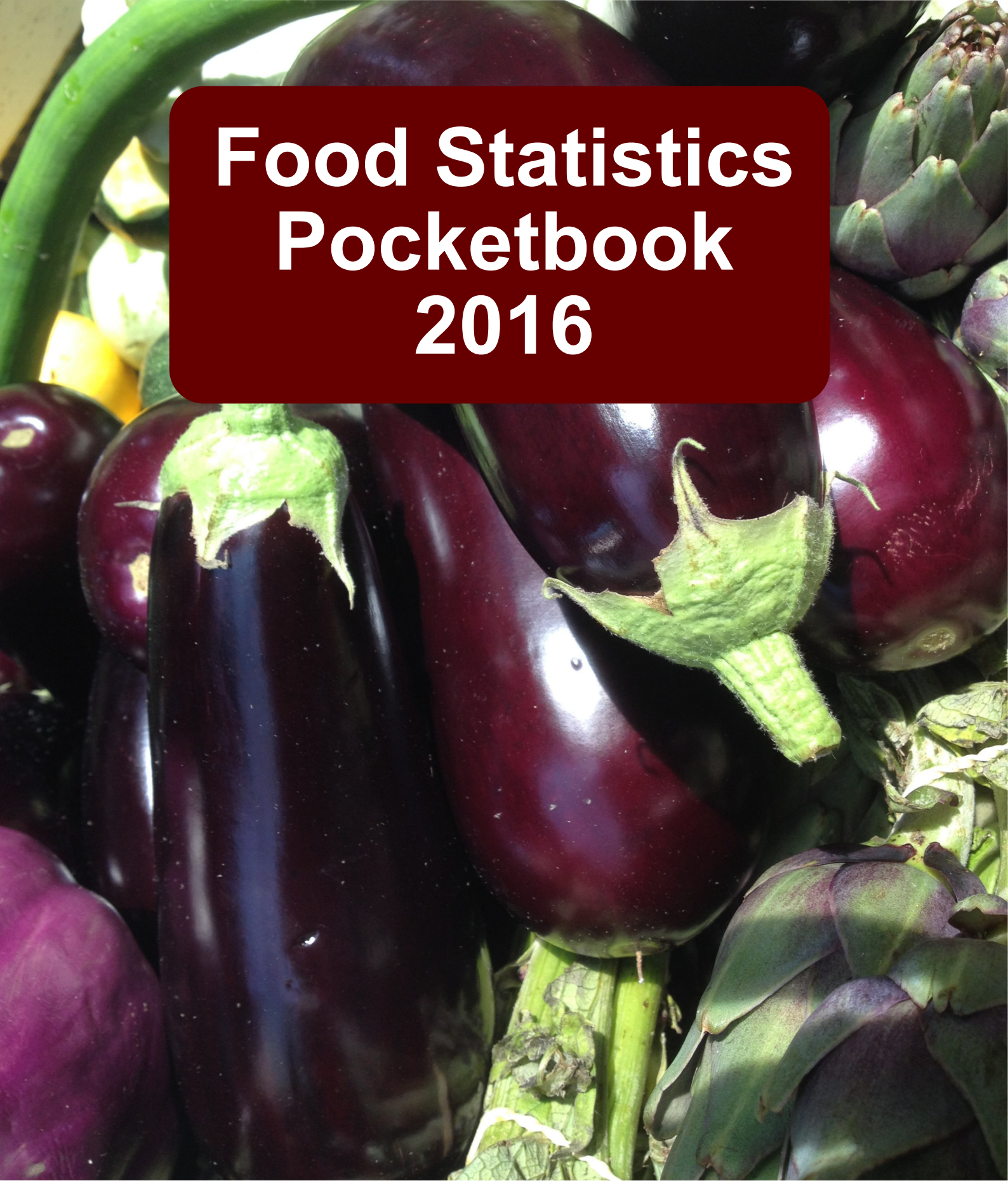
Food Statistics Pocketbook 2016



Department for Environment Food & Rural Affairs

NATIONAL STATISTICS

Food Statistics Pocketbook 2016

Department for Environment, Food and Rural Affairs

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Chapter 5: Waste

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Foreword

This publication provides a concise round-up of statistics on food covering the economic, social and environmental aspects of the food we eat. It contains statistics for different time periods, but always using latest available data at the time of release.

Data comes from surveys run by Defra and the Office for National Statistics and from a wide range of other sources including government departments, agencies and commercial organisations. Links to data sources are included on every page.

Associated datasets containing all charts and key data sources from this year's publication are also available.

Data are a mixture of National Statistics, Official Statistics and unofficial statistics. Unofficial statistics are used where there are gaps in the evidence base. National Statistics (Official Statistics that comply with the national statistics code of practice) are indicated using the logo pictured here.
Further information on National Statistics can be found on the UK Statistics Authority website.

Related Defra publications:

- Family Food
- Total Factor Productivity of the United Kingdom Food Chain
- Agriculture in the United Kingdom

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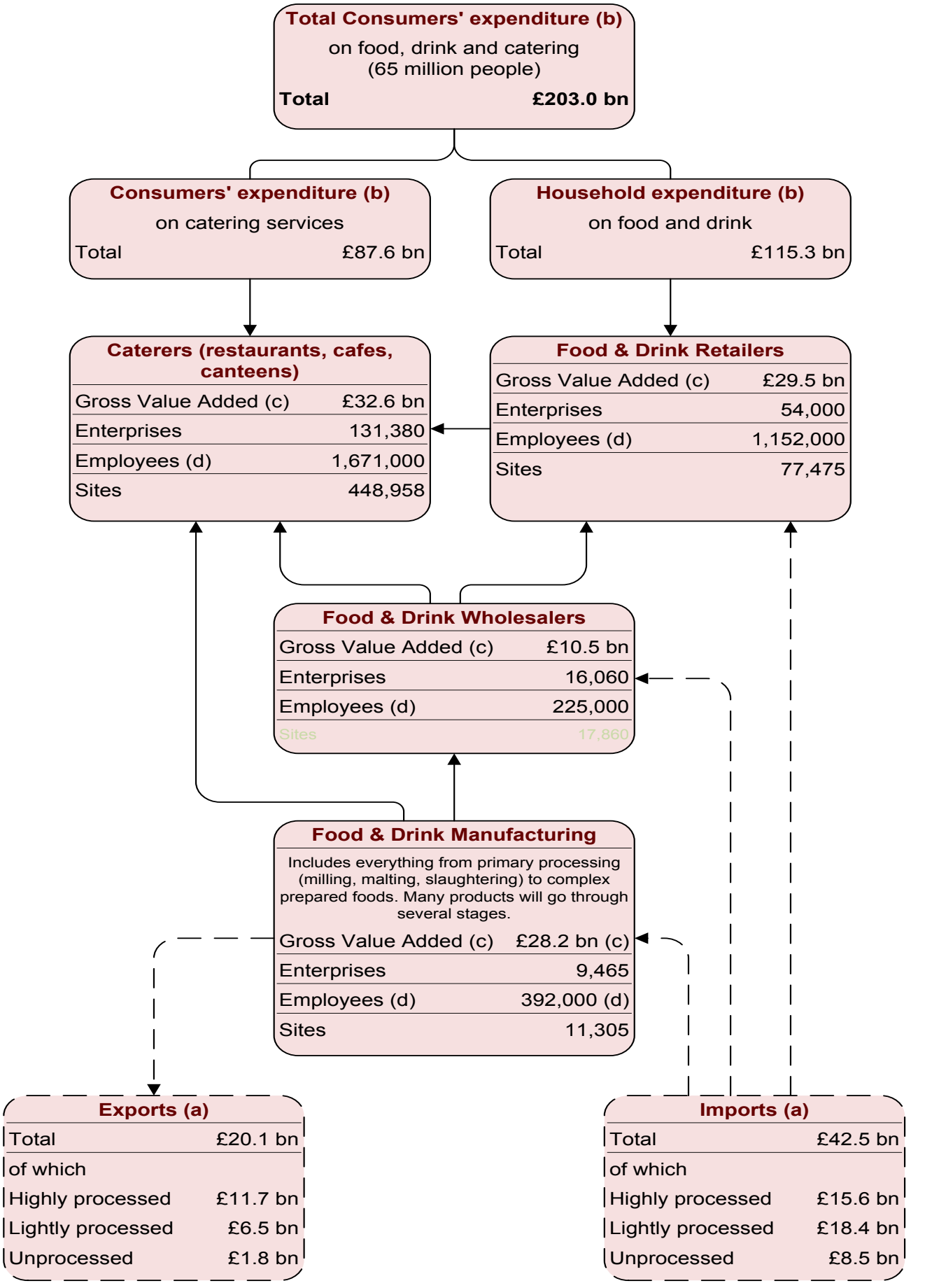
Summary

The Agri-Food Chain

£110bn	The agri-food sector contributed £110 billion, or 6.6% to national Gross Value Added in 2015
3.9m	People employed in the agri-food sector in Q4 2016, 13.2% of national employment.
£20.1bn	The value of food and drink exports in 2016. Beverages are the largest export category by far, at £6.8bn.
2.2%	Food prices fell by 2.2% in real terms in the 12 months to February 2017. Food prices started rising in 2017.
£203bn	Total consumer expenditure on food, drink and catering in 2016. On average, around 11% of all household spending is on food.
3.9	Purchases of 5 A DAY was 3.9 portions in 2015. Low income group households bought the least fruit and veg: 3.3 portions per person/ day.
£470	The average UK household spend on food that could have been eaten but is thrown away is around £470 a year.
1,514	Food, feed and environmental contamination incidents investigated by the FSA in 2015.
70m	Emissions from the food chain in tonnes of CO_2 equivalent. Farming accounted for 56m.

1 Food Chain


Total Consumers' expenditure (b)
on food, drink and catering
(65 million people)
Total £203.0 bn
Consumers' expenditure (b)
on catering services
Total £87.6 bn
Household expenditure (b)
on food and drink
Total £115.3 bn
Caterers (restaurants, cafes, canteens)
Gross Value Added (c) £32.6 bn
Enterprises 131,380
Employees (d) 1,671,000
Sites 448,958
Food & Drink Retailers
Gross Value Added (c) £29.5 bn
Enterprises 54,000
Employees (d) 1,152,000
Sites 77,475
Food & Drink Wholesalers
Gross Value Added (c) £10.5 bn
Enterprises 16,060
Employees (d) 225,000
Sites 17,860
Food & Drink Manufacturing
Includes everything from primary processing (milling, malting, slaughtering) to complex prepared foods. Many products will go through several stages.
Gross Value Added (c) £28.2 bn (c)
Enterprises 9,465
Employees (d) 392,000 (d)
Sites 11,305
Exports (a)
Total £20.1 bn
of which
Highly processed £11.7 bn
Lightly processed £6.5 bn
Unprocessed £1.8 bn
Imports (a)
Total £42.5 bn
of which
Highly processed £15.6 bn
Lightly processed £18.4 bn
Unprocessed £8.5 bn

1.1: Economic summary of the UK food chain beyond agriculture[1]

(a) Overseas trade data is for final full year 2016 from HM Revenue and Customs, and is subject to amendment. (Data may not equal total due to rounding.) Dashed lines indicate main trade flows.

