 to 16.25 kilotonnes of SO₂ equivalent (kt SO₂e) in 2010¹⁰.
- In 2010 nitrogen oxides accounted for 79% of all acid rain precursor emissions from food and drink manufacturing. Ammonia and sulphur dioxide accounted for around 8.2% and 12% respectively.
- Ammonia is the smallest contributor to acid rain precursor emissions and has shown the lowest level of reduction of the three precursor types since 1990 at 12%.

⁸ Emissions that cause acid rain.

⁹ Includes road freight transport but excludes electricity use.

¹⁰ The emissions are weighted together using their relative acidifying effects. The weights, given relative to SO₂, are 0.7 for NO_x and 1.9 for NH₃. This is a simplification of the chemistry involved and there are a number of factors which can affect the eventual deposition and effect of acid rain.

4.6: Indicators of the external impact of food transport¹¹



Source : Food Transport Indicators (Defra).

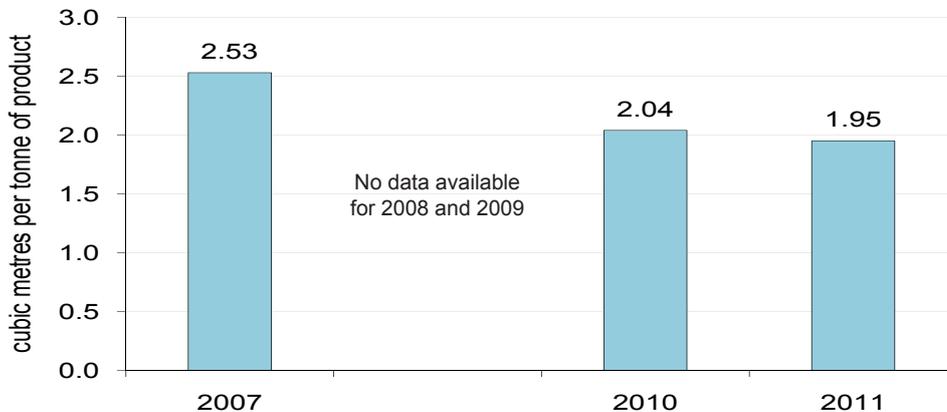
- The external impacts of food transport peaked in 2006-2007. Although 3 out of the 4 indicators showed an increase in 2010, the underlying trends may not have changed.
- UK urban food kilometres increased by 6.4% from 2009 to 2010 but there is little evidence of a clear trend in the data:
 - CO₂ emissions from food transport increased 4.1% in 2010 but remain 4.0% lower than in 2006, suggesting an underlying downward trend remains¹².
 - HGV food kilometres increased by 6.9% in 2010 broadly in line with other national economic outputs measures. A downward trend in HGV food kilometres since 2004 is apparent despite the increase in 2010.
- Urban food km is a proxy for urban road congestion; HGV food km is a proxy for infrastructure costs.
- Air food kilometres have fallen after a period of rapid growth up to 2007, with some evidence that this is stabilising at around 2003 levels. Although air freight of food accounts for only 1% of food tonne kilometres, it produces 12% of the food transport CO₂ emissions.

¹¹ Air, urban and HGV are measured in vehicle kilometres, CO₂ emissions are measured in tonnes.

¹² Emissions from food transport are also covered in Chart 4.1.

Environment

4.7: Trend in water usage rates for 213 sites with comparable data, 2007-2011



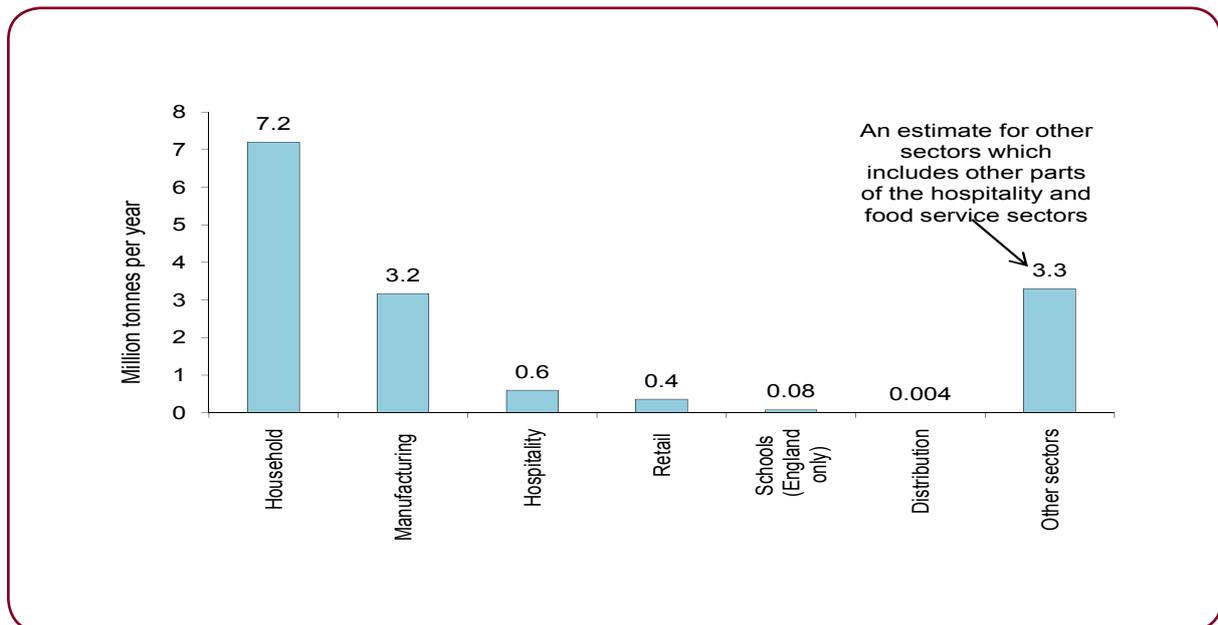
Source : Federation House Commitment (FHC)¹³, Progress report 2012 (WRAP).

- Federation House Commitment is a voluntary agreement for the food and drink manufacturing sector. Its aim is to help reduce the stress on the nation's water supplies and contribute to an industry-wide target to reduce water use by 20% by 2020 against a 2007 baseline.
- Water usage is declining among FHC members with a drop of 23% in water usage per tonne of product at 213 sites with comparable data between 2007 and 2011.
- FHC signatories represent 24% of the food and drink industry (based on total water use in 2007).
- Between 2007 and 2011 signatories collectively made a 14.4% reduction in their water use (excluding that in product). This reduction is equivalent to 5.9 million m³ or around 2,400 Olympic-size swimming pools.
- As of July 2012, the FHC has 70 signatories across 278 sites, 60% of whom are from the 'soft drinks & beverages', 'dairy' and 'meat processing' sectors.

¹³The FHC is managed by WRAP in partnership with the Food and Drink Federation: More information at www.fhc2020.co.uk

Chapter 5: Waste

5.1: UK food and drink waste through the food chain¹



Source: New estimates for household food and drink waste in the UK; The composition of waste disposed of by the UK Hospitality² Industry; Food waste in schools, WRAP 2011.

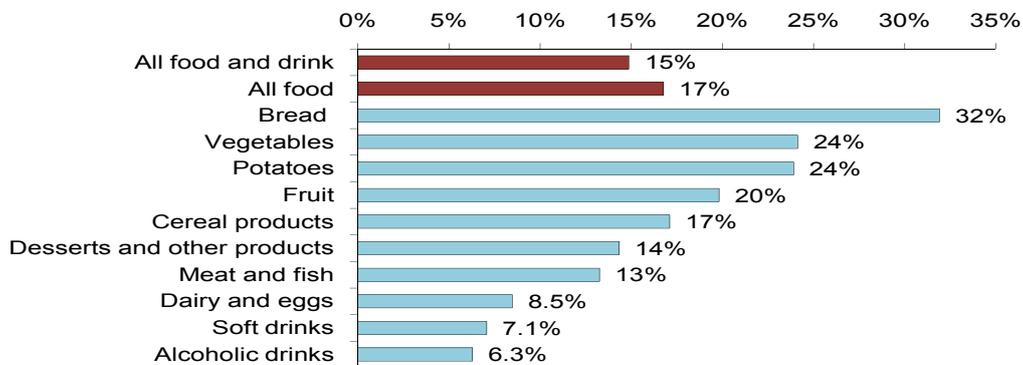
- Estimated total UK food and drink waste is around 15 million tonnes per year, with households generating 7.2mt/year of which 4.4 is avoidable.
- WRAP estimate a 1.1mt reduction between 2006 and 2010, although more work is needed to reconcile estimates of purchases, consumption and waste.
- The hospitality² sector disposed of around 600 thousand tonnes of food waste to landfill in 2009, of which almost 400 thousand was avoidable.
- Schools in England dispose of around 80 thousand tonnes of food waste, with primary schools generating more than secondary schools.
- Estimates are based on peer-reviewed studies. Accuracy will vary with some being indicative only. See individual studies for further information.

¹ Excluding agriculture.

² This data covers landfill waste from hotels, pubs, restaurants and quick service restaurants.

Waste

5.2: UK percentage of edible food purchases that are wasted



Source: Household food and drink purchases linked to waste, Defra 2010³.

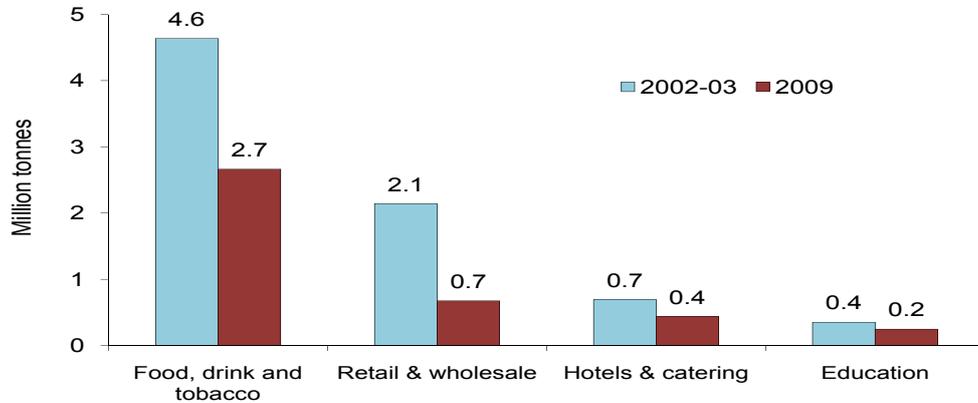
- Overall 15% of edible food and drink purchases are wasted each year. Different foods are wasted at different rates; 17% of overall food purchases, 7.1% of soft drinks and 6.3% of alcoholic drinks are wasted.
- Avoidable food and drink waste in the home is estimated by WRAP at £12 billion per year or £480 per household.
- ‘Not used in time’ is often cited as the reason for throwing away food. Bread is the most wasted food with 32% of edible purchases⁴ being wasted. Bread crusts are not classed as edible in this analysis.
- Vegetables and potatoes are wasted at a similar rate (24%), equivalent to 730 thousand tonnes of edible vegetables and 400 thousand tonnes of edible potatoes wasted per year.
- On a calorie basis 16% of food and drink is wasted. Some nutrients have a higher level of waste e.g. carbohydrate at 20% and fibre at 23%. Some nutrients are wasted far less e.g. non-milk extrinsic sugars found in confectionery, soft drinks, fruit juices and biscuits at 9.3%.

³ Data was collected between 2006 and 2008.

⁴ Calculated as total purchases minus the difference between total waste and avoidable waste.

Waste

5.3: Food and drink waste generated by businesses in England

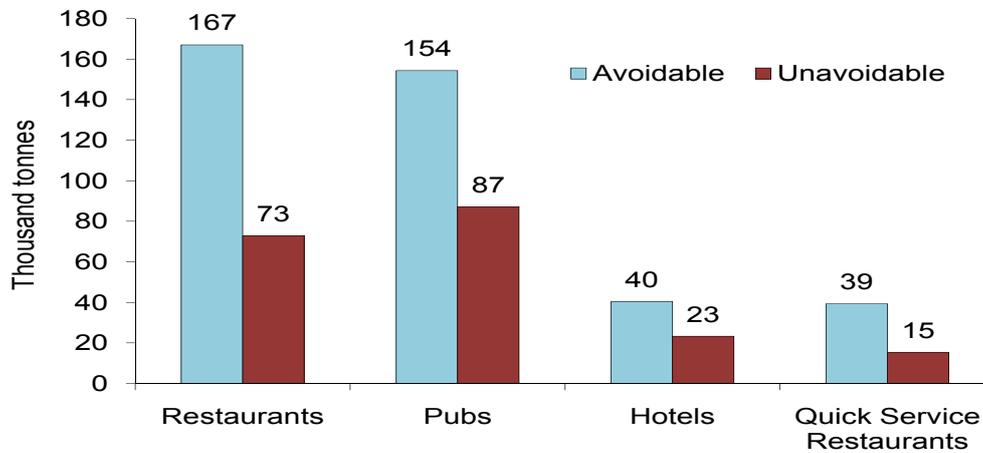


Source: Survey of commercial and industrial waste arisings 2002-03 and 2009, Defra.