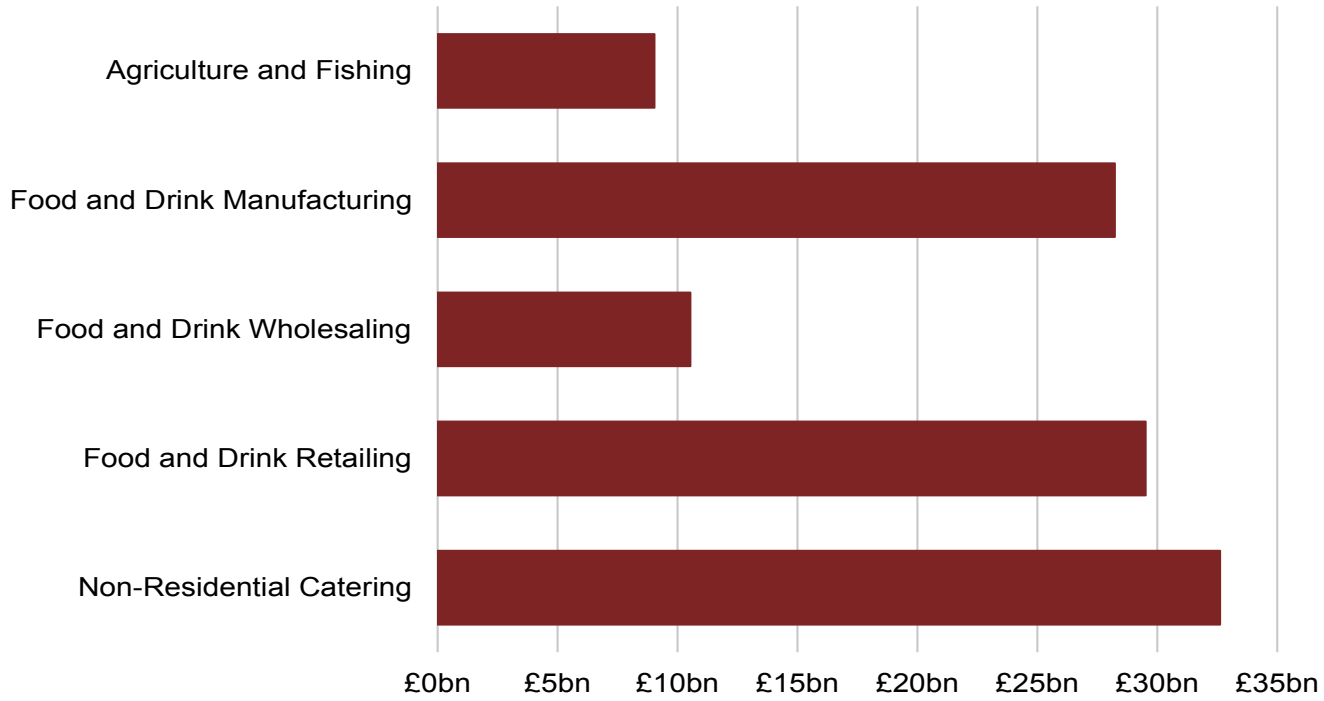
(b) Consumers' expenditure, properly known as household final consumption expenditure, is provisional from the Office for National Statistics for full year 2016 and is calculated at current prices. (Data may not equal total due to rounding.)

(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 data is taken from the ONS's Annual Business Survey and is final data for full year 2015. It is calculated at basic prices (market prices less taxes plus subsidies).

(d) Agricultural wholesaling includes an estimate of employment of wholesalers of agricultural machinery 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).

1.2: Gross Value Added of the UK agri-food sector, 2015



The agri-food sector contributed £109.9 billion or 6.6% to national Gross Value Added in 2015.

The GVA of the food sector (excluding agriculture) increased 4.1% in 2015, following a 2.0% increase in 2014. Wholesaling GVA decreased by 4.6%, catering rose by 12.4% and manufacturing by 6.4%. Retailing GVA decreased by 2.8%.

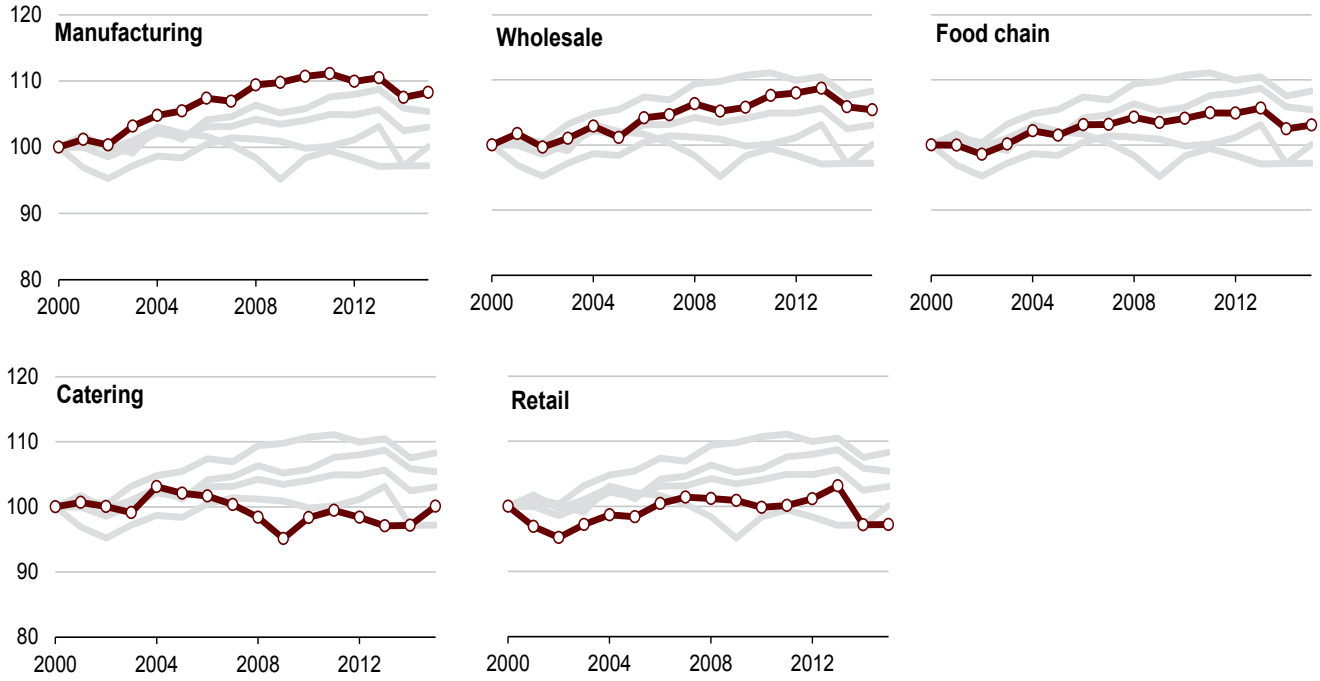
Longer term, the food sector (excluding agriculture) increased by 72.4% between 2000 and 2015 while the whole economy increased by 86.8%. The food sector has less scope for growth as there is a limit to consumer intake capacity and therefore it relies largely on quality improvements.

In 2015, there was a net increase of 630 in the number of registered enterprises in the food sector.[2]

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

[2] Business Demograhpy, Enterprise Births, Deaths and Survivals, ONS 2015

1.3: Trends in the total factor productivity[3] of the UK food sector[4]



Total factor productivity of the UK food chain beyond the farmgate has risen by 0.5% between 2014 and 2015. Productivity in the wider economy has increased in 2015 by 1.3%.

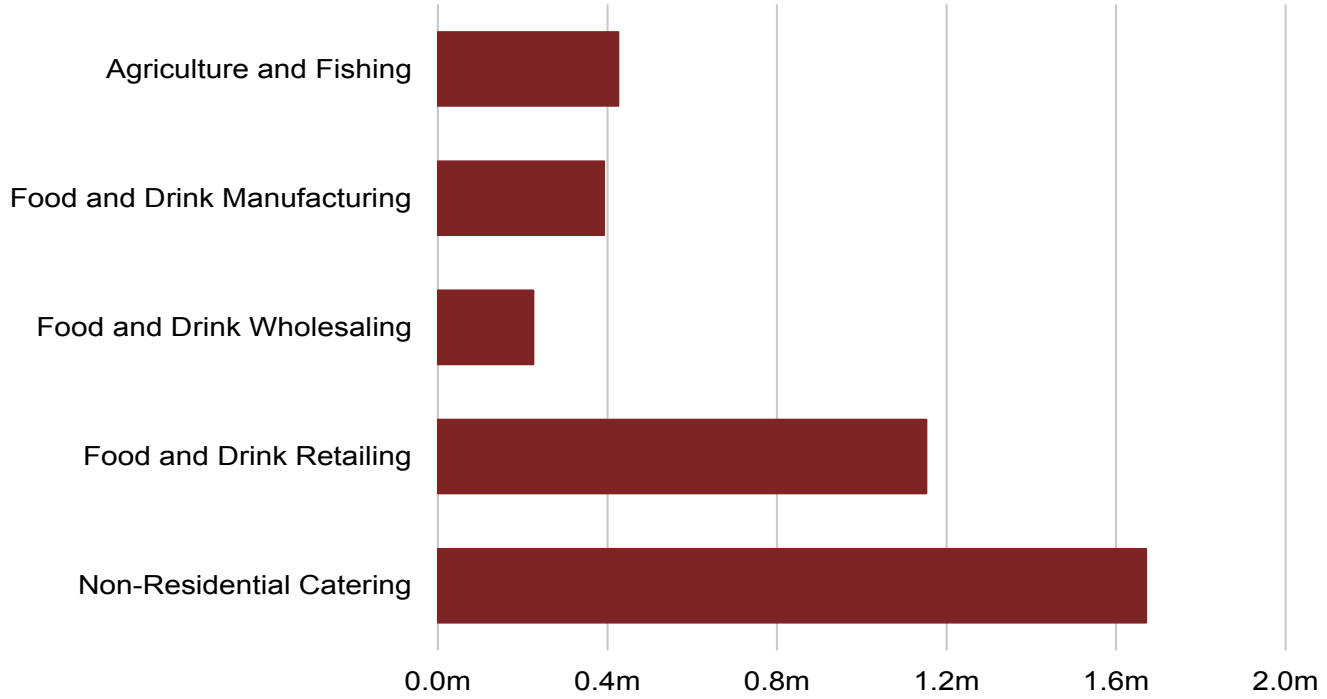
The TFP of the UK food sector is an indicator of the efficiency and competitiveness of the food industry within the UK. An increase in TFP indicates the industry is improving its competitiveness. Productivity in food retail saw an increase in 2015 of 2.9%, although over the last 10 years it has increased by 0.1%.

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.

Source: *Total Factor Productivity of the United Kingdom Food Chain 2000-2015, Defra, January 2017.*

[3] See Glossary for definition of Total Factor Productivity.
[4] Wholesaling includes tobacco (SIC 46.35).

1.4: Agri-food sector employees (GB)[5], Q1 2016



The food sector in GB employed 3.4 million people in Q4 2016 (3.9 million if agriculture and fishing are included along with self-employed farmers), a 0.2% increase on Q4 2015. It covered 11.8% of GB employment in Q4 2016 (13.2% if agriculture and fishing are included along with self-employed farmers).

Non-residential catering accounts for 49% of the post-farm gate food chain. Employment in this sector increased 1.6% on Q4 2015, equating to around 26,000 jobs. Retailing accounts for around one third of food chain jobs (excluding agriculture) and decreased year on year by 2.2%, or around 26,000 jobs.

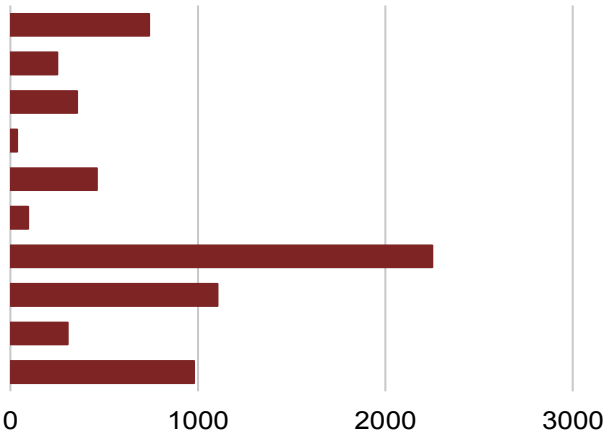
In Q4 2016, one half of food sector jobs were part time. Women accounted for 57% of employees in food retailing and 53% in non-residential catering.

Source: *Labour Market Statistics (ONS) and June Survey (Defra).*

[5] Food' includes non-alcoholic drinks. 'Drink' is alcoholic drinks

1.5: UK food and drink manufacturing by product type[6]

GVA of sector in 2015	Product	Number of SMEs
£3.6 bn	Meat and meat products	740
£0.6 bn	Fish and crustaceans	250
£2.2 bn	Fruit and vegetables	355
£0.2 bn	Oils and fats	35
£2.0 bn	Dairy products	460
£1.4 bn	Grain and starch products	95
£4.0 bn	Bakery	2250
£5.9 bn	Other food products	1105
£1.8 bn	Prepared animal feeds	305
£6.6 bn	Beverages	980



There were approximately 6600 micro, small and medium sized enterprises (SMEs) in the food and drink sector with turnover of around £19 billion and 115,000 employees in 2016. In the food sector (excluding beverages) SMEs accounted for 96% of businesses, 27% of employment and 19% of turnover. Around a third of the SMEs are manufacturers of bakery products.

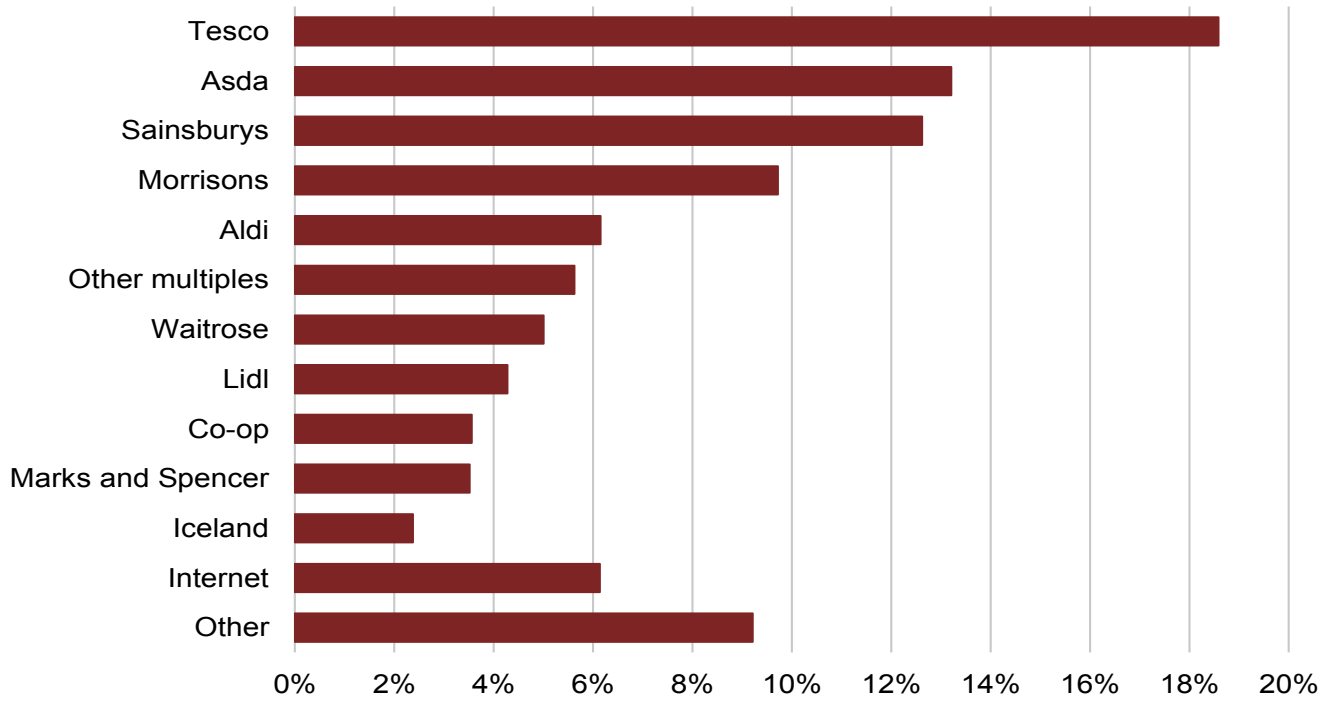
In terms of Gross Value Added (GVA) beverages (including soft drinks and mineral water) is the largest manufacturing group with a of £6.6 billion in 2015; contributing 23% to the total food and drink manufacturing GVA.

The 'other food products' category had a GVA of £5.9 billion. This includes items such as prepared meals, confectionery, condiments and seasonings.

Source: *Annual Business Survey (ONS), Business Population Estimates (BIS).*

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

1.6: UK grocery market shares 2015



The combined market share of food and non-alcoholic drinks of the largest four food and drink retailers was 54% in 2015, down from 61% in 2014. Tesco commanded the largest market share at 19%, a decrease of 2 percentage points on 2014. The three largest discounters (Aldi, Iceland and Lidl) had a combined market share of 13%, up from 12% in 2014. Internet food shopping, which includes the largest supermarkets, increased to 6.1% of sales of food and non-alcoholic drinks, up from 5.5% in 2014.

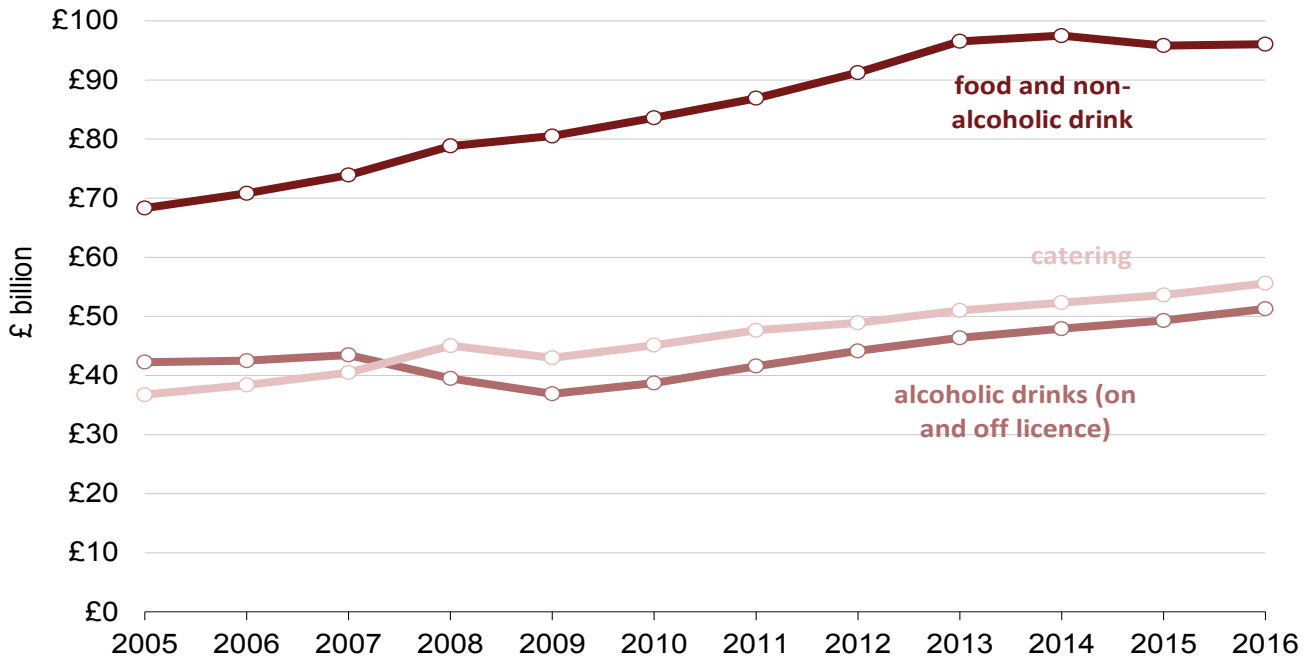
Data comes from the Living Costs and Food Survey which is fully representative of UK household food shopping.

Alternative market share estimates from the Kantar Worldpanel[7] are more up to date although not restricted to foods and not as representative.

Source: Living Costs and Food Survey (LCFS) 2015, (Defra/ONS)

[7] 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.

1.7: UK Consumer expenditure on food[8], drink and catering



Total consumer expenditure on food, drink and catering has continued to rise, by 2.1% in 2016 to £203 billion. Expenditure on food (including non-alcoholic drinks) increased by 0.3% to £96 billon. Spend on alcoholic drinks increased by 4.0% and catering increased 3.8%.

Spend on food shopping has increased 24% since 2008. In 2016 it accounted for 47% of spend in the sector. Spend on catering accounted for 27% of sector spend in 2016 and has increased by 24% since 2007.

Spend on all alcoholic drinks accounted for 25% of sector spend in 2016. It has increased by 30% since 2008. Spend reduced between 2007 and 2009, but has increased yearly thereafter.

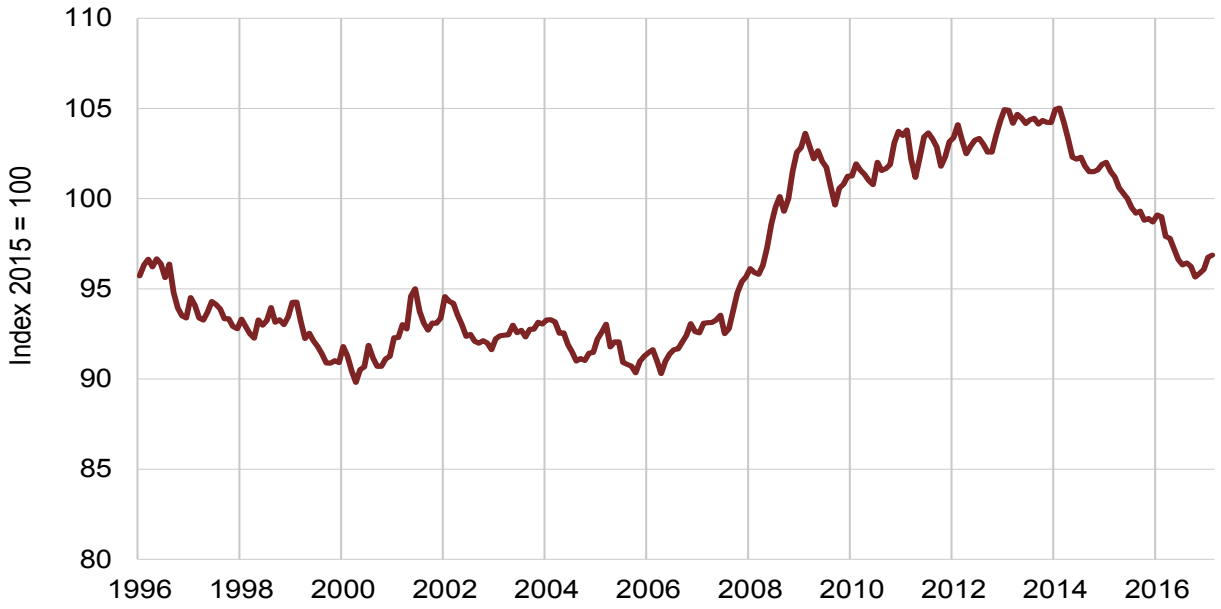
Source: *Consumer Trends, (ONS).*

Status:

[8] Food' includes non-alcoholic drinks. 'Drink' is alcoholic drinks

2 Prices and Expenditure

2.1: UK trend in food prices in real terms, January 1996 to February 2017[1]



Food prices rose 11.5% in real terms between 2007 and their peak in June 2012 as measured by the Consumer Price Index, following a long period in which they had fallen. Gradual price reductions since 2013 have reduced that real terms increase to 4.1% compared to 2007. In the past 12 months food price inflation has fallen in real terms by 2.2%, although in 2017 food prices started to rise after a long period of negative inflation.

Successive spikes in the price of agricultural commodities since 2007 have led to higher retail food prices. They have not returned to the 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.

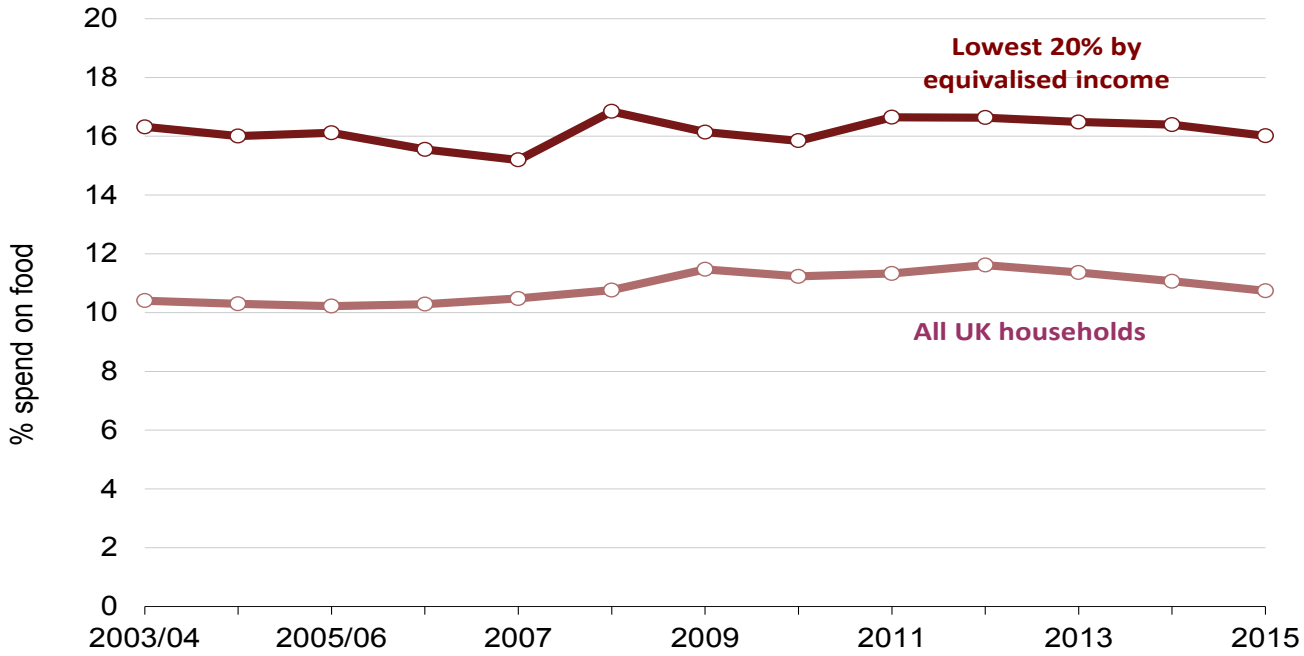
Those on lower incomes tend to buy different food items to those on average or high incomes but food prices for these different shopping baskets have risen at about the same rate.