- The surveys covered all commercial and industrial businesses⁵ and are often used to benchmark other analyses, e.g. hospitality sector estimates for the UK.
- Levels of food and drink waste in the food sector were almost halved between 2002-03 and 2009, down 49%:
 - retail and wholesale achieved a 69% drop,
 - food and drink manufacturing achieved a 43% drop.
- There was a relatively small reduction in food and drink waste at education sites, down only 30% (around 100 thousand tonnes) between 2002-03 and 2009.
- Around 51% of food waste generated by businesses in the food and drink sector will either be recycled, composted or reused. The amount of food waste sent to landfill is about 8%.

⁵ Comparisons between estimates for the two years will be valid, but due to the interval between the two surveys there have been inevitable changes such as the standard SIC classification scheme for businesses, which will have some unavoidable effect on the results.

5.4: UK food hospitality waste going to landfill



Source: *The composition of waste disposed of by the UK Hospitality Industry, WRAP 2011.*

- Waste going to landfill from the UK hospitality sector⁶ in 2009 is estimated at 1.5 million tonnes, which includes 600 thousand tonnes⁷ of food waste (41%). The majority of this, 400 thousand tonnes, is avoidable.
- Pubs and restaurants generate more food waste than hotels and quick service restaurants combined.
- WRAP estimates that UK Hospitality businesses pay around £1.02 billion a year buying food that is subsequently wasted. Most food waste from this sector heads to landfill but WRAP estimates that £6.6 million a year could be saved if this waste went for anaerobic digestion.
- Total food waste generated by schools in England is estimated at 80 thousand tonnes (67 thousand tonnes classed as avoidable and potentially avoidable). Of this, 55 thousand tonnes is generated by primary schools⁸.

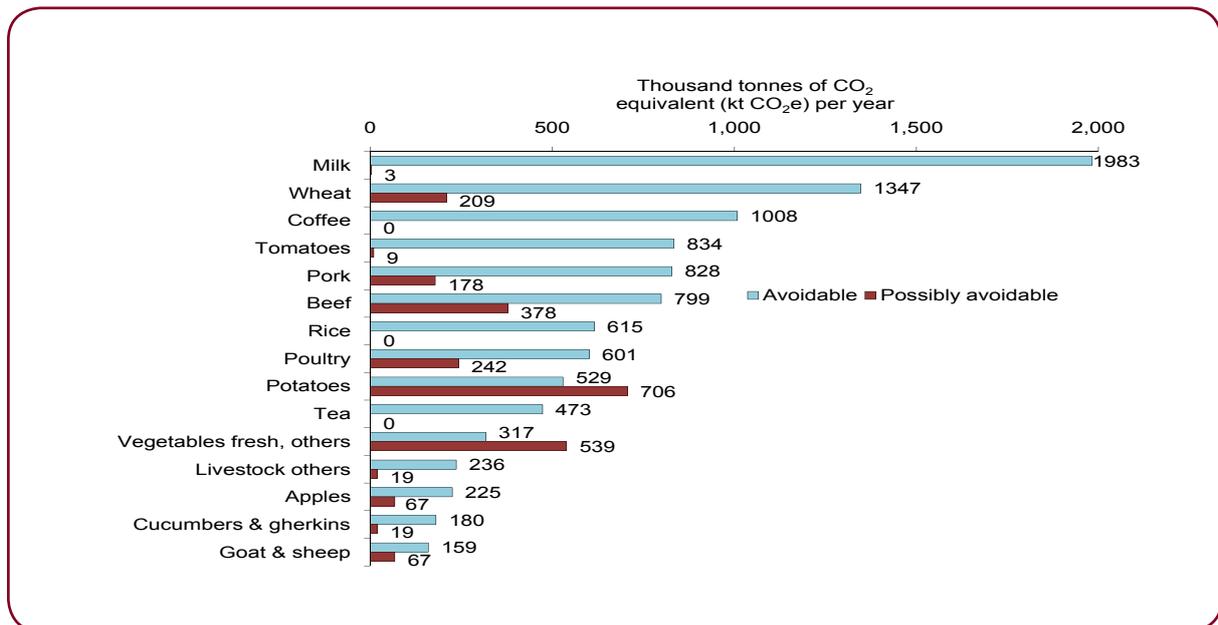
⁶ This data covers 4 areas of the hospitality sector: UK hotels, pubs, restaurants and quick service restaurants. It only covers waste disposed to landfill.

⁷ See *The composition of waste disposed of by the UK Hospitality Industry, WRAP 2011* for definitions.

⁸ See *Food waste in schools, WRAP 2011.*

Waste

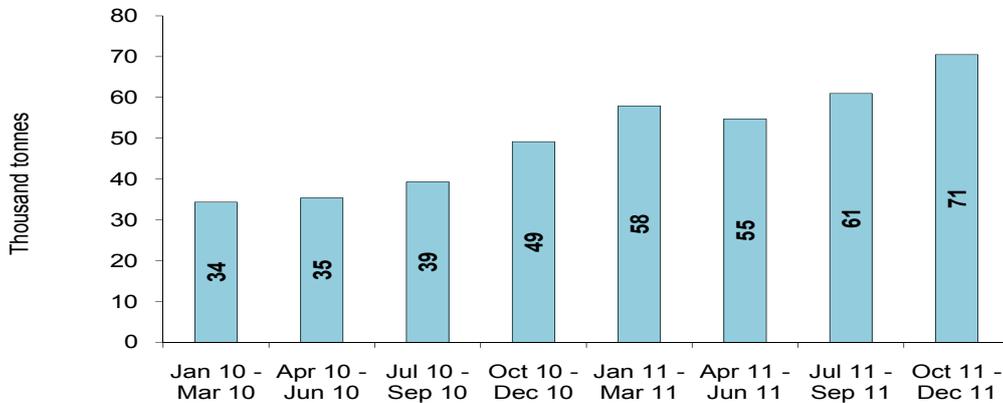
5.5: UK carbon footprint of household food and drink waste



Source: *The water and carbon footprint of household food and drink waste in the UK, WRAP 2011.*

- Avoidable food and drink waste by households is responsible for 17 million tonnes of CO₂e (carbon dioxide equivalent) per year: equivalent to one third of the emissions of CO₂ (rather than CO₂e) associated with household electricity in the UK.
- The average carbon footprint of avoidable household waste is around 270kg CO₂e per person per year.
- Emissions due to changes in land use are excluded. If they were to be included it would increase the estimates by 20%.
- Each tonne of food waste sent to landfill produces 4.2 tonnes of CO₂e. Sending a tonne of food waste through anaerobic digestion rather than landfill saves around 3.7 tonnes of CO₂e.
- The water footprint of avoidable household food waste is 4,400 million cubic metres per year, representing approximately 4% of all of our water requirements.

5.6: UK recycling of separately collected food waste



Source: Waste Data Flow, Defra questions 10 and 12, 2011⁹.

- Local authorities in the UK collected and recycled 244,115 tonnes of separately collected food waste from households in 2011, a 54% increase on 2010.
- In 2011, around 4 million UK households (around 16% of the total) received a food waste collection service, twice as many as in 2010.
- Separately collected food waste accounted for around 2.1% of the total UK household waste collected for recycling in 2011, compared to 1.3% in 2010.
- In 2010, local authorities collected 3.8 million tonnes of food waste in England¹⁰, a reduction of around 840,000 tonnes from 4.7 million tonnes in 2006-07.
- Disposal of UK household food waste¹¹ in 2010:
 - Municipal waste¹² - 64% (70% in 2007),
 - The sewer – 26% (22% in 2007) and
 - Home composted or fed to pets – 10% (8% in 2007).

⁹ 2011 data is provisional. Final data is due autumn 2012.

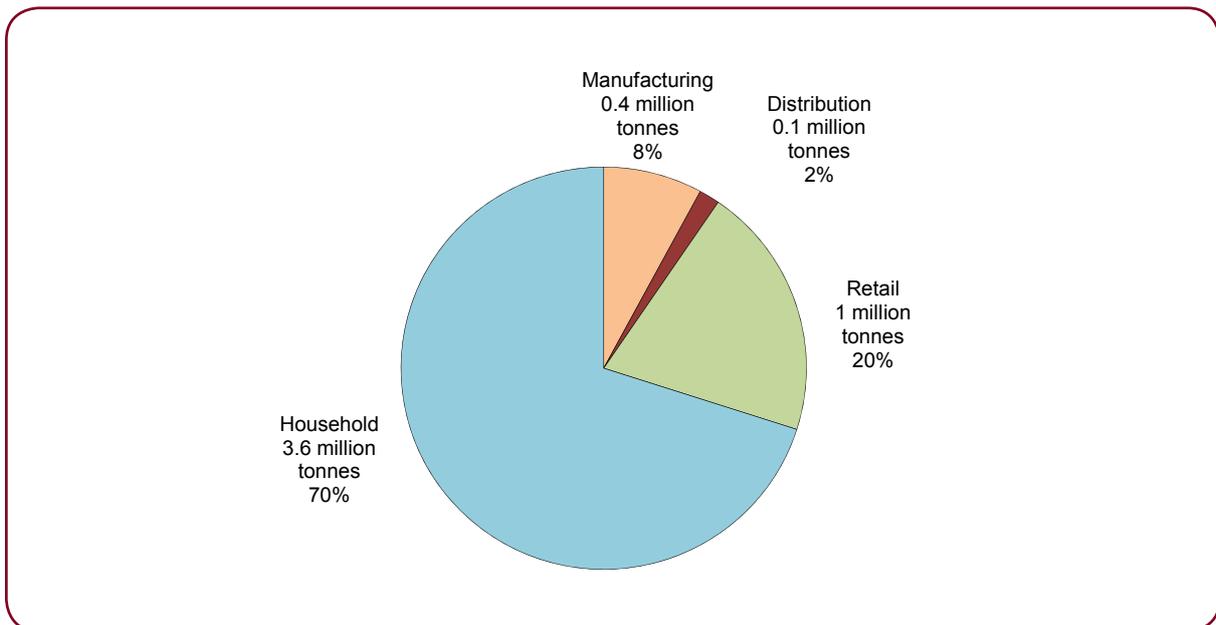
¹⁰ Synthesis of Food Waste Compositional Data 2010, WRAP November 2011.

¹¹ New estimates for household food and drink waste in the UK, WRAP November 2011.

¹² Separate kerbside food waste collections form part of this 64%.

Waste

5.7: UK food and drink packaging waste in the supply to households

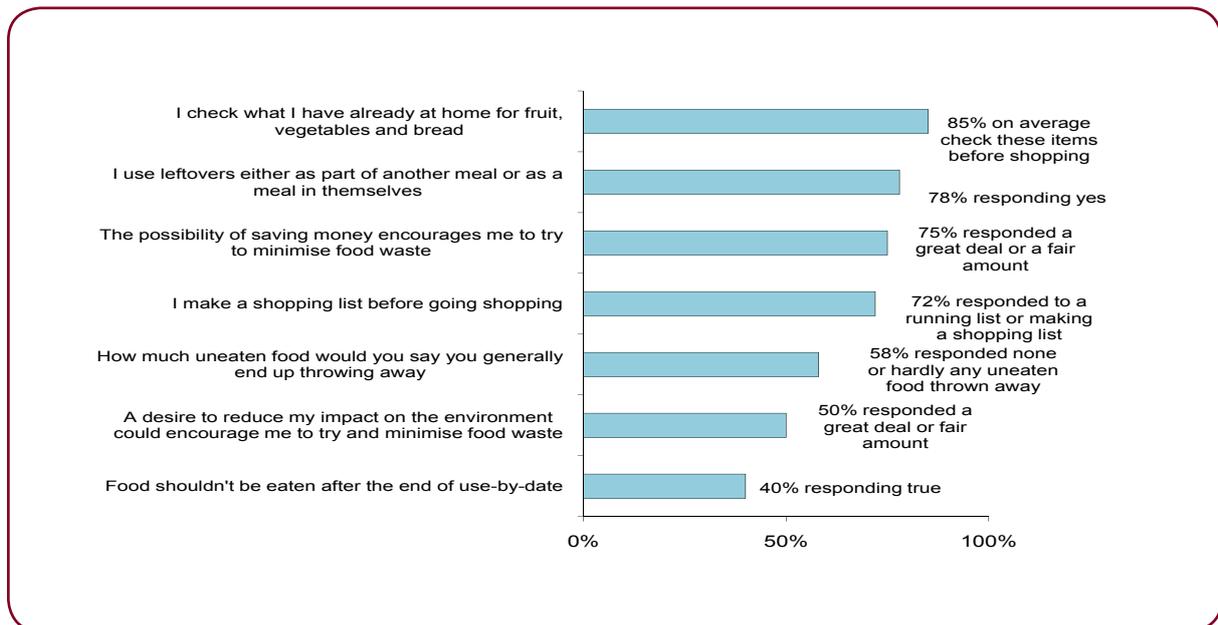


Source: Waste arisings in the supply of food and drink to households in the UK, WRAP 2010.