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.

Source: *Consumer Price Indices, (ONS).*

[1] Excludes alcoholic drinks and catering.

2.2: Trend in share of spend going on food and drink[2] in low income and all UK households, 2003-04 to 2015



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 10.7% of spend went on food in 2015, 0.3 percentage points above the 2007 level.

For households in the lowest 20% by equivalised income[3] 16% of spend went on household food, 0.8 percentage points above 2007.

Source: *Living Costs and Food Survey (Defra/ONS), Family Spending table 3.2e (ONS).*

[2] Excluding alcoholic drinks.
[3] See Glossary for definition of equivalised income.

2.3: Income decline after housing costs, low income[4] decile (UK)

Median income after housing costs fell 4% between 2003-04 and 2014-15 for low income decile households. Over the same time period, food prices (in real terms) increased 11%. In 2008-09 the median income for low income decile households reached its lowest level, 17% below that of 2002-03. Small decreases between 2011 and 2014 were partially reversed 2014-15 when income increased by 2.7%, coinciding with a 2.0% fall in food prices.

In 2014-15, all income groups with the exception of the lowest, saw increases in median income of between 2.4% and 4.7% (deciles 2 and 6). All but the lowest income decile group are above the 2003-04 level.

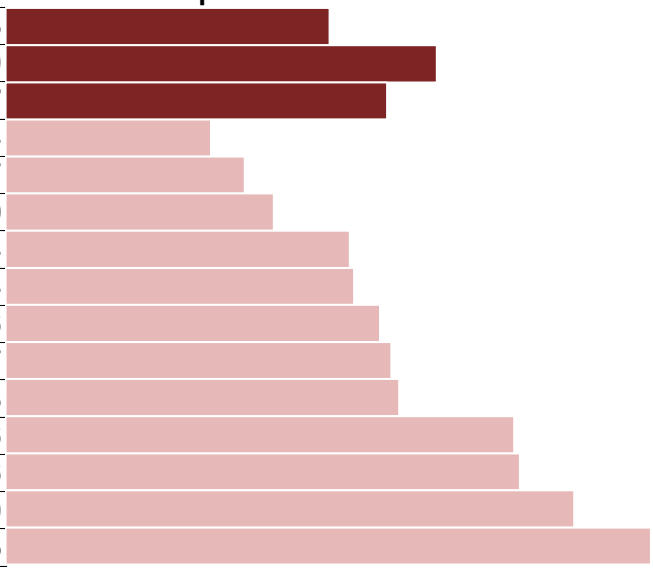
The most commonly used threshold of low income in the UK is having an income which is less than 60% of the median. In 2013-14 the percentage of individuals in relative low income (before housing costs) was 16%[5], equating to around 10.1 million individuals.

Source: *Living Standards, Poverty and Inequality in the UK, 2015; Institute for Fiscal Studies.*

[4] See Glossary for definition of Low income.
[5] Households Below Average Income, DWP June 2016.

2.4: UK retail price changes by food group, 2007 to 2016

	% increase in price June 2007 to June 2016
All items CPI	**23**
Catering	**30**
Food and non-alcoholic beverages	**27**
Vegetables, potatoes	14
Alcoholic drinks	17
Milk, cheese, eggs	19
Processed food	24
Soft drinks	24
Meat	26
Bread, flour, cereals	27
Fish	28
Coffee, tea, cocoa	36
Fruit	36
Sugar, Jam, confectionery	40
Butter, margarine,cooking oil	45



All foods groups have risen in price since 2007 (the start of the recession), with rises ranging from 14% to 45%. Coffee, tea and cocoa, fruit, sugar, jam and confectionery, and butter, margarines and oil prices have all risen by 30% or more since June 2007. Food prices (including non-alcoholic drinks) rose 4.1% in real terms between 2007 and 2016.

Rising prices seen up to 2014 have begun to fall over the last couple of years. In the year to June 2016 prices fell in most food groups with the exception butter, margarine and cooking oil, which increased by 2.0%. Fruit, coffee and tea, and processed foods showed marginal increases of 0.3%. Catering increased by 2.2%.

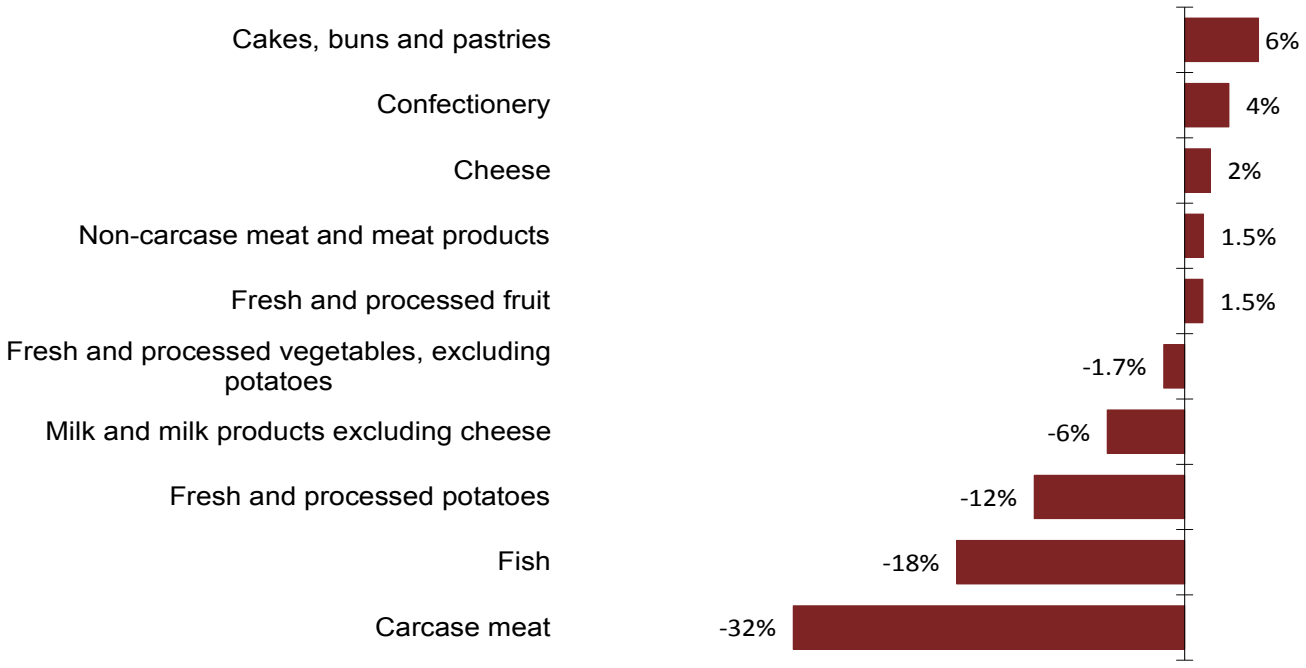
Vegetables, potatoes and dairy products saw the greatest falls, both down by over 6.0% in the year to June 2016. Prices of meat and fish both fell by over 4.0%, whilst bread, flour and cereals, butter, margarine and oils, sugar, jam and confectionery, and soft drinks all fell by between 1.0% and 2.0%.

Food price rises have a strong effect on food shopping for low income households. Since 2007, households in income decile 1 (lowest income group) bought less lamb, beef, butter, bread, sugar and preserves, but bought more pork, eggs and sweets and chocolates[6].

Source: *Consumer Price Indices, (ONS).*

[6] Family Food 2014, Defra, December 2015.

2.5: Percentage change in food purchases 2007-2015, in low income households (UK)



In 2015 compared to 2007, the lowest income households (equivalised income[7] decile 1) purchased 32% less carcase meat, 18% less fish, and 12% less fresh and processed potatoes .

Purchases of cakes, buns and pastries increased 6% between 2007 and 2015 and purchases of confectionery increased 6%.

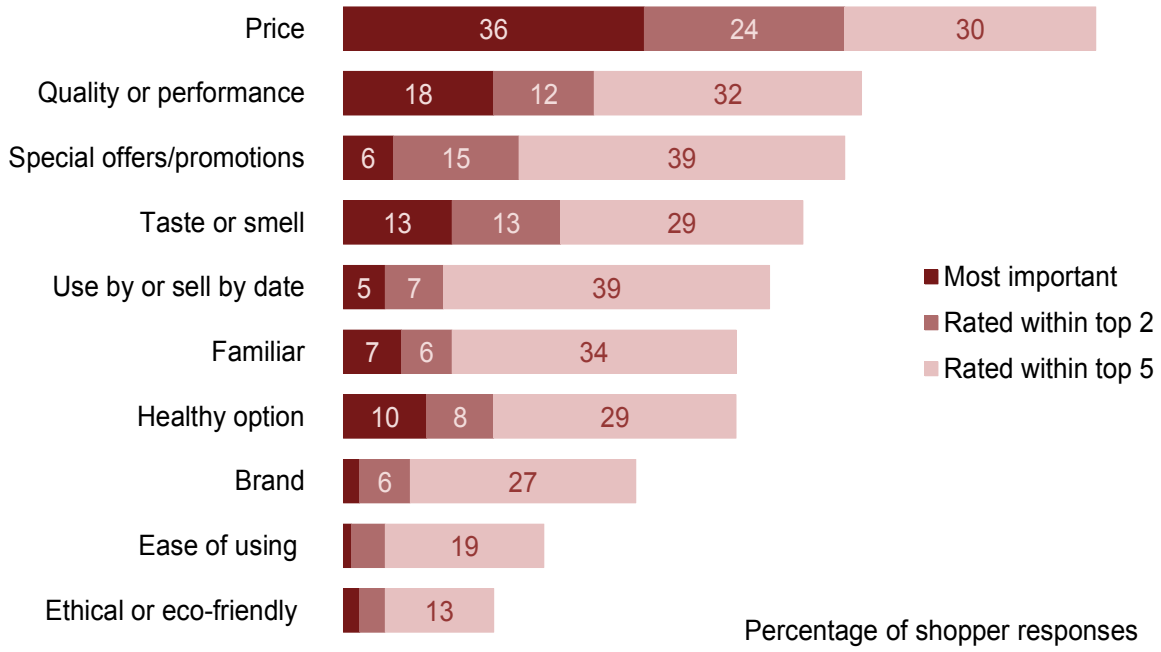
Between 2007 and 2015, average households traded down to cheaper products to save 4.8% while the lowest income households traded down to a much lesser extent, possibly as they were already buying cheaper products.

Food is the largest item of household expenditure for low income households after housing, fuel and power costs.

Source: *Family Food 2015, Defra.*

[7] See Glossary for definition of equivalised income

2.6: Factors influencing consumer product choice[8]



Price is increasingly important in driving product choice, with 36% of shoppers naming it as the most important factor and 90% listing it within their top five influences. Quality was rated as the highest influence by 18% of respondents, followed by taste or smell (13%) and a healthy option (10%).

Quality is highly influential with 62% listing it in the top 5 factors, although only 18% considered it most important. Only price featured more highly as a top 5 influence.

Use by dates were considered most important by only 5% of shoppers although half (51%) of shoppers included it in their top 5 influences. Taste or smell were considered most important by 13% of shoppers. Familiarity and brand names still have a sway in many purchase decisions, with 47% and 35% of shoppers naming them in their top 5 influences.

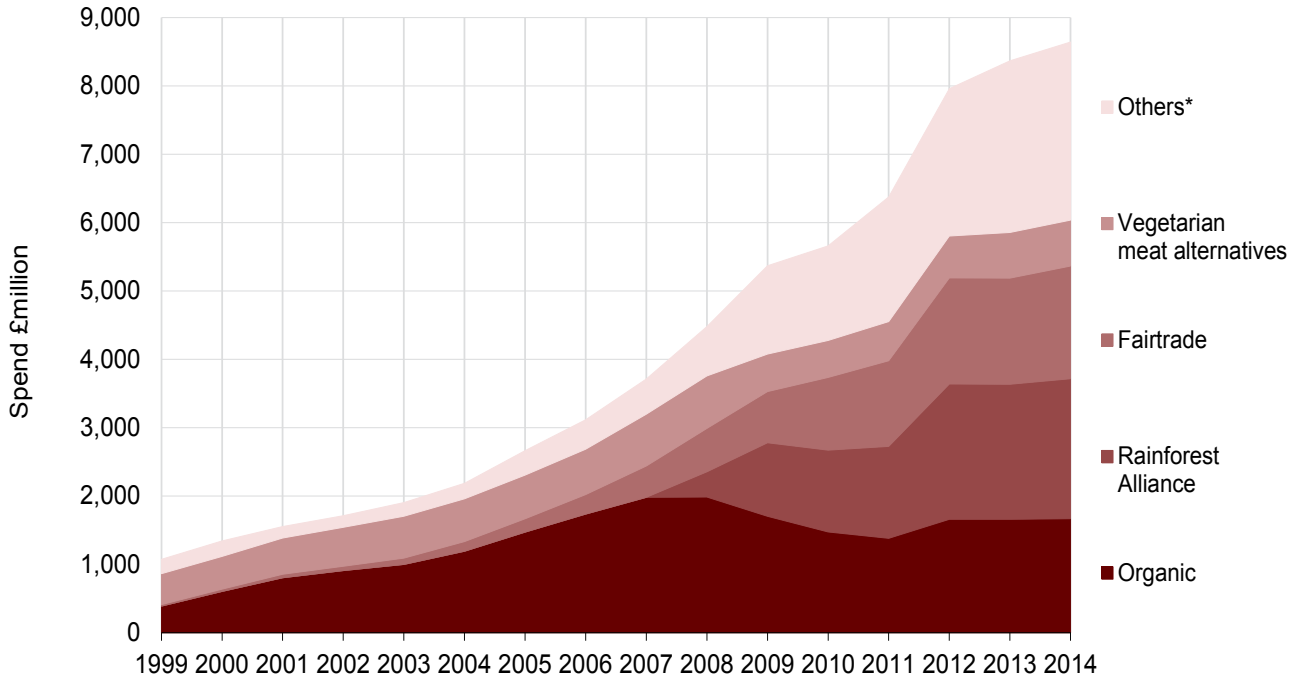
Ethically produced products and whether a product was easy to use were considered least important factors with 18% of shoppers listing them in their top 5 influences.

Table 7.4 shows another analysis of consumer product choice relating to ethical and environmental factors.

Source: *IGD ShopperVista 2014.*

[8] IGD ShopperVista 2014, base: all main shoppers, fieldwork June 2014. Sample is managed to be representative of main grocery shoppers but may contain unquantifiable biases.

2.7: UK trend in sales of ethical produce



*Others include free range eggs and poultry, freedom foods and sustainable fish.

Sales in "ethical" food and drink, including organic, fair-trade, free range and freedom foods rose to £8.5 billion in 2014[9], 9.2% of all household food sales.

Sales of ethical produce have increased year on year since 2007, despite the economic downturn. Rainforest Alliance made up the largest single share in 2014, accounting for 24% of the total ethical food sector at £2.0 billion; an increase of 3.6% on 2013. Fairtrade and organic products are the next largest contributors at 19% each (£1.6 bn and £1.7 bn respectively).

Sales of organic food and drink have been steady in the last few years, although still 16% down on their peak in 2008.

Sales of sustainable fish rose by 12% in 2014 to £0.5 billion.

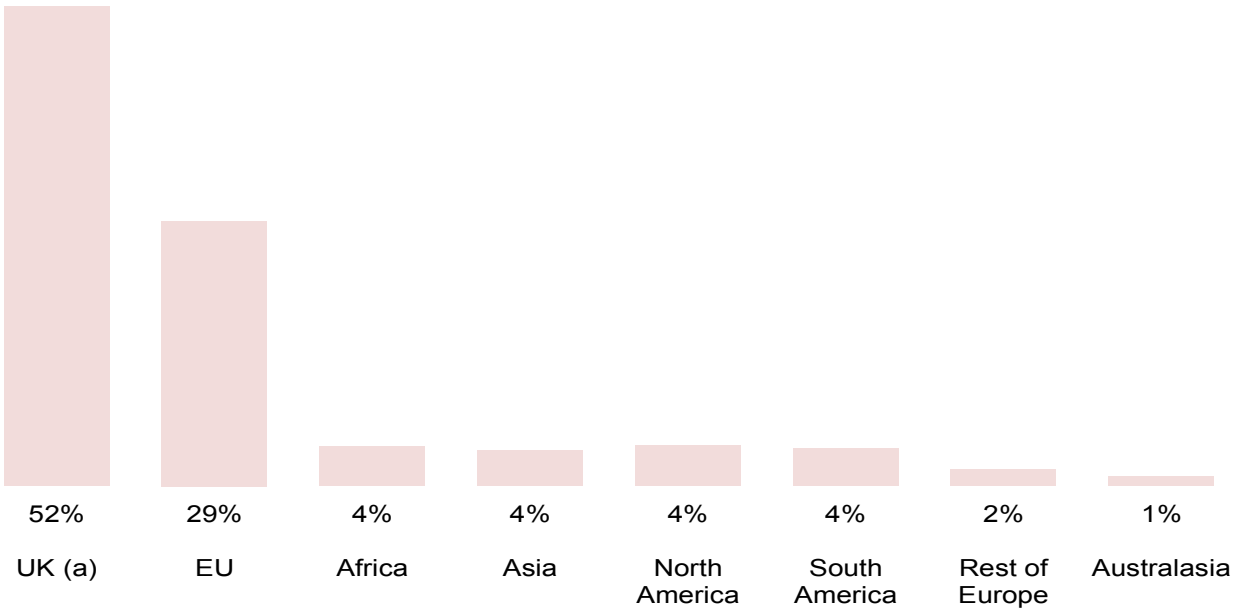
Figures are determined by the Ethical Consumer Market Report by The Ethical Consumer Research Association based on administrative data held by ethical labelling organisations, trade associations and market research data.

Source: *Ethical Consumer Market Report 2015, Ethical Consumer Research Association.*

[9] Excludes food and drink boycotts.

3 Global and UK Supply

3.1 Origins of food consumed in the UK, 2015[1]



(a) Consumption of UK origin consists of UK domestic production minus UK exports.

Sourcing food from a diverse range of stable regions, in addition to domestically, enhances food security[2].

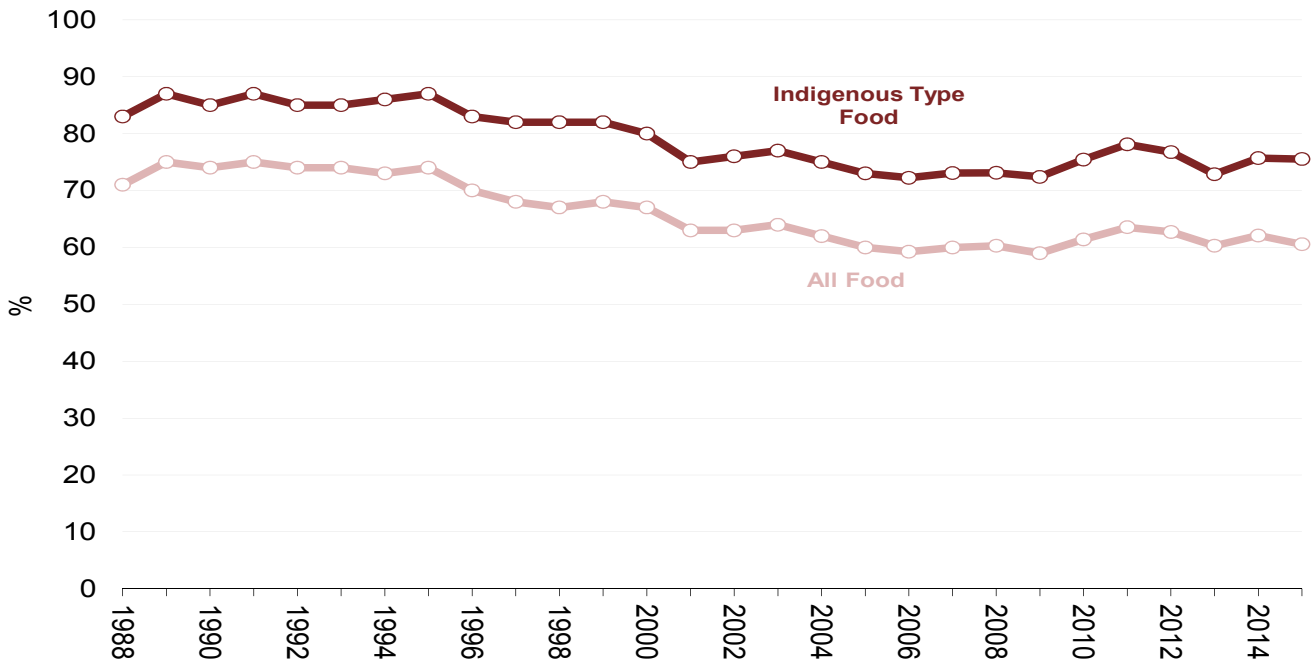
Based on the farm-gate value of unprocessed food in 2015, the UK supplied over half (52%) of the food consumed in the UK. The leading foreign suppliers of food consumed in the UK were countries from the EU (29%) and Africa, Asia, North and South America, all providing a 4% share of the food consumed in the UK.

Two countries accounted for 69% of UK imports of fresh vegetables. Three countries accounted for 54% of unmilled wheat imports, and four countries accounted for 44% of UK imports of fresh fruit.

Source: *Defra.*

[1] 2015 figures are provisional.
[2] UK Food Security Assessment, January 2010 (Defra).

3.2: UK Food production to supply ratio, 1998-2015



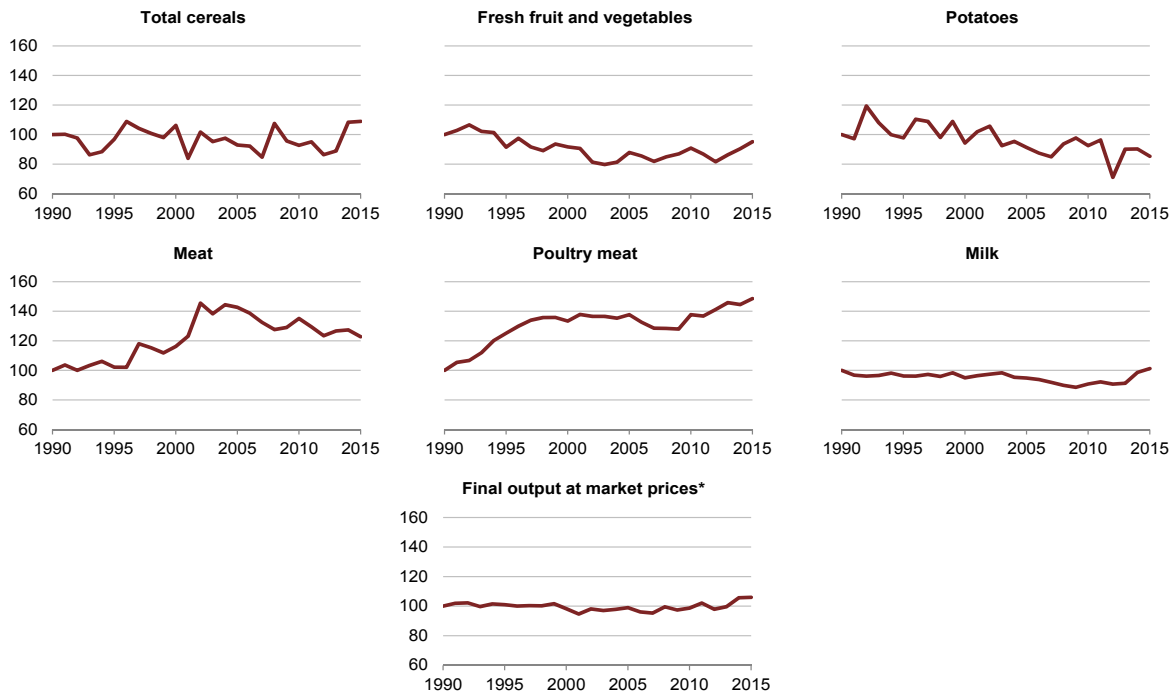
Food Production to Supply Ratio is calculated as the farm-gate value of raw food production (including for export) divided by the value of raw food for human consumption. It provides a broad indicator of the ability of UK agriculture to meet consumer demand.