- Packaging protects products in transit and helps maintain shelf life for perishable foods.
- An estimated 3.6 million tonnes of grocery¹³ packaging enters households which is over two thirds of the total grocery packaging waste.
- Food and drink packaging emissions amount to 8.7 million tonnes of CO₂e (6.1 million for household purchases).
- The Courtauld Commitment is a responsibility deal between the UK grocery sector and WRAP, delivered in partnership with local authorities. It has led to savings of around 670 thousand tonnes of food waste and 520 thousand tonnes of packaging waste between 2006 and 2009, which equate to around 3.3 million tonnes of CO₂e being avoided - the same as stopping half a million around the world flights.

¹³ Including packaging from non-food and drink products sold in grocery shops.

5.8: Public attitudes and behaviours



Source: Household Food Waste Tracker Spring 2011, WRAP (unpublished).

- These statistics provide response levels on awareness of issues because people, on average, give responses that indicate the behaviour they aspire to rather than actual behaviour. This survey was conducted online across GB.
- 40% of people surveyed responded correctly that food should not be eaten after the end of the use-by date indicating that the vast majority of consumers are misinterpreting food date labelling.
- Whilst the vast majority (90%) of food shoppers buy food on special offer only 4% believe it leads to more food waste.
- Although a third of those who cooked rice and pasta admitted to having leftovers, only 1 in 7 admit to throwing away food which is left over.
- On what would encourage people to try and minimise food waste: 50% said 'a desire to reduce their impact on the environment' and 75% 'possibility of saving money'.

Chapter 6: Dietary Health

6.1: The eatwell plate

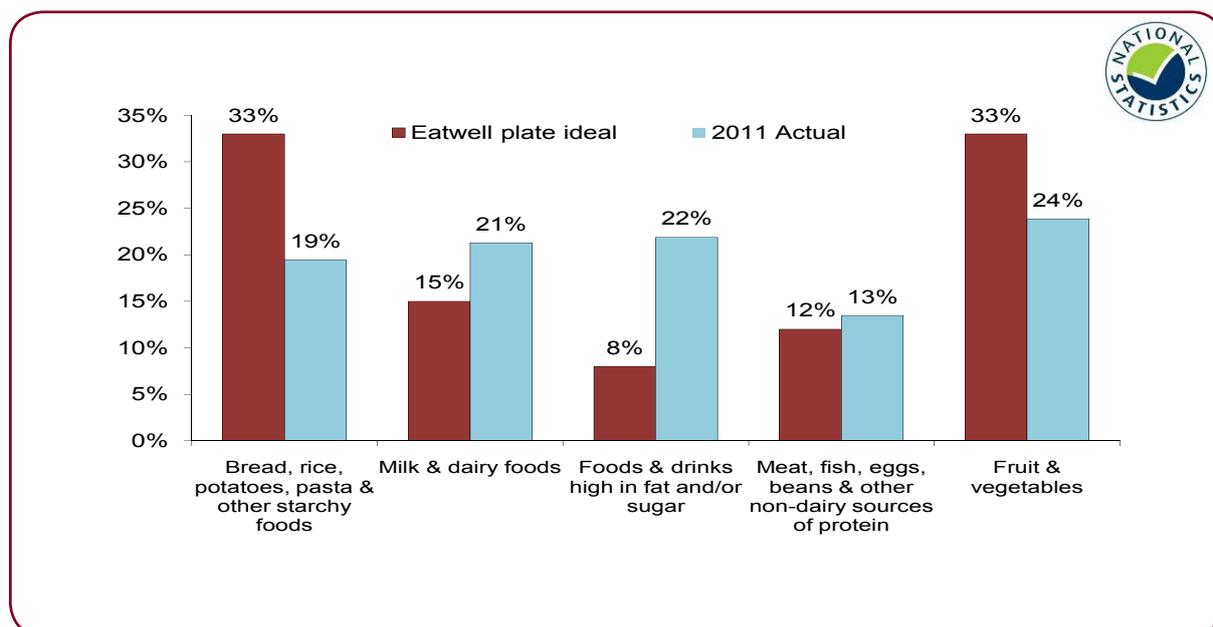


Source: Department of Health.

- The eatwell plate shows the types and proportions of foods that should be eaten to make a well-balanced, healthy diet. The eatwell plate balance does not need to be achieved at every meal; it is a guide to getting the balance right over time such as each day, or over the course of a week. The eatwell plate includes snacks as well as meals.
- We should try to eat:
 - Plenty of 'bread, rice, potatoes, pasta and other starchy foods' (33%). Choose wholegrain varieties when you can.
 - Some 'milk and dairy foods' (15%).
 - Just a small amount of 'foods and drinks high in fat and/or sugar' (8%).
 - Some 'meat, fish, eggs, beans and other non-dairy sources of protein' (12%).
 - Plenty of 'fruit and vegetables' (33%).

Dietary Health

6.2: Household purchases compared to the eatwell ideal



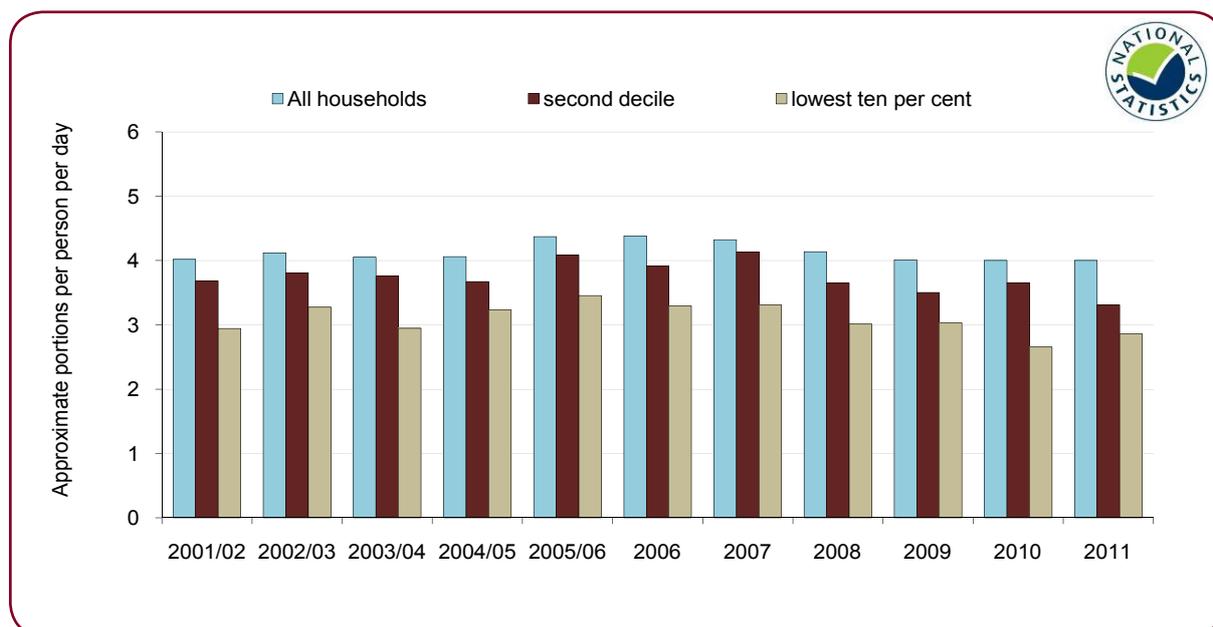
Source: Family Food in 2011, Defra, December 2012.

- Food and drink purchases for household supplies were allocated into the five eatwell plate groups¹. This shows that in 2011 household purchases included:
 - too much 'food and drink high in fat and/or sugar'; nearly three times the eatwell percentage,
 - more than the suggested proportion of 'milk and dairy foods'; 6 percentage points higher than the eatwell percentage,
 - around the right proportion of 'meat, fish, eggs, beans and other non-dairy sources of protein',
 - too little 'bread, rice, potatoes, pasta and other starchy foods'; less than 60% of the eatwell percentage,
 - too little 'fruit and vegetables'; around 28% less than the eatwell percentage.

¹ Alcohol, low calorie drinks, tea, coffee and mineral water were excluded from 'beverages' and 'soft drinks'. Slimming & sports foods & infant cereal foods were excluded from 'other cereals and other cereals products'. Only jelly, ice cream and soya foods were included from 'other food and drink'.

Dietary Health

6.3: UK trend in purchases of fruit and vegetables (excluding potatoes) to 2011



Source: *Family Food in 2011*, Defra, December 2012.

- UK household purchases of fruit and vegetables were 7.5% lower in 2011 than in 2007.
- Purchases of 5 A DAY³ across all households in 2011 remain unchanged for the third consecutive year at an average of 4.0 portions per person per day; the same level as in 2001-02.
- The lowest income households² purchase the least fruit and vegetables at an average of 2.9 portions per person of 5 A DAY in 2011, 14% less than in 2007.
- Households in the second decile reduced purchases of fruit and vegetables by the greatest amount (9.4%) in 2011 and by 20% between 2007 and 2011.
- Defra estimates that 22% of edible fruit and vegetables are wasted⁴.

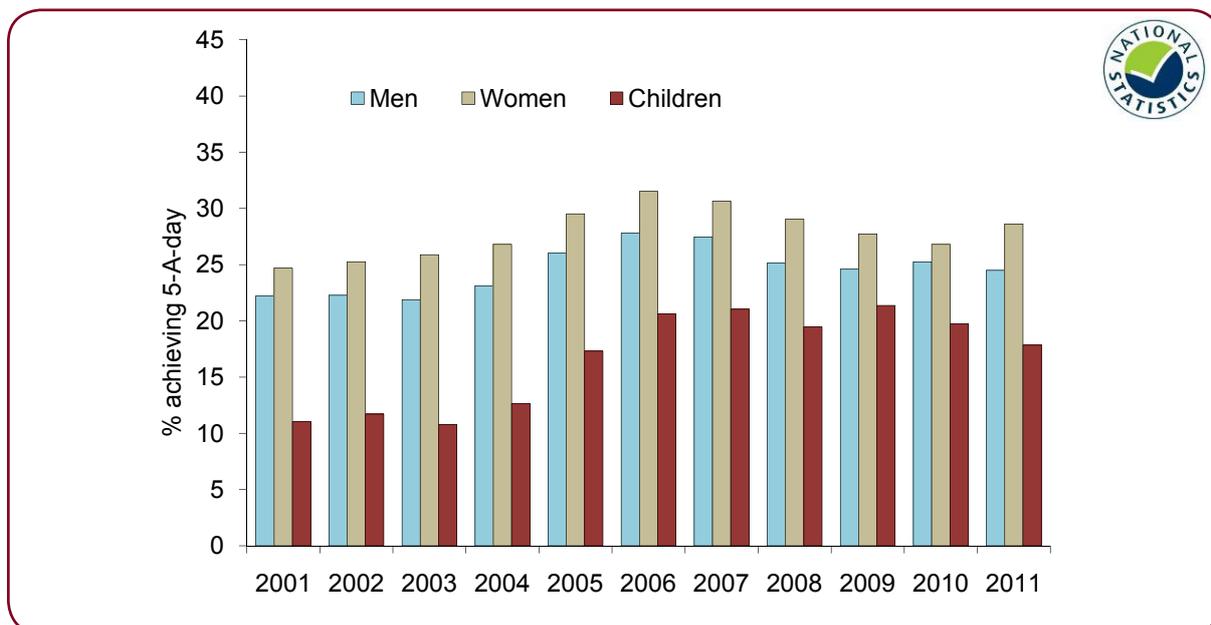
² Lowest income households are those with incomes in the lowest ten percent of all households. Data on low income households is available from 2001.