A high production to supply ratio fails to insulate a country against many possible disruptions to its supply chain.

The ratio in 2015 was 61% for all food and 76% for indigenous type food. This compares with 62% and 76% respectively in 2014.

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

3.3: Trends in UK food production



Final output[3] of UK agriculture is a proxy for UK food production. The volume of all outputs rose by 0.3% between 2014 and 2015[4], which is the highest level recorded for the UK.

Total UK cereal production has fluctuated, with significant dips in 2001, 2007, 2012 and 2013, linked to adverse weather conditions in those years. 2015 saw little overall change in production compared to 2014, reflecting above average across all cereals.

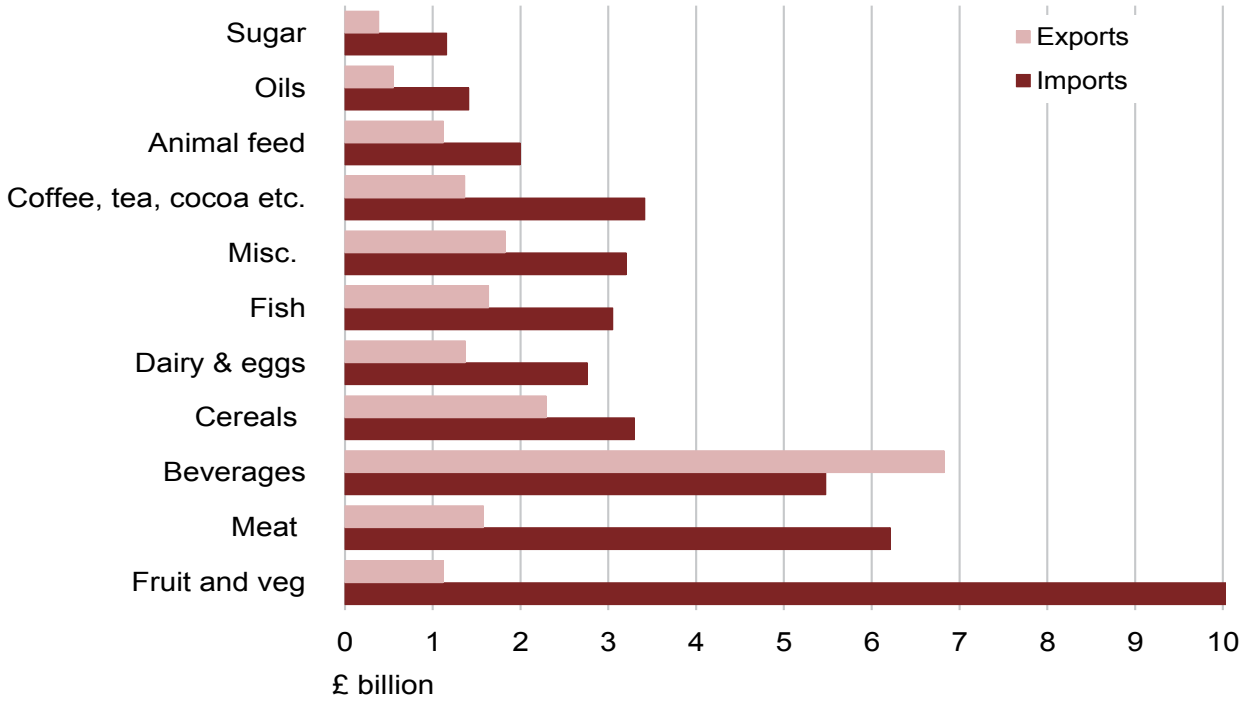
Since 1990 there have been large increases in production levels of poultry meat, part of a longer term upward trend since the late 1970's. Although production dipped during the 2000's it reached a record level in 2013. Following a slight fall in 2014 total production of poultry increased by 2.8% in 2015.

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.

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

[3] Gross output less transactions within the industry.
[4] 2015 figures are provisional.

3.4 UK trade in different food groups, 2016[5]



The value of imports is greater than the value of exports in each of the broad categories of food, feed and drink except 'Beverages' which had a trade surplus of £1.35 bn in 2016, largely due to exports of Scotch Whisky.

Beverages are the largest export category by far with an export value of £6.8 bn in 2016, up by 6% on 2015. Exports (at 2016 prices) rose 23% between 2009 and 2011, due largely to increases in the existing markets.

Cereals is the second largest export group with a value of £2.3 bn, followed by the meat and fish categories at around £1.6 bn each (excluding the miscellaneous category).

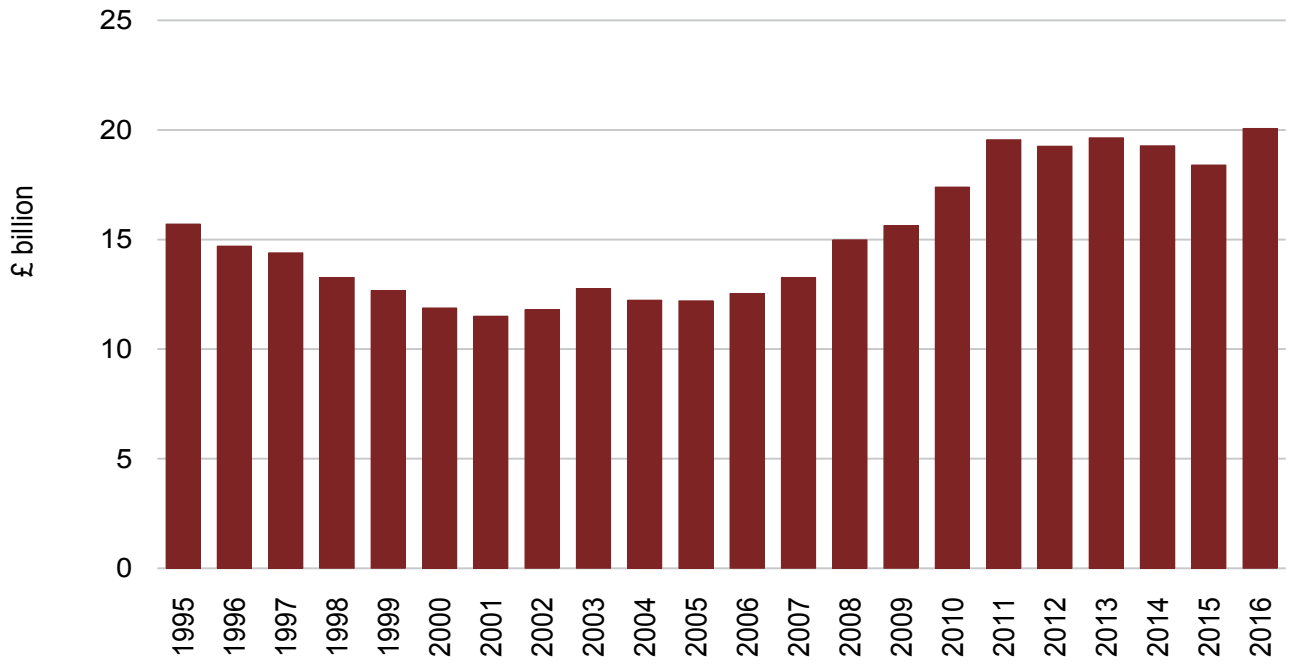
'Fruit and vegetables' has the largest trade deficit. In 2016 imports were £10.3 bn while exports were worth £1.1 bn, giving a trade gap of £9.2 bn.

The second largest groups in terms of imports in 2015 were meat and beverages with imports of £6.2 and £5.5 bn respectively.

Source: *HM Revenue and Customs.*

[5] 2015 figures are provisional.

3.5: Trend in exports of food, feed and drink[6]



The total value of food and drink exports increased in 2016 to £20.1 billion, £0.9 billion more than the previous peak of £19.2 billion in 2011.

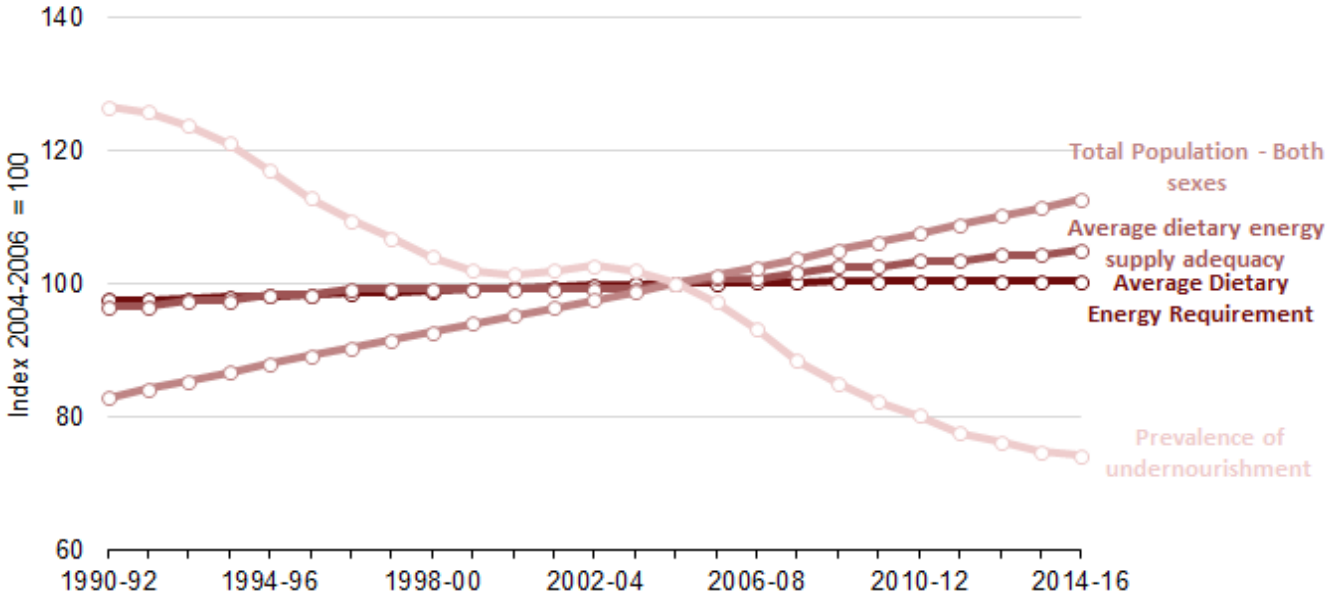
Fruit and vegetables had the greatest value increase at £1 billion (11%). Exports of dairy products and birds eggs increased by £530 million (24%) and exports of fish and fish preparations increased by £655 million (27%). Oilseeds, oils and fats had the greatest reduction in value at £194 million (12%).

The trade deficit in food, feed and drink increase in 2016 to £22.2 billion, up from £20.5 billion in 2015. It is equal to the previous largest deficit, in 2013, measured in 2016 prices.

Source: *HM Revenue and Customs*

[6] 2016 figures are provisional.

3.6: World trends in population, energy requirement, energy supply and prevalence of under-nourishment[7]



The average of individual dietary energy requirement (ADER), calculated as Kcal/capita/day, is a reference for adequate nutrition in the population. Its value can be used to calculate the depth of the food deficit (FD)[8].

The dietary energy supply, calculated as Kcal/capita/day, has increased 8.8% since 1990-92.

World population is currently growing 1.2% per year and increased 36% between 1990-92 and 2014-16.