³ 5 A DAY calculated as all purchases of fresh and processed fruit and vegetables including fruit juice divided by the adult portion size of 80 grams.

⁴ Household Food and Drink Waste linked to Food and Drink Purchases, Defra July 2010.

Dietary Health

6.4: Trend in the consumption of fruit and vegetables in men, women and children in England to 2011



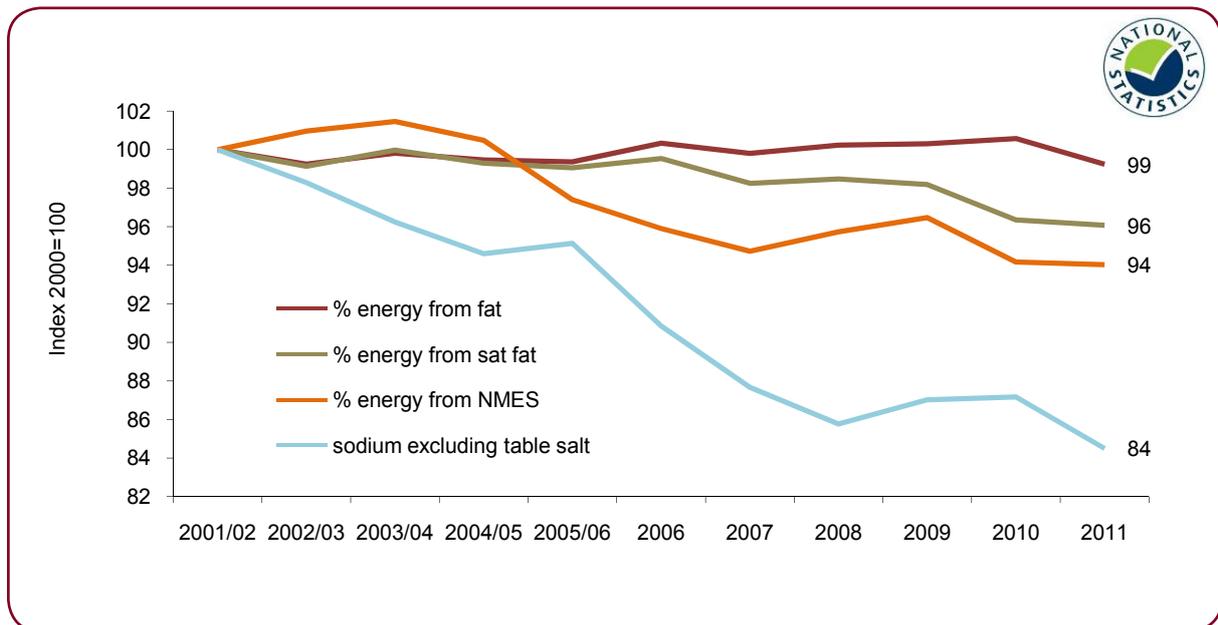
Source: Health Survey for England 2011, December 2012 (NHS Information Centre)⁵.

- In 2011 24% of men, 29% of women and 18% of children (aged 5 to 15 years) consumed the recommended 5 A DAY.
- In 2011 18% of children achieved 5 A DAY, having been over 20% in 2007 and only 11% in 2003.
- Achieving 5 A DAY peaked in 2006 with 32% of women and 28% of men achieving 5 A DAY.
- In 2011 6.6% of adults and 4.7% of children included no fruit or vegetables in their diet.
- Those aged 55 to 75 eat the most fruit and vegetables.
- In 2011 fruit and vegetable consumption increased by those aged 55 to 65 to an average of 3.9 portions per day for men and 4.3 portions per day for women.

⁵ Data from the Health Survey for England is weighted for non-response from 2003 onwards. Consumption is based on a 24 hour period.

Dietary Health

6.5: UK trends in intakes of fat, saturated fatty acids, non-milk extrinsic sugars⁶ and sodium to 2011



Source: *Family Food in 2011*, Defra, December 2012.

- Sodium intake continued on a downward trend to 2.74 g/person/day in 2011. This is 15% lower than in 2001-02, but above the SACN⁷ recommendation of 2.40g of sodium including table salt.
- The percentage of food energy from NMES at 13.9% and from saturated fatty acids at 14.2% were both lower in 2011 than in 2008 although hardly changed compared to 2010. Neither should exceed 11%.
- Total fat should contribute no more than 35%⁸ of food energy intake (excluding alcohol). Estimates based on food purchases in 2011 from the Family Food survey exceed this at 38.1%.

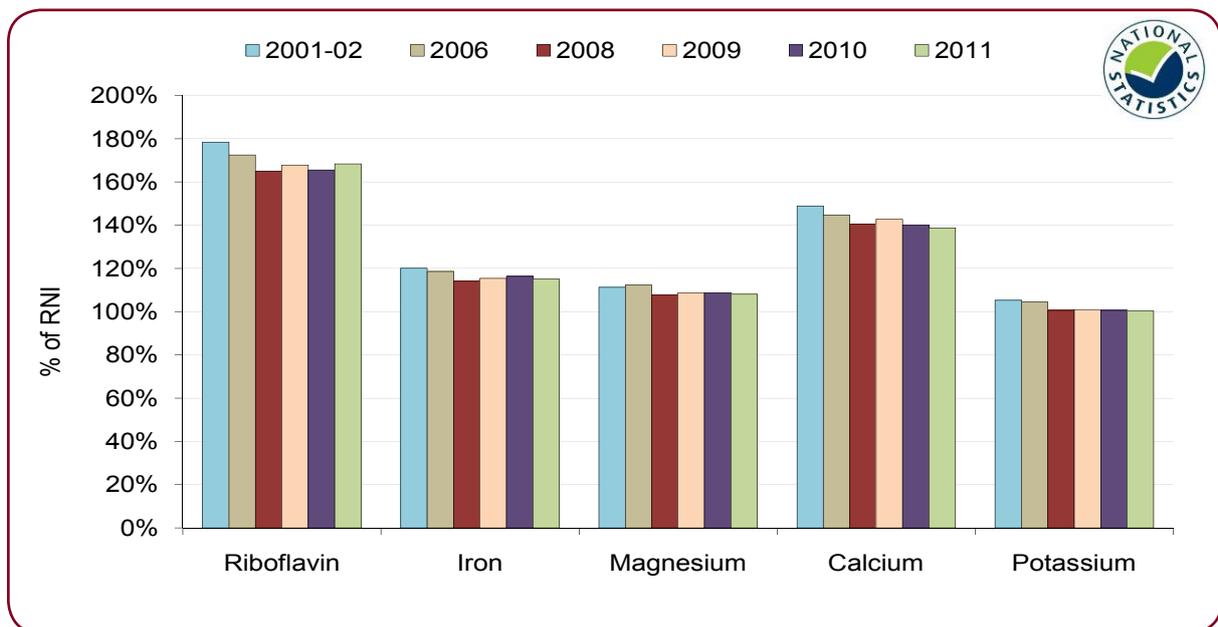
⁶ NMES – free sugar not bound in foods e.g. table sugar, honey and sugars in fruit juices, but excluding milk sugar.

⁷ For recommended intakes see Dietary Reference Values for Food Energy and Nutrients in the United Kingdom, 1991 (Department of Health).

⁸ Scientific Advisory Committee for Nutrition.

Dietary Health

6.6: UK average micronutrient intakes, 2001-02 to 2011⁹



Source: *Family Food in 2011*, Defra, December 2012.

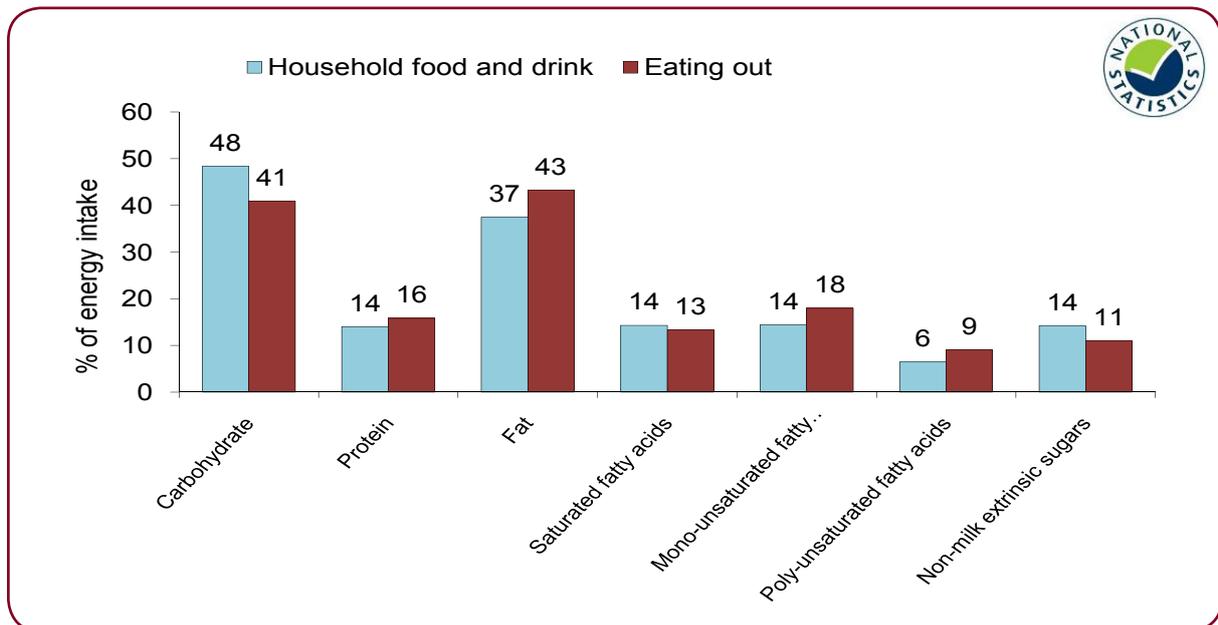
- Based on food and drink purchases average micronutrient intakes except sodium¹⁰ reached at least 100% of their reference nutrient intake value, where one is set, in 2011.
- Intake of vitamin B₁₂ has been consistently high since 2001-02 and remains at around four times the recommended level.
- Over the four years 2008 to 2011 intakes of vitamin D have increased while intakes of calcium, thiamin and vitamin B₆ have declined.

⁹ Reference Nutrient Intake: the intake which is considered sufficient to meet the requirements of 97.5% of the population.

¹⁰ See Chart 6.5 for the trend in intakes of Sodium.

Dietary Health

6.7: The UK household diet compared with the eating out diet in 2011¹¹



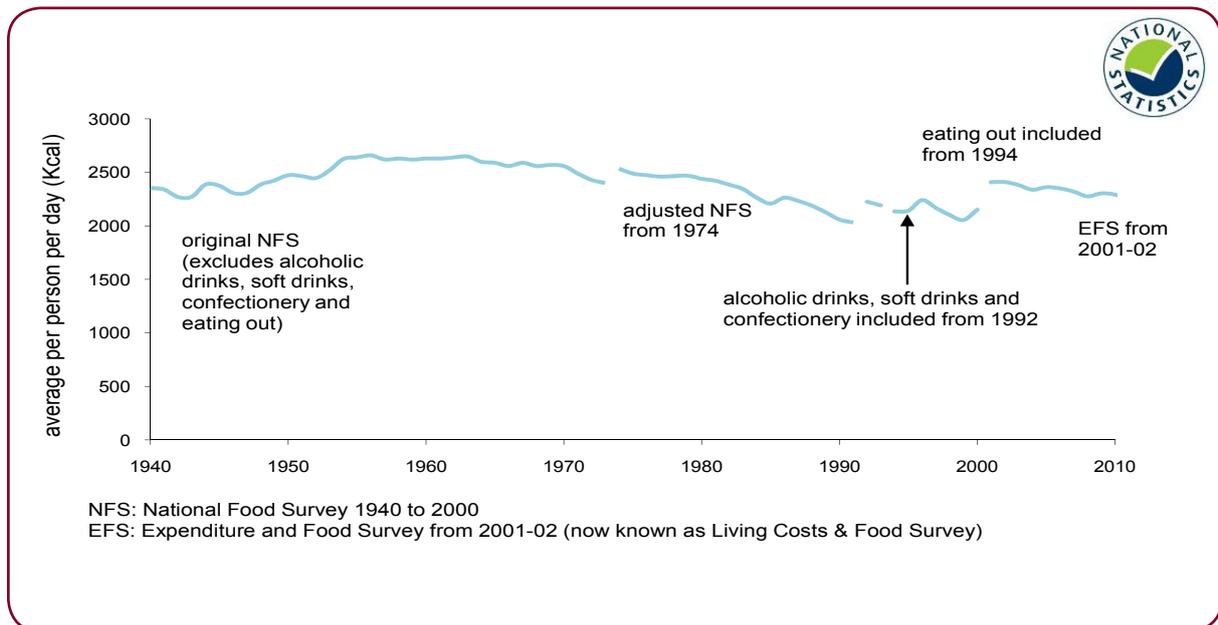
Source: *Family Food in 2011*, Defra, December 2012.

- Eating out food and drink are products that are consumed before entering the household.
- In 2011 eating out contributed about 10% of energy intake excluding energy from alcohol.
- The percentage of energy intake from eating out has fallen steadily from 12% to 10% over the last ten years.
- The eating out diet is higher in fat and protein but lower in carbohydrate and non-milk extrinsic sugars.
- Mono-unsaturated and poly-unsaturated fatty acids are higher in the eating out diet. They are found in olive oils, rapeseed oil, vegetable oils, fish oils, nuts, milk and some meat and meat products.
- Saturated fatty acids are slightly lower in the eating out diet. They are found in milk and dairy products, meat and meat products, biscuits, cakes and pastries.

¹¹ For recommended intakes see Dietary Reference Values (DRVs) for Food Energy and Nutrients in the United Kingdom, 1991 (Department of Health).

Dietary Health

6.8: Trends in average energy intake from food and drink to 2011

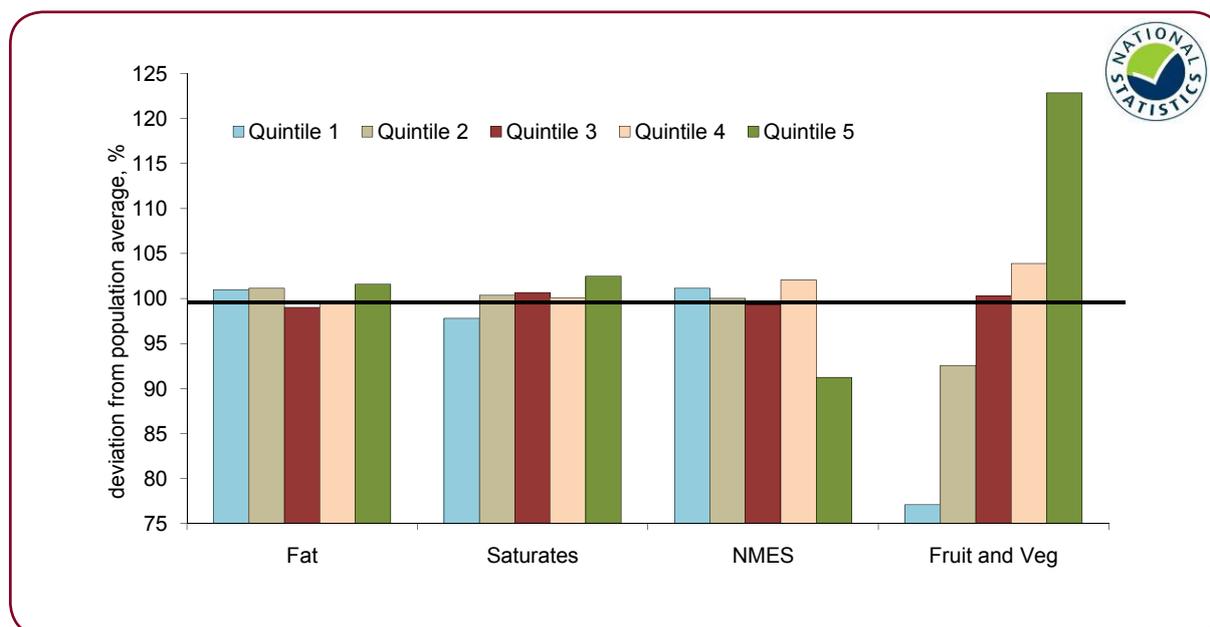


Source: *Family Food in 2011*, Defra, December 2012.

- Average energy intake based on all food and drink purchases fell 2.1% to 2,245 kcal per day in 2011.
- Average energy intake based on all food and drink purchases has fallen 6.8% between 2001-02 and 2011.
- Energy intake from food and drink recorded as eating out fell 8.4% in 2011 and has fallen by 24% since 2001-02.
- There is a long term downward trend in energy intake since 1964 (visible in all components of the chart). Combining year on year changes of estimates on like bases suggests that average energy intake per person is 30% lower in 2011 than in 1974.
- Despite decreasing energy intake, over-consumption of energy relative to our needs is a major factor in increasing levels of obesity, see Chart 6.10.
- Lowest income decile households purchased 4.5% less food for the household than the UK average in 2011, when measured by energy content.

Dietary Health

6.9: UK dietary indicators by equivalised income¹²



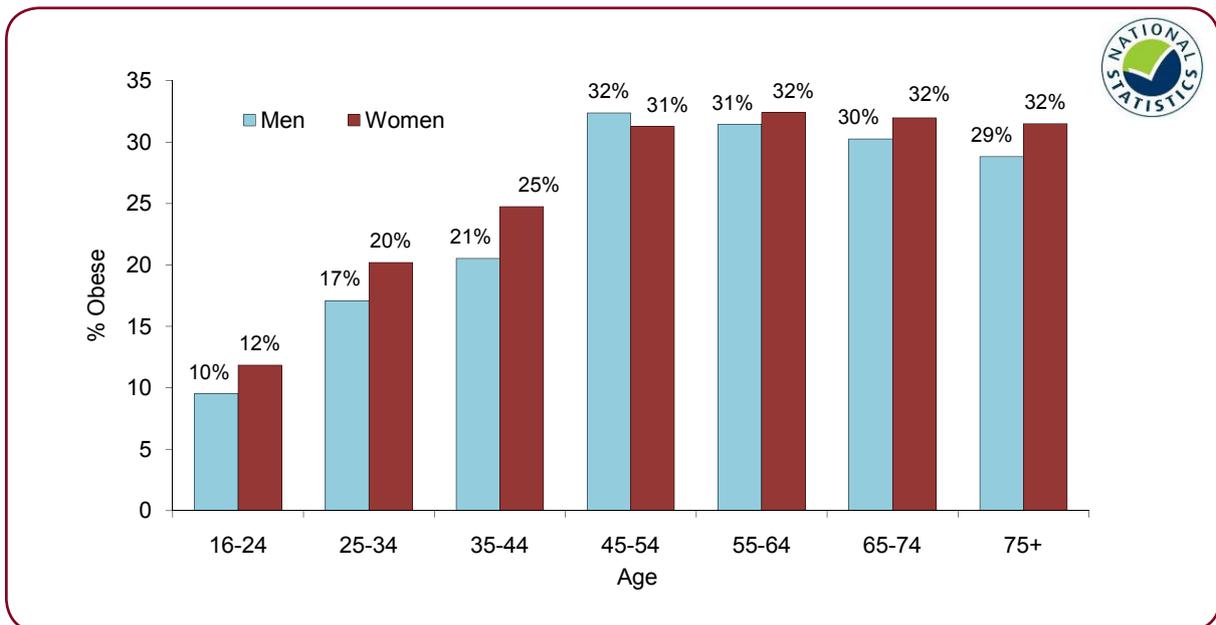
Source: Family Food in 2011, Defra, December 2012.

- The percentage of food energy derived from total fat does not vary much with income.
- The percentage of food energy derived from saturated fatty acids rises with income. Quintile 5 is 4.8% above quintile 1.
- The percentage of food energy obtained from NMES¹³ is 8.8% lower in the highest income quintile than the UK average.
- Fruit and vegetable purchases rise strongly with income, 60% more being purchased in the highest income quintile compared to the lowest in 2011.
- In 2011 the highest income quintile purchased an average of 4.9 portions of fruit and vegetables per day. The lowest income quintile purchased 3.1 portions per day. (See Chart 6.3 for trends).

¹² Household income adjusted for size and composition using the OECD scale.

¹³ NMES – free sugar not bound in foods e.g. table sugar, honey and sugars in fruit juices, but excluding milk sugar.

6.10: Levels of adult obesity in England¹⁴



Source: Health Survey for England 2011, December 2012 (NHS Information Centre).

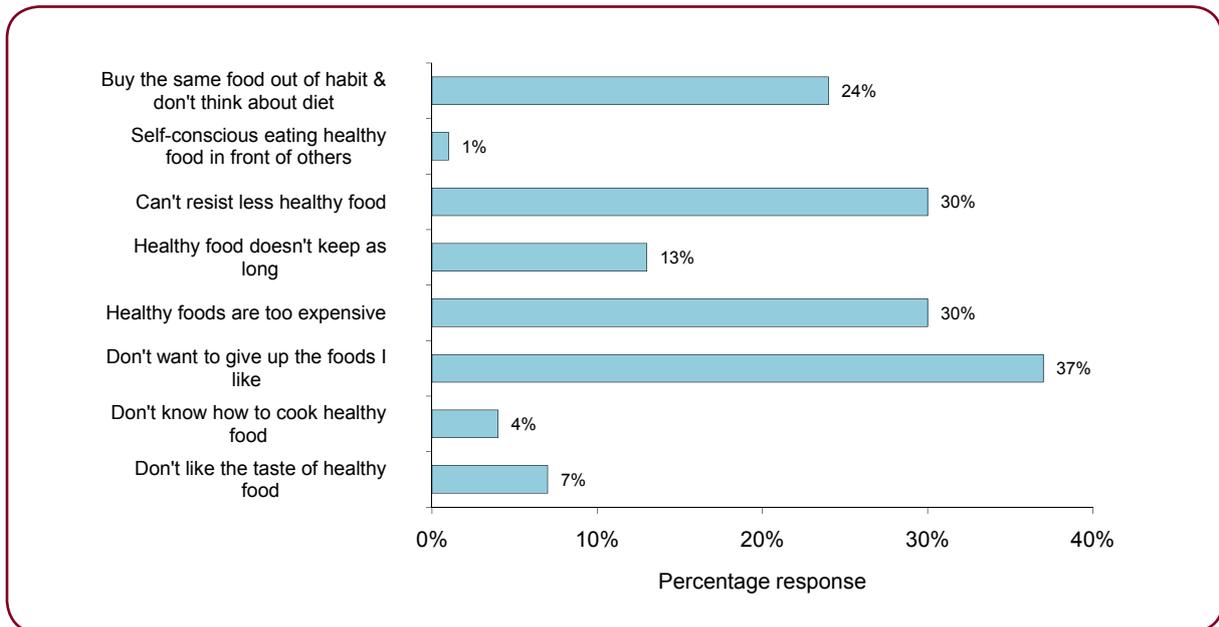
- Direct costs caused by obesity are now estimated to be £5.1 billion per year. Obesity is associated with cardiovascular risk and with cancer, disability during old age, decreased life expectancy and serious chronic conditions such as Type 2 diabetes, osteoarthritis and hypertension.
- In 2011 25% of adults were obese and a further 37% were overweight.
- The obesity rate across all men was 24% in 2011 down from 26% in 2010. The percentage of overweight (including obese) men was 65% in 2011, having fallen in all age bands with an overall fall of 4.1%.
- The obesity rate across all women was unchanged in 2011 at 26%. The obesity rate in women aged 65-74 fell 13% in 2011 but increased 15% in women aged 75+.
- The OECD¹⁵ reported in 2011 that the prevalence of overweight and obesity in adults exceeds 50% in 19 of 34 OECD countries.

¹⁴ Body Mass Index (BMI) is a measure of weight relative to height: underweight = less than 18.5kg/m², normal = 18.5 to less than 25kg/m², overweight = 25 to less than 30kg/m², obese = 30kg/m² or more (includes morbidly obese), morbidly obese = 40kg/m² or more.

¹⁵The Organisation for Economic Co-operation and Development: Health at a Glance 2011-2018.