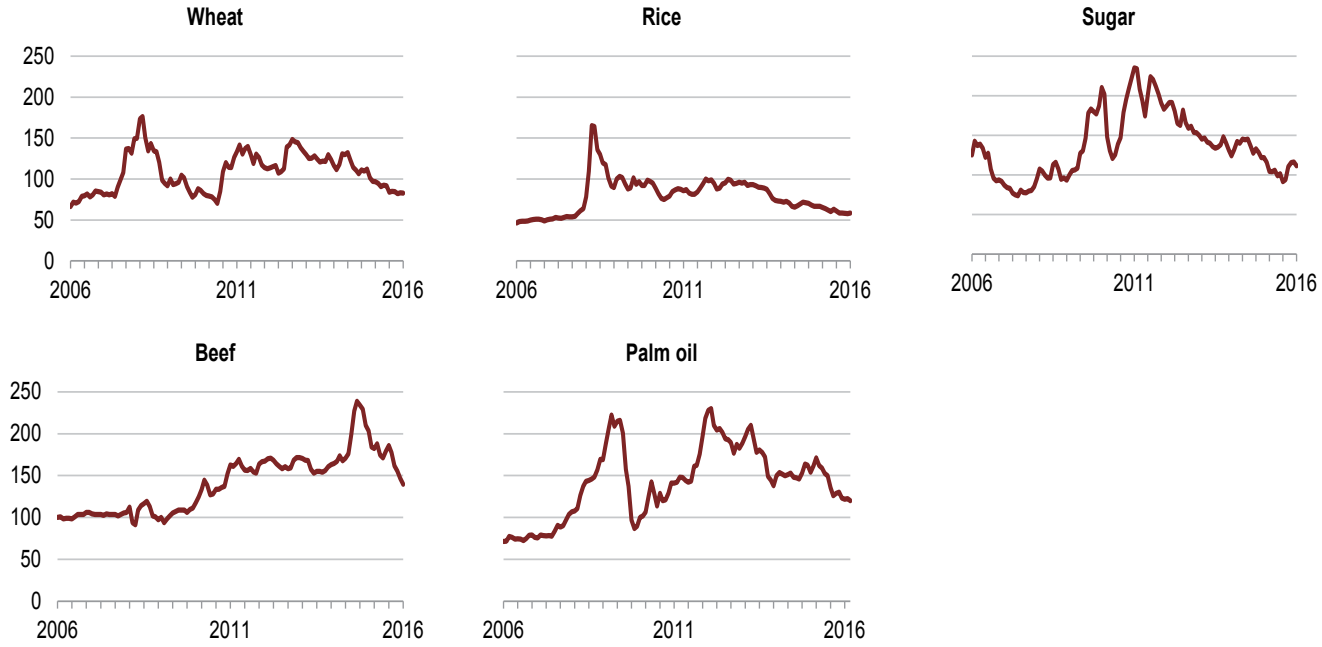
Undernourishment reflects a shortage of food energy to sustain normal daily activities, affected by the amount of food available and by its distribution.

The prevalence of under-nourishment in the world has fallen 52 points since 1990-92[9].

Source: *Food Security Indicators (FAO).*

[7] Calculated on three-year average to reduce the impact of errors in recording annual stock variations.
[8] The amount of dietary energy that would be needed to ensure that, if properly distributed, hunger would be eliminated.
[9] Global Monitoring Report 2015, World Bank.

3.7: World agricultural commodity prices to June 2016



Wheat prices rose 38% between April and September 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 September 2012. The second and third spikes were not as high and reductions between September 2012 and June 2013, and since October 2014 have brought prices down to 56% lower than in 2008.

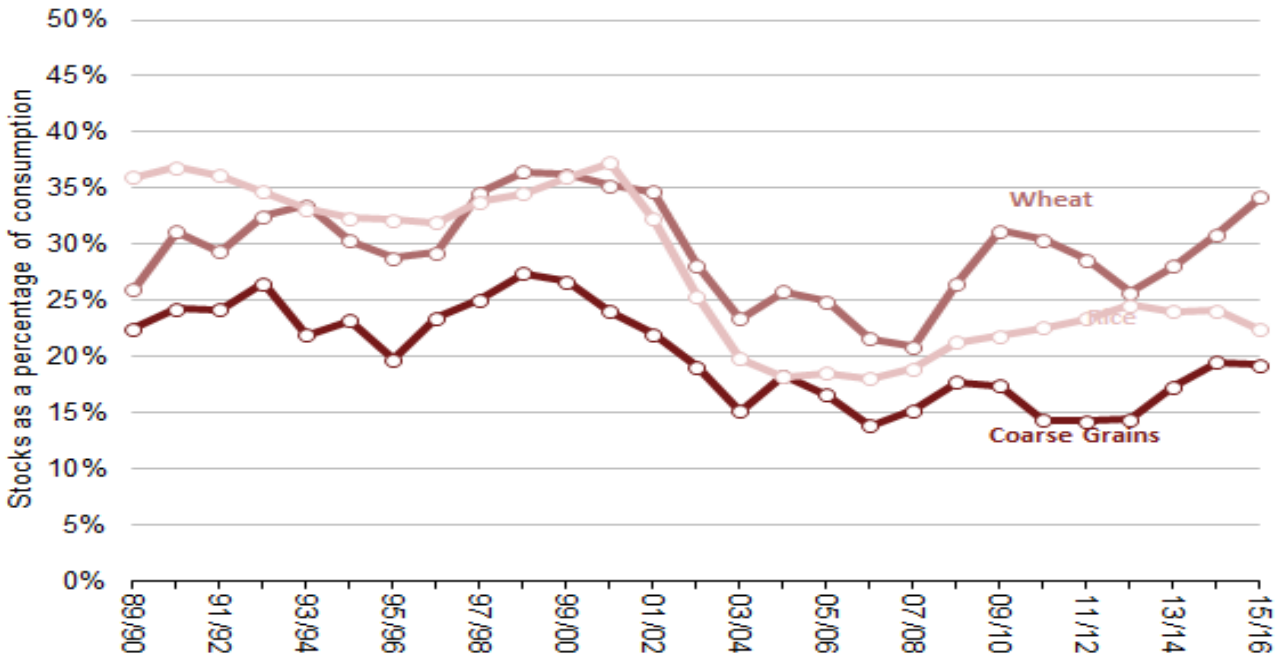
Sugar prices peaked in January 2011, 170% higher than in January 2007. A steady decline since then resulted in prices in March 2015 being 56% lower than the 2011 peak. Since then, sugar prices have risen, and in June 2016, the index stood at 154.5.

A downward trend followed the 2008 peak in rice prices until June 2010 with prices falling 55%. Prices rose steadily between June 2010 and the first half of 2011 since when there has been relative stability. Prices fell in late 2015, early 2016, but increased towards the mid-point of 2016.

Palm oil prices peaked in early 2011, 3.4% higher than the previous peak in early 2008. Since then, prices were on a downward trend despite some fluctuations in early 2012, and have risen in recent months in line with similar commodity prices.

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

3.8: World grains stocks to consumption ratio 2015-2016[10]



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.

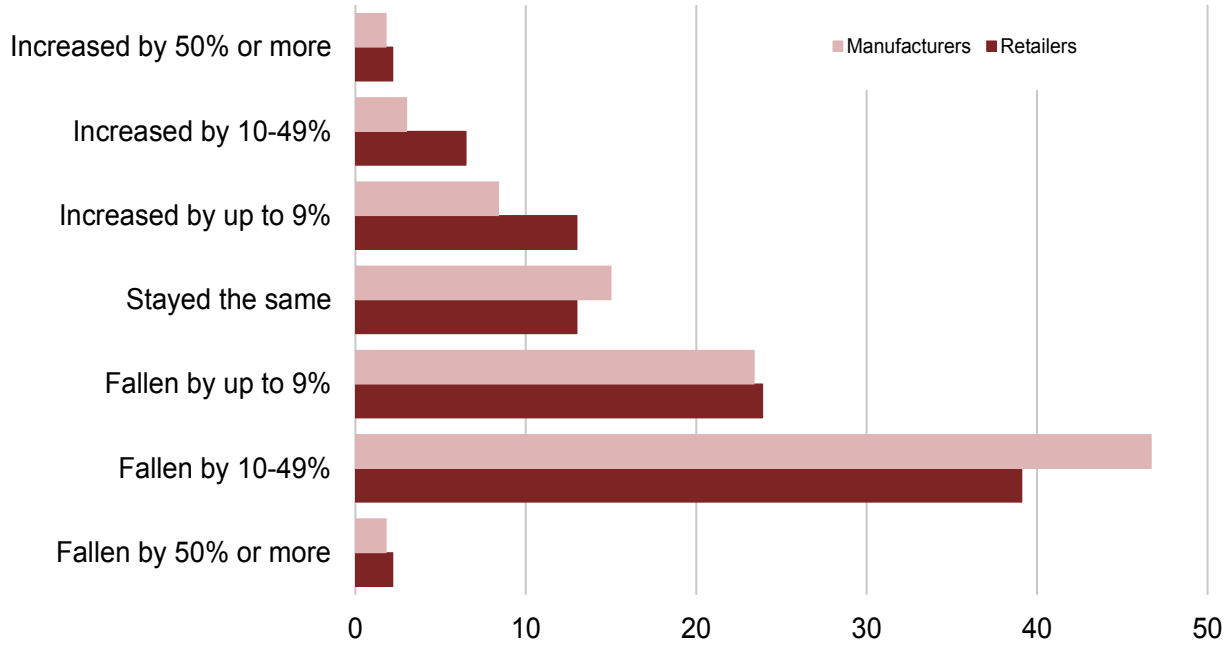
Wheat and Course Grain stocks have been on a rising trend in recent years, starting with the 2012-13 crop year[11]. Rice stocks were on a general upward trend line from around the 2004-05 harvest.

Rice consumption (the denominator) is on a gradually rising trend, pushing the indicator onto a downward trend.

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

[10] Starting this month, (August 2013) Production, Supply and Distribution (PSD) numbers for "European Union" reflect the addition of Croatia to the former EU-27. Croatia data no longer exists in the PSD after 1998/99; therefore, comparisons to data, including World Totals, will differ from those published prior to July 2013.
[11] USDA projections.

3.9: Retailer warehouse stock levels 5-year change



The industry has largely reduced warehouse stock levels. 72% of manufacturers and 65% of retailers have made at least some reduction.

The majority of retail supply chains have between one and four weeks of stock, with suppliers tending to hold higher levels of stock than retailers. For fresh produce, stock levels can sometimes be only 24 hours or less.

As retail supply chains become more responsive, lead times[12] are reducing and order frequencies are increasing.

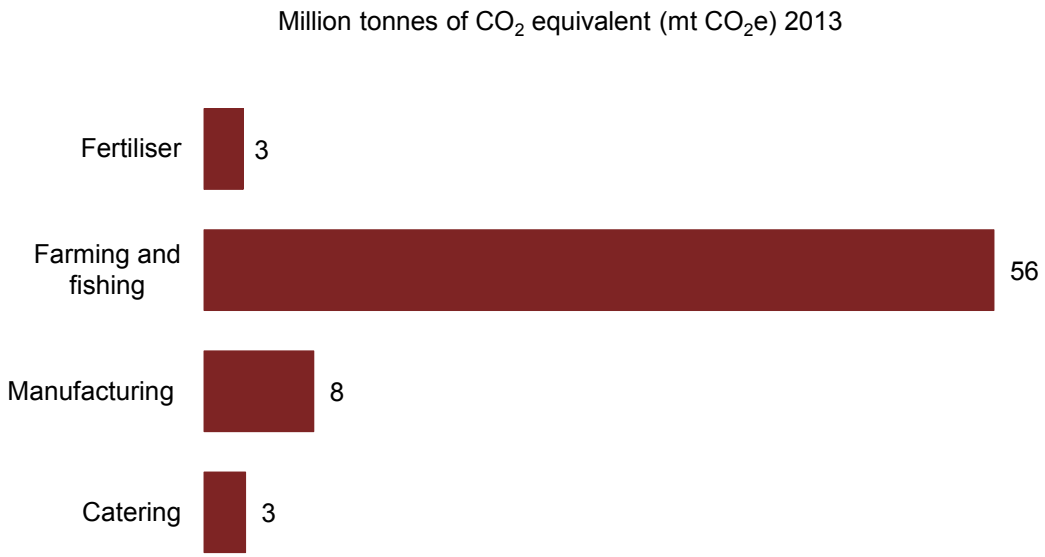
Retailers are increasingly moving products into their stockless networks, managing products from across their ranges in the same way as the fresh and produce categories.

The impact of the current economic climate on consumer spending has helped drive this change as retailers look at ways of funding price cuts; supply chain operating costs and working capital tied up in inventory has provided such an opportunity.