Dietary Health

6.11: Barriers to a healthy balanced diet



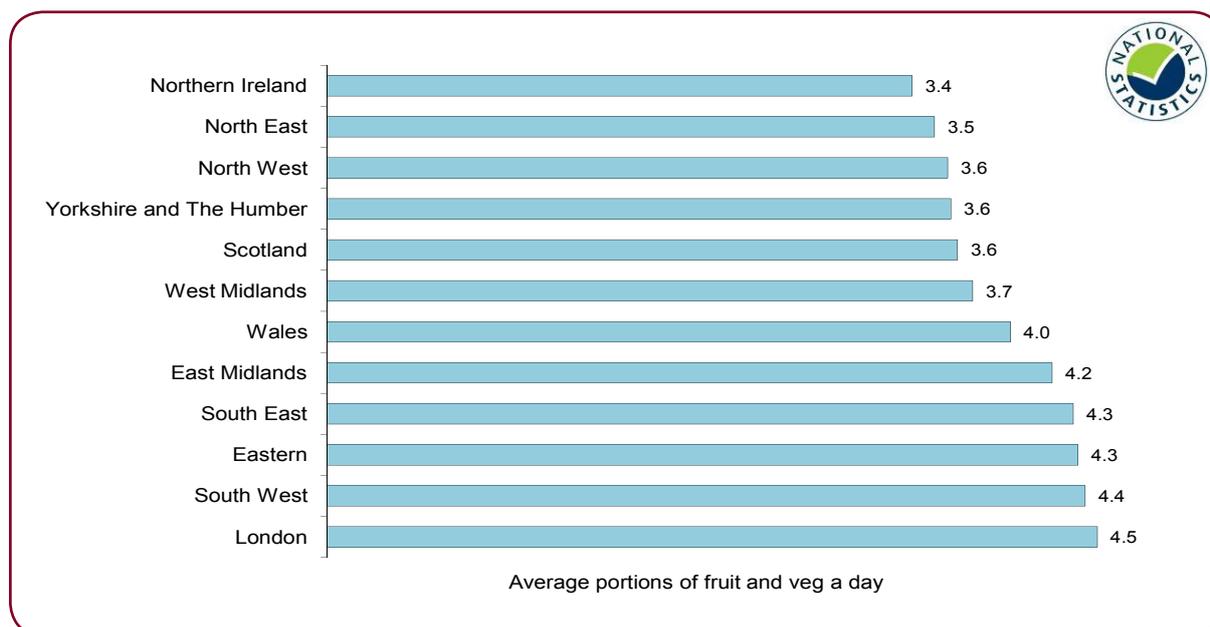
Source: *Attitudes and Behaviours around Sustainable Food Purchasing*, Defra 2011.

- The main barriers to a healthy balanced diet are 'don't want to give up the foods I like', 'healthy foods are too expensive' and 'can't resist less healthy food'.
- The data for this Defra study was collected from the Kantar Worldpanel¹⁶ in 2010.
- Of the panel 19% say it is not greatly important that their food forms part of a healthy balanced diet, although around half of these claimed to actively seek healthier foods.
- Of the 73% of the panel who say a healthy diet is important and that they actively seek healthy foods, the main drivers for trying to ensure a healthy diet are: still enjoying a treat from time to time (64%), knowing how to cook in healthy ways (50%) and not too expensive (46%).
- Of households on the panel who actively seek foods which support a healthy diet 53% are achieving 5 A DAY. Only 26% of those who do not rate a healthy diet as important achieve 5 A DAY.

¹⁶ Based on GB data supplied by Kantar Worldpanel from a sample of 3,000 households selected from their panel of 25,000 respondents.

Dietary Health

6.12: UK Regional household consumption of fruit and vegetables, 2009-2011¹⁷



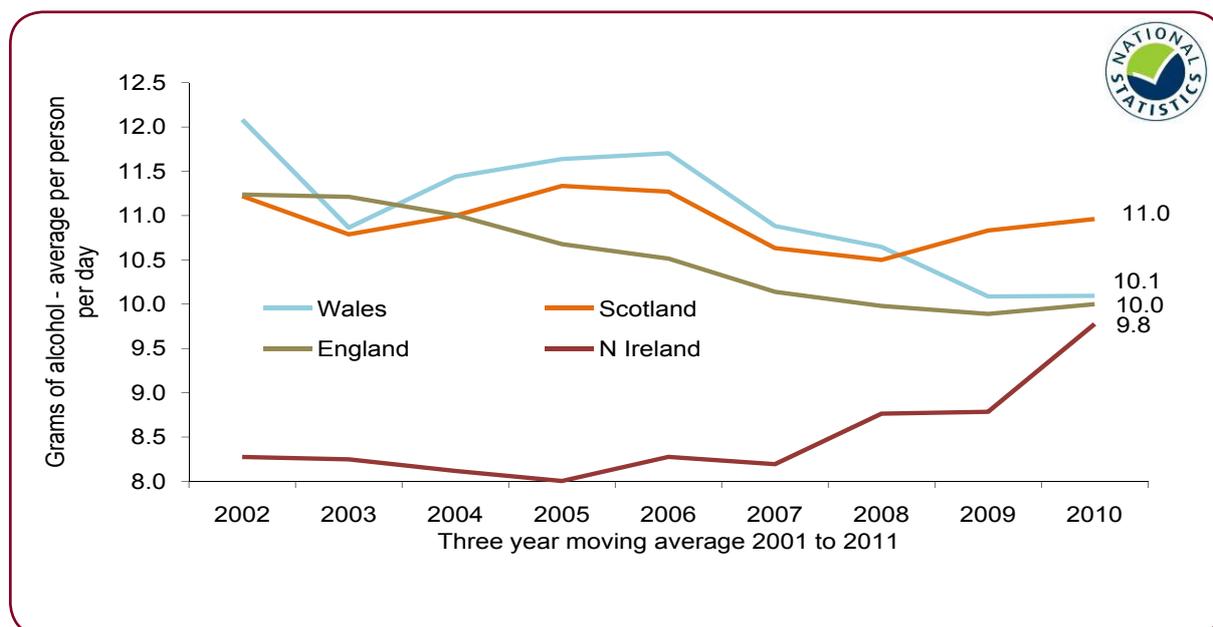
Source: *Family Food in 2011*, Defra, December 2012.

- Purchases of fruit and vegetables (excluding potatoes) were highest in London at an equivalent of 4.5 portions per person per day, with the South West just behind at 4.4 portions per day.
- Within England, household purchases of fruit were lowest in the North East, and household purchases of vegetables were lowest in the North West.
- Within the UK, Northern Ireland had the lowest purchases of both fruit and vegetables with a combined total of 3.4 portions per person per day.
- Much of the regional variation may be explained by differences in income. In general, purchases of fruit and vegetables increase with income see Chart 6.9.
- Waste and inedible content are not taken into account here. See Chart 6.3 for trends over time and Chart 5.2 for estimates of edible waste.

¹⁷ 5 A DAY calculated as all purchases of fresh and processed fruit and vegetables including fruit juice divided by the adult portion size of 80 grams.

Dietary Health

6.13: UK Trend¹⁸ in average alcohol intake (including eating out)



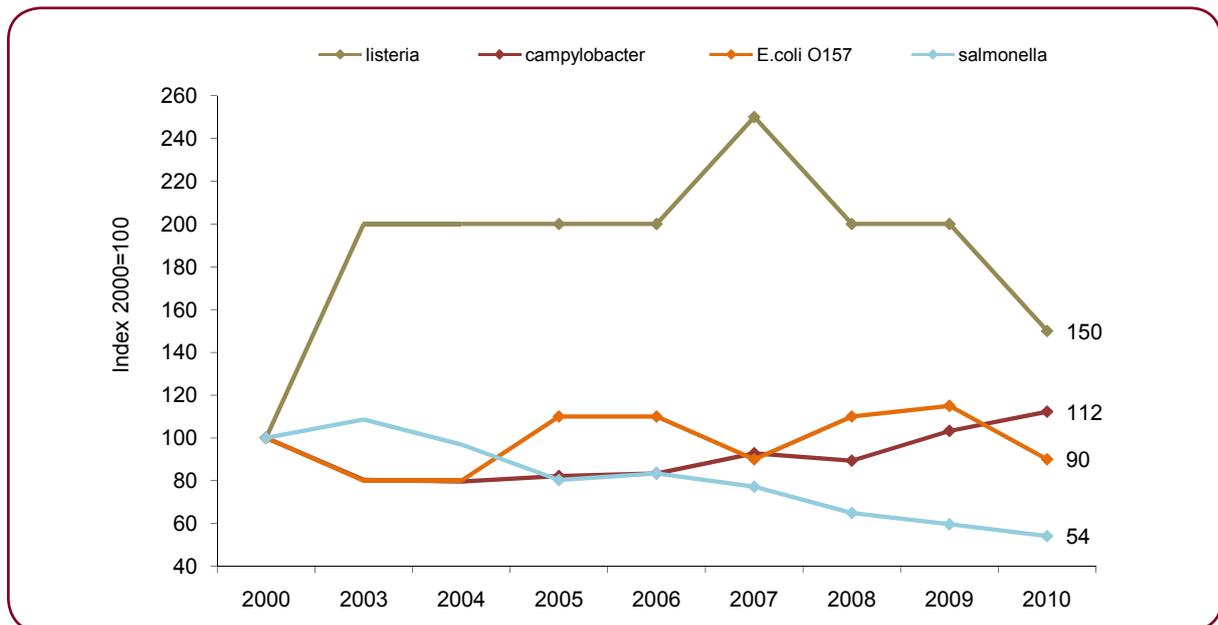
Source: *Family Food in 2011*, Defra, December 2012.

- Average alcohol intake per person was similar across the four UK countries between 2009 and 2011.
- Over the last 10 years alcohol intake has fallen by over 10% in England and Wales but risen by about 20% in Northern Ireland.
- Within England in 2011, average alcohol intake was highest in the North East, more than one and a half times higher than London which was the lowest.
- In Northern Ireland over 80% of alcohol intake is from household purchases. In Yorkshire and the Humber almost 30% of alcohol intake is from eating out.
- The Department of Health is responsible for Government health policy on alcohol misuse. Regularly drinking above the recommended daily limits significantly increases the risk of ill health.

¹⁸ Three year moving average, 2001 to 2011.

Chapter 7: Safety & Confidence

7.1: Trend in the estimated number of cases of foodborne illnesses in England and Wales¹



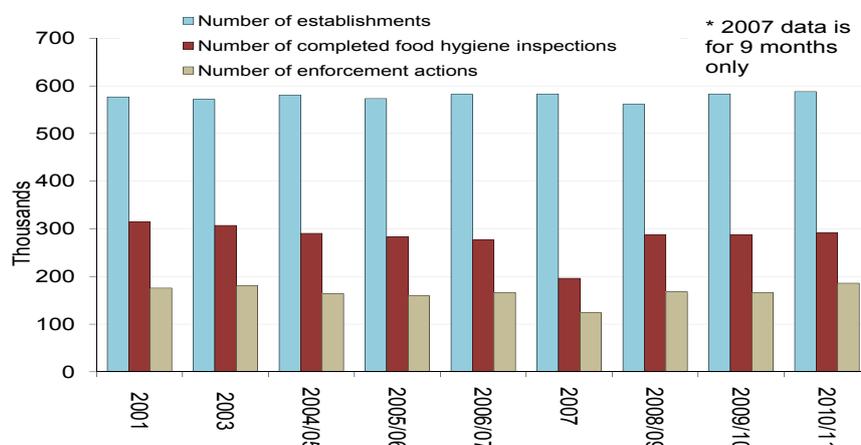
Source: Food Standards Agency / Health Protection Agency (HPA), 2012.

- Listeria leads to more deaths than salmonella and E.coli combined. In 2010, estimated cases of listeria fell to 300 from a peak in 2007 of 500, but remain 50% higher than in 2000. The reason for a drop in listeriosis cases is unclear.
- Estimated cases of campylobacter increased to 403,500 cases in 2010, now 12% higher than in 2000.
- The downward trend in salmonella continued in 2010 with an estimated 22,500 cases, 46% fewer than in 2000. Control of salmonella in eggs and poultry and improved hygiene throughout the food chain are thought to have contributed significantly to this reduction.
- Cases of E.coli decreased 22% between 2009 and 2010 to an estimated 900 cases, now 10% lower than in 2000.
- Foodborne illness is caused by contamination by microorganisms or the toxins they produce. Due to lack of precision, the underlying data is rounded to the nearest 100 cases.

¹ Estimates for 2001 and 2002 are not available. Estimates are of cases occurring in the community, as opposed to lab-confirmed reported cases. Salmonella, campylobacter, E. coli O157 and Listeria monocytogenes have been identified by the FSA as the four major pathogens.

Safety & Confidence

7.2: Inspections and enforcement actions of food businesses to 2010-11



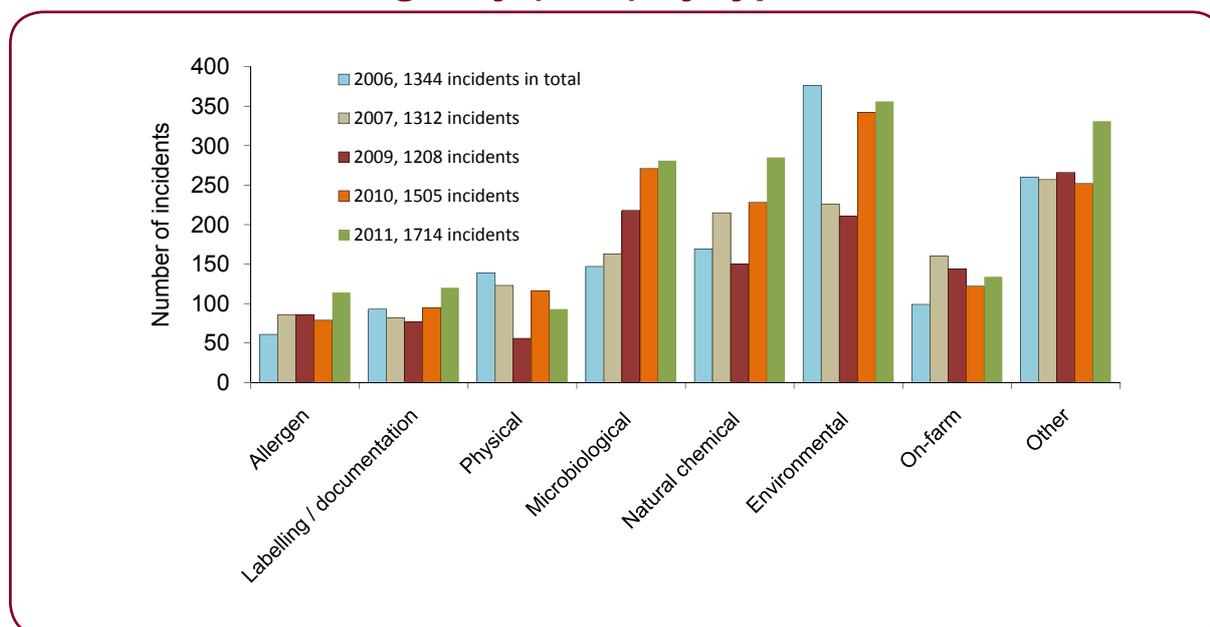
Source: Food Standards Agency Board paper on monitoring of food law enforcement activity, 2011.

- Some 186,050 formal enforcement actions were carried out in 2010-11, a rise of more than 10% on 2009-10.
- There were 587,890 food establishments under Local Authority (LA) control at 31 March 2011.
- There were 557,262 food hygiene and food standards interventions carried out by LAs in 2010-11.
- 5.9% (33,883) food establishments were not yet risk rated in 2010-11 – a reduction from 6.8% in 2009-10.
- The level of broad compliance and above² was 88.9%, an increase of 1.5% from the figures reported in 2009-10.
- There were 290,934 inspections for food hygiene and 94,516 inspections for food standards in 2010-11.

² Equivalent to the top three tiers of the National Food Hygiene Rating Scheme; a partnership scheme between FSA and LAs in England, Wales and N. Ireland, launched in 2010. Following inspection, hygiene standards are rated on a scale of 0 to 5 where 5 is the highest standard and 0 means urgent improvement is required. A parallel scheme exists in Scotland.

Safety & Confidence

7.3: Contamination incidents investigated in the UK by the Food Standards Agency (FSA) by type³



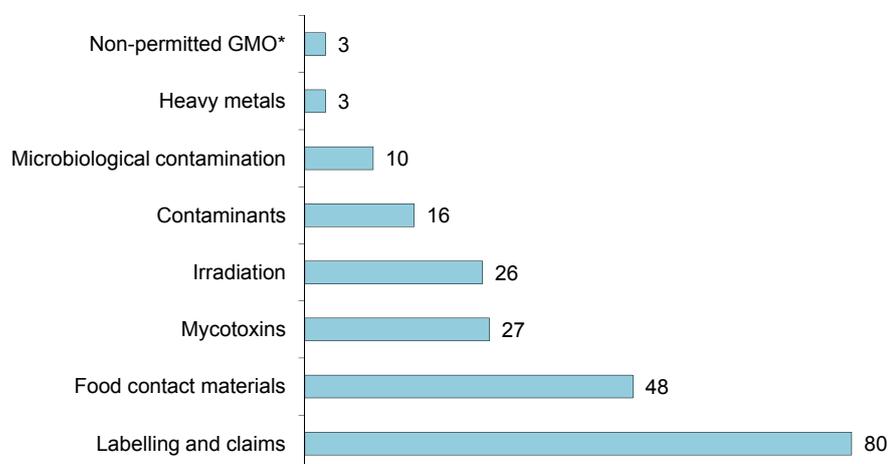
Source: Annual Report of Incidents, 2011 (FSA).

- In 2011, the FSA investigated 1,714 food and environmental incidents in the UK, 209 more than in 2010.
- Natural chemical contamination incidents rose 25% in 2011. Increased testing of peanuts at border inspection points may explain this increase.
- Allergen incidents rose 44% in 2011 to 114 compared to 79 recorded in 2010. Those relating to milk increased from 9 to 27 largely due to cross-contamination issues of plain chocolate with milk chocolate.
- Microbiological contamination shows a continual increase since 2006, having risen 91% to 281 incidents in 2011, now making 16% of all incidents.
- Environmental contamination; 356 incidents, predominantly related to fires.
- The FSA dealt with seven high level incidents in 2011, including the implications of the Fukushima nuclear emergency and outbreaks of E.coli in Germany and France.

³ 'Other' includes food contact materials, veterinary medicines, use of unauthorised ingredients, pesticides etc. Microbiological contamination is the main cause of food poisoning.

Safety & Confidence

7.4: Number of adverse samples found in imported food by type, 2010-11



Source: *Key Findings of the Imported Food Sampling & Surveillance Grants 2009/10 (FSA)*.
*Genetically Modified Organism

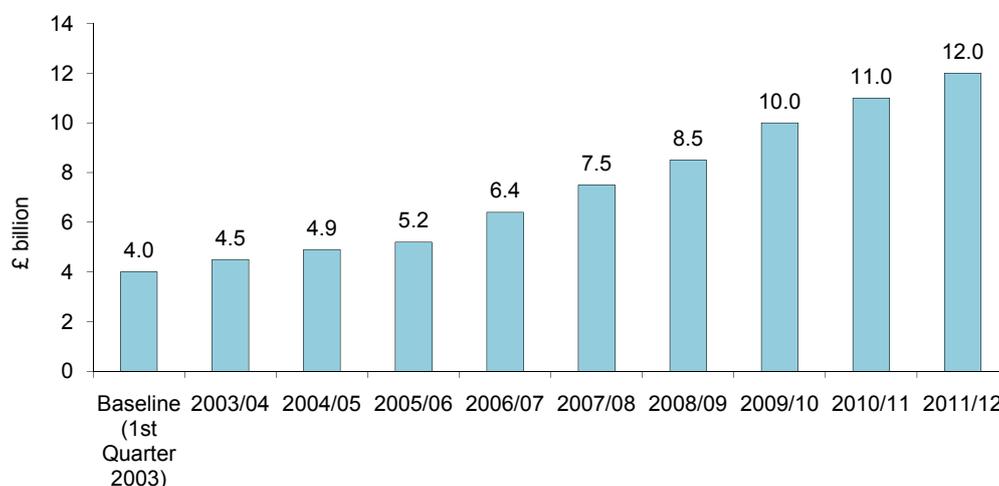
- Samples taken as part of this programme are targeted towards areas of known or suspected risk⁴. As a result, it is expected that rates of non-compliance would be higher than those taken as part of randomly-selected foods
- During the 2010-11 programme, a total of 4836 samples were submitted for testing.
- 'Labelling and claims' and 'food contact materials' produced the highest number of adverse samples found in imported foods in 2010-11.
- As seen in previous years, Asia was the source continent of the highest number of non-compliances (60%), with the majority of these samples originating from China, India and Thailand

⁴ Sampling was targeted at foods most likely to be affected by the specific areas of concern e.g. nut products were tested for mycotoxins

⁵ 'Labelling claims' excludes general checks carried out by public analysts but includes nutritional composition and claims such as 'organic' where a chemical analysis is required to test the claim. 'Food contact materials' covers migration of primary aromatic amines from kitchen utensils, phthalates from jar lids and formaldehyde from melamine ware.

Safety & Confidence

7.5: Trend in the value of food with the Red Tractor logo



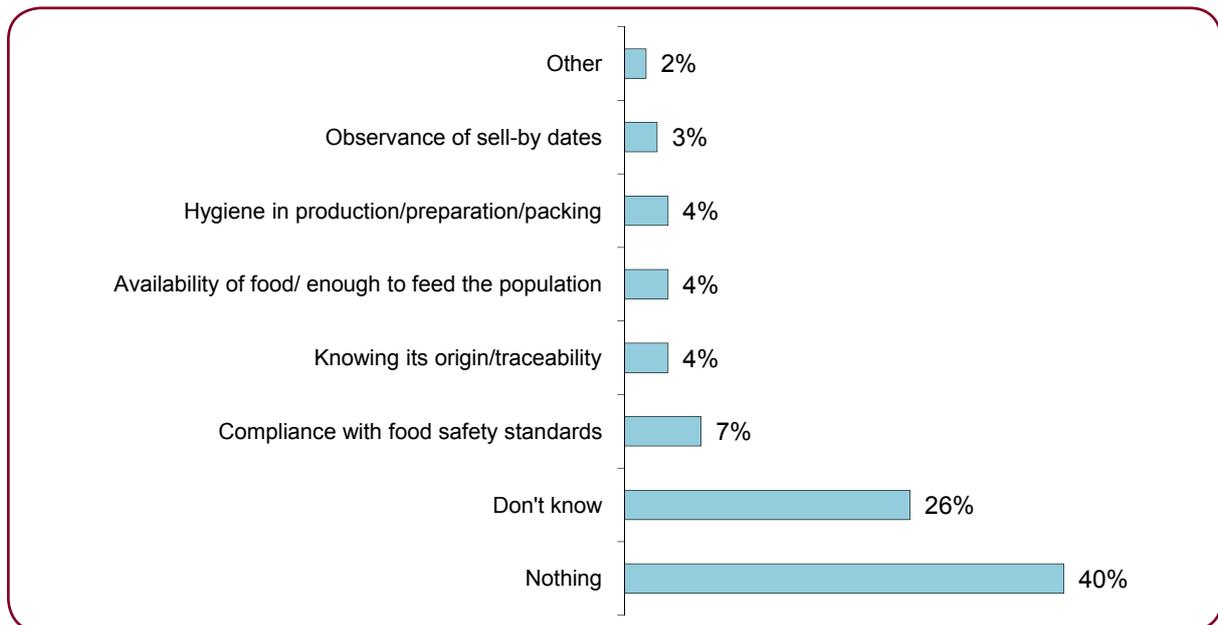
Source: Assured Food Standards (AFS).

- Over 78,000 farms in the UK are now part of the Red Tractor Assurance scheme, along with livestock markets, hauliers and food supply businesses. The scheme sets effective, internationally recognised production standards to various product sectors and through the supply chain covering food safety, animal welfare and environmental protection.
- Yearly increases have seen the value of sales of food with the Red Tractor logo rise to £12 billion in 2011-12. Total consumer expenditure on food and drink was £179 billion in 2011, see Chart 1.3.
- Freedom Food is the RSPCA's farm assurance and food labelling scheme. It is the only UK farm assurance scheme to focus solely on improving the welfare of farm animals reared for food and covers the whole of the animal's life from birth to slaughter.
- LEAF⁶ is a registered charity supporting farmers to produce foods whilst also caring for the environment. Defra has named the LEAF Marque as the standard to which all Government Departments and Agencies must adhere in their procurement of food.

⁶ Linking Environment And Farming. For more information see: www.leafuk.org/leaf/home.eb

Safety & Confidence

7.6: Spontaneous understanding of the term 'food security'



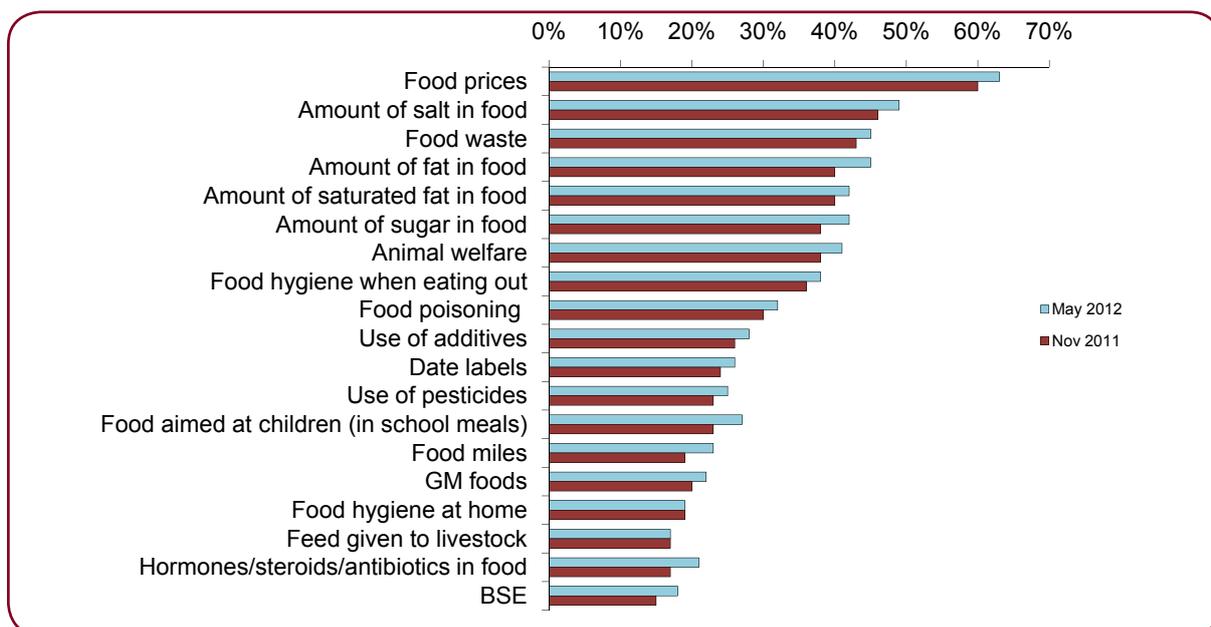
Source: *Consumer insight into food security, Defra 2012.*

- Defra's definition of food security is for all consumers to have access at all times to sufficient, safe and nutritious food for an active and healthy life at affordable prices.
- Understanding of the term 'food security' had little resonance with the general public.
- In a survey⁷:
 - two thirds of respondents could not provide an answer,
 - 4% of respondents linked the term to the availability of enough food to feed the population and
 - 75% of respondents had no recollection of the food security topic being discussed in the media.
- Concerns about UK and international food security stem from security of key inputs such as energy and water, potential impact of global climate change and the recent economic crisis and current recession.

⁷ A representative sample of UK adults numbering 1,014 between July 2009 and July 2010.

Safety & Confidence

7.7: Percentage of people concerned about certain food issues, 2011-2012

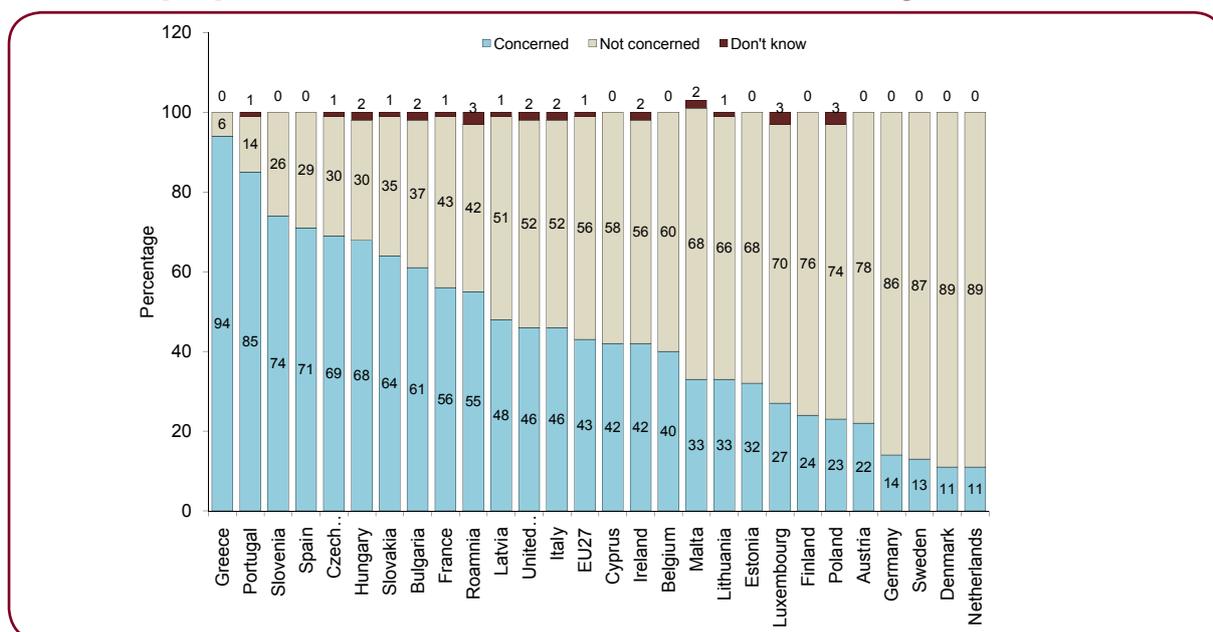


Source: Biannual Public Attitudes Tracker, (FSA).

- The main food issue of concern to people is food prices, with 63% concerned in May 2012, an increase from 60% in November 2011.
- The second highest food concern was the amount of salt in foods, with 49% of respondents concerned in May 2012.
- There was an increased level of concern in almost all food issues between November 2011 and May 2012. Large increases included:
 - amount of fat in food – up from 40% to 45%,
 - amount of sugar in food – up from 38% to 42%,
 - food aimed at children – up from 23% to 27% and
 - food miles – up from 19% to 23%.
- Food prices, salt, waste, fat, saturated fat, sugar and animal welfare are the food issues where more than 40% of people are concerned.

Safety & Confidence

7.8: Extent of concern across EU whether food production meets population need in 'their own country'



Source: *Europeans' attitudes towards food security, food quality and the countryside*; European Commission, 2012⁸.

- People in Greece and Portugal are very concerned about their national food security. 94% of those polled in Greece and 85% of those polled in Portugal expressed concern.
- People in Netherlands, Denmark, Sweden and Germany are less concerned about national food security.
- Across the EU (most Member States) 76% expressed concern that sufficient food is produced to meet the needs of the world's population.
- Across the EU (most Member States) 43% expressed some degree of concern that sufficient food is produced to meet the needs of their country.
- In 17 out of the 27 Member States the proportion of respondents who are not concerned about food production in their own country is greater than the proportion of those who are concerned.

⁸ A survey of 26,593 respondents across the 27 Member States of the European Union between 10th and 25th March 2012.

Food Statistics Pocketbook 2012: data sources

The title for each organisation provides a link to its homepage.

1. Food Standards Agency (FSA)

Biannual Public Attitudes Tracker Survey
www.food.gov.uk/science/socsci/surveys/publictrackingsurvey

Annual Report of Incidents <http://www.food.gov.uk/multimedia/pdfs/annual-report-of-incidents.pdf>

Imported Food Sampling and surveillance Grants
http://www.food.gov.uk/foodindustry/imports/enforce_authorities/samplingandsurveillance/

2. NHS Information Centre for health and social care

Health Survey for England, 2011
<http://www.ic.nhs.uk/Health Survey>

3. Department of Health

Dietary Reference Values for Food Energy and Nutrients in the UK, 1991
<http://www.dh.gov.uk/health/2011/10/dietary-energy/>

The Eatwell Plate
<http://www.nhs.uk/Livewell/healthy-eating>

Data sources

4. Department for Environment, Food and Rural Affairs (Defra)

Living Costs and Food Survey (LCFS)

<http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/>

June Survey of Agriculture and Horticulture

<http://www.defra.gov.uk/statistics/foodfarm/landuselivestock/farmstats/>

Agriculture in the United Kingdom

<http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-crosscutting-auk-auk2011-120709.pdf>

Food Transport Indicators

<http://www.defra.gov.uk/statistics/foodfarm/food/transport/>

Total Factor Productivity of the UK Food Chain

<http://www.defra.gov.uk/statistics/foodfarm/food/food-chain-productivity/>

Attitudes and behaviours around sustainable food purchasing

<http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-food-attitudes-report-110406-mainreport.pdf>

UK Food security assessment, January 2010

<http://archive.defra.gov.uk/foodfarm/food/pdf/food-assess100105.pdf>

Environmental Statistics

<http://www.defra.gov.uk/statistics/environment/>

British Survey of Fertiliser Practice

<http://www.defra.gov.uk/statistics/foodfarm/enviro/fertiliserpractice/>

Data sources

5. Department of Energy and Climate Change (DECC)

Digest of United Kingdom Energy Statistics

<http://www.decc.gov.uk/en/content/cms/statistics/publications/dukes/dukes.aspx>

Energy Consumption in the UK

<http://www.decc.gov.uk/en/content/cms/statistics/publications/ecuk/ecuk.aspx>

6. Office for National Statistics (ONS)

Annual Business Survey (ABS)

<http://www.ons.gov.uk/ons/publications>

Labour Market Trends

<http://www.ons.gov.uk/ons/rel/lms/labour-market-statistics/march-2013/statistical-bulletin.html>

Consumer Trends

<http://www.ons.gov.uk/ons/rel/consumer-trends/consumer-trends/q1-2012/stb-consumer-trends-q1-2012.html>

Consumer Price Indices

<http://www.ons.gov.uk/ons/rel/cpi/consumer-price-indices/january-2013/stb---consumer-price-indices---january-2013.html>

Annual Survey of Earnings and Hours (ASHE)

<http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2011-provisional-results--soc-2010-/stb---ashe-results-2011--soc-2010-.html>

Business Demography, Enterprise births, deaths and survivals

<http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Structure+of+Businesses>

Data sources

UK Environmental Accounts

<http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Agriculture+and+Environment>

Family Spending 2012

<http://www.ons.gov.uk/ons/rel/family-spending/family-spending/index.html>

7. The Co-operative Bank

Ethical Consumerism Report, 2012

<http://www.co-operative.coop/PageFiles/416561607/Ethical-Consumer-Markets-Report-2012.pdf>

8. Institute of Grocer Distribution (IGD)

ShopperVista 2012

<http://www.igd.com/index.asp?id=1&fid=2&sid=2&tid=94>

9. Assured Food Standards (AFS)

The Red Tractor Scheme

<http://assurance.redtractor.org.uk/rtassurance/global/home.eb>

10. Kantar Worldpanel

11. Horizons for Success

Foodservice database

<http://www.hrzns.com/services/database>

QuickBite Survey

<http://www.hrzns.com/services/quickbite>

Data sources

12. Waste Resource Action Programme (WRAP)

Press releases

http://www.wrap.org.uk/media_centre/press_releases/index.html

Federation House Commitment

<http://www.fhc2020.co.uk/fhc/cms/assets/FHC-2012-annual-report-.pdf>

13. Food and Agriculture Organisation of the United Nations (FAO)

FAOSTAT

<http://faostat.fao.org/default.aspx>

14. International Grains Council (IGC)

<http://www.igc.org.uk/en/downloads/gmrsummary/gmrsumme.pdf>

15. United Nations (UN)

United Conference on Trade & Development (UNCTAD)

<http://unctad.org/en/Pages/Home.aspx>

16. The Organisation for Economic Co-operation and Development (OECD)

Health at a Glance 2011-2018

<http://www.oecd.org/health/healthpoliciesanddata/healthataglance2011.htm>

17. The World Bank

Global Economic Prospects, June 2012

<http://documents.worldbank.org/curated/en/2012/06/16742449/global-economic-prospects-managing-growth-volatile-world-vol-2-2-main-report>

Data sources

Food Price Volatility, a growing concern: World Bank stands ready to respond, July 2012

<http://www.worldbank.org/en/news/2012/07/30/food-price-volatility-growing-concern-world-bank-stands-ready-respond>

18. United States Department of Agriculture (USDA)

Foreign Agricultural Service

<http://www.fas.usda.gov/psdonline/psdHome.aspx>.

19. Department for Work and Pensions (DWP)

Households Below Average Income (HBAI)

<http://research.dwp.gov.uk/asd/index.php?page=hbai>

20. Scientific Advisory Committee on Nutrition

21. European Commission (EC)

Eurostat

<http://epp.eurostat.ec.europa.eu/portal/page/portal/food/data/database>

Europeans' attitudes to food security, food quality and the countryside, 2012

http://ec.europa.eu/agriculture/survey/2012/389_en.pdf

22. Institute for Fiscal Studies

Living Standards, Poverty and Inequality in the UK, 2012

<http://www.ifs.org.uk/publications/6196>

23. HM Revenue and Customs (HMRC)

24. Health Protection Agency (HPA)

Chief Scientist Report

Data sources

<http://www.food.gov.uk/multimedia/pdfs/publication/csr1011.pdf>

25. Linking Environment and Farming (LEAF)