Source: *IGD Research, 2013.*

[12] The time between an order being placed and delivery.

4.1: Greenhouse gas (GHG) emissions from the UK agri-food sector, 2013[1]



Four sectors were responsible for emitting around 70 million tonnes of CO_2 equivalent GHGs (mt CO_2e) from UK domestic food sector activity in 2013 (excluding emissions from non-fertiliser pre-farm production, land use change, food packaging, retailing, households, food waste and net trade). The largest contributor of the four sectors was farming and fishing, estimated at 56 mt CO_2e.

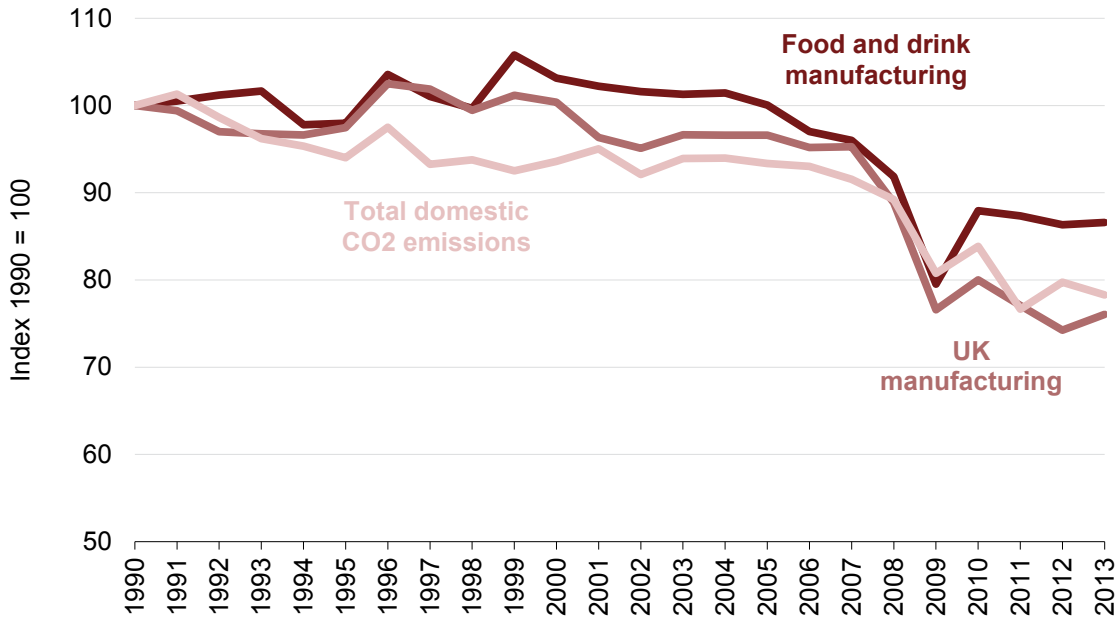
Emissions from farming and fishing remained relatively stable between 2012 and 2013. Excluding fishing, emissions from farming, which were estimated at around 55.6 mt CO_2e in 2013, have maintained a steady long-term decline. Enteric fermentation in ruminating animals and oxidisation of nitrogen in fertilisers is the source of most of the farming emissions.

In the other sectors, food and drink manufacturing emissions rose by 1.2% in 2013, while catering emissions also rose by 3.1%.

Source: *UK Environmental Accounts, ONS 2015 British Survey of Fertiliser Practice*

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

4.2: Trend in CO_2 emissions from UK food and drink manufacturing, 1990-2013[2]



CO_2 emissions from UK manufacturing, including food and drink manufacturing, have been on a downward trend since 1999, despite the occasional increase, including in 2013.

In all three sectors, there was a similar pattern between 2008 and 2011, with a decrease in CO^2 emissions in 2008 and 2009, an increase in 2010 and another decrease in 2011.

In 2013 UK manufacturing CO_2 emissions have increased by 2% while total domestic emissions have decreased by 2%. Food and drink manufacturing has remained unchanged since 2012.

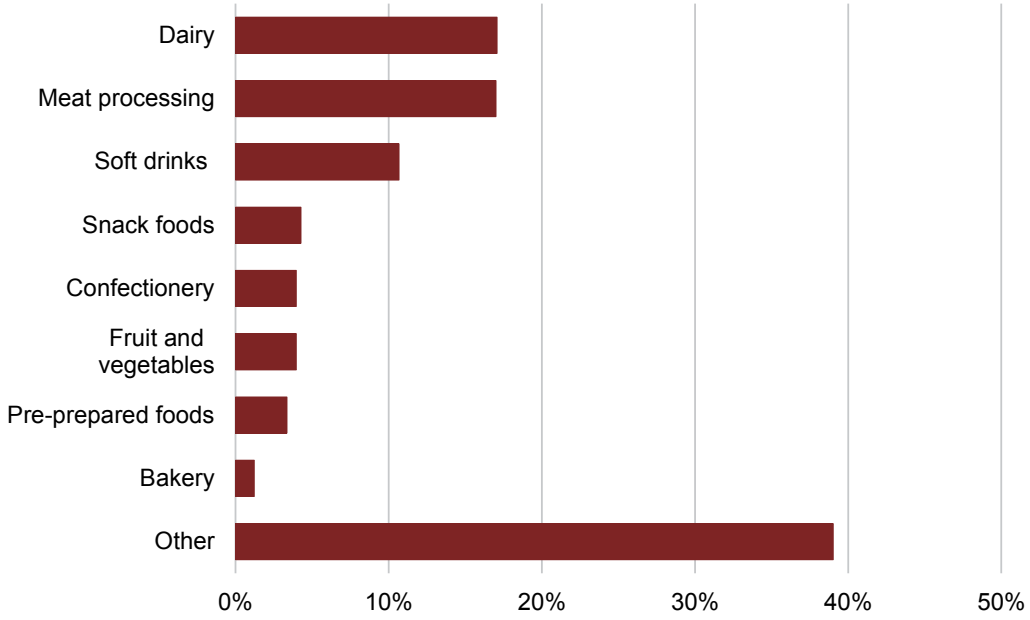
The volume of output from food and drink manufacturing fell between 2007 and 2009 during the economic downturn, leading to a reduction in the level of CO_2 emissions.

An increase in the volume of outputs along with a prolonged period of exceptionally cold weather produced an increase in emissions during 2010.

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

[2] Manufacturing figures include the share of CO_2 emissions relating to electricity production using a constant emission factor. Total domestic CO_2 emissions include net emissions/removals from land use and land use change but with no allowance for EU Emission Trading Scheme purchases.

4.3: Food and drink sub-sectors represented within the Federation House Commitment (FHC)[3]



Federation House Commitment[4] 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.

As of June 2014, the FHC has 70 signatories across 284 sites. Together, these signatories represent a quarter of UK food and drink manufacturing.

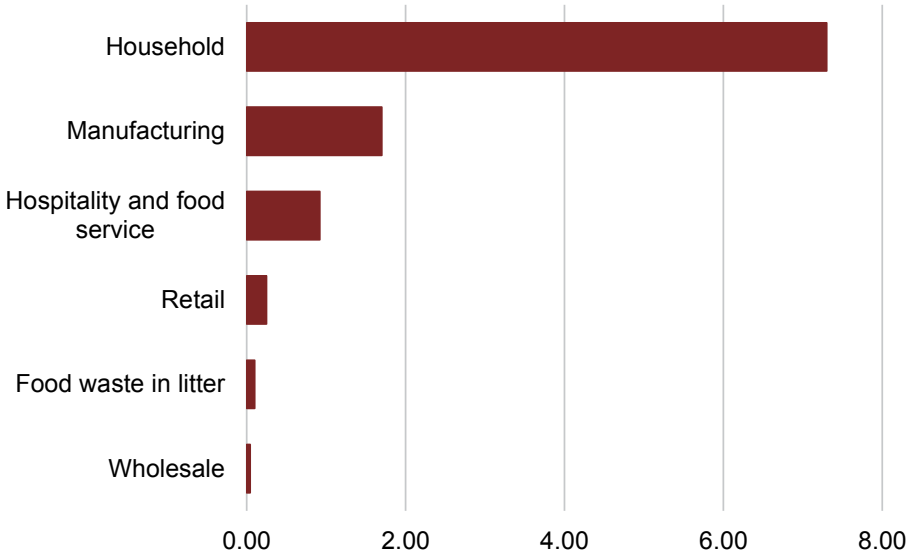
Between 2007 and 2013 these signatories collectively made a 16% reduction in their water use (excluding that in the product). This reduction is equivalent to 6.1 million m3 or 2,430 Olympic-size swimming pools, and is three-quarters of the way towards meeting the 20% reduction target by 2020.

Source: *Federation House Commitment (FHC) , Progress report 2014 (WRAP).*

[3] Meat processing includes red meat and poultry. 'Other' includes fish processing, alcoholic beverages, pet food and animal feed, milling, desserts, sauces and condiments.
[4] The FHC is managed by WRAP in partnership with the Food and Drink Federation and Dairy UK and supported by the Environment Agency: More information at www.fhc2020.co.uk

5 Waste

5.1: UK food and drink waste through the food chain (million tonnes)



Around 10 million tonnes of food and drink is wasted in the food chain annually[1] in the UK. Around 42 mt of food are purchased in the UK annually (mainly for use in the home), meaning that the quantity wasted in the supply chain is equivalent to about one third of the food purchased.

The highest proportion of food and drink waste in the food chain was wasted in households, with 7.3 million tonnes being thrown away in the UK in 2015, of which 4.4 mt was avoidable, 1.3 mt was possibly avoidable and 1.6 mt was unavoidable.

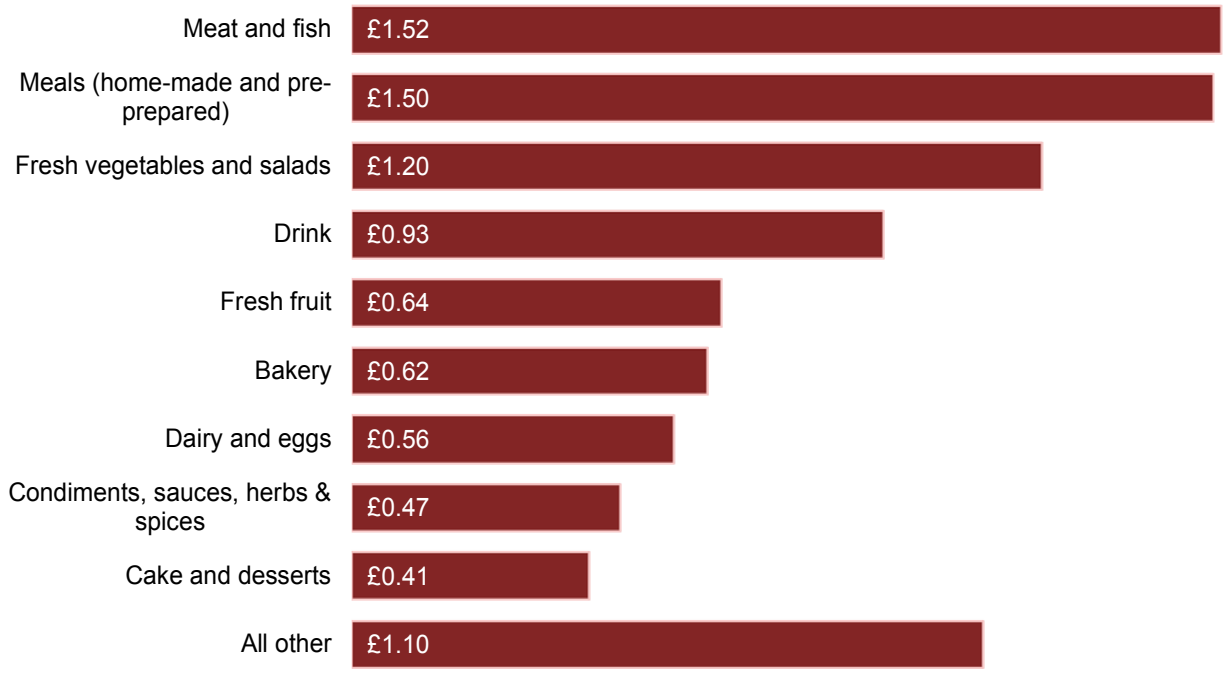
Manufacturing contributed the second largest proportion of waste, at 1.7 mt, around half of which was avoidable. Grocery retail and wholesale together generated 0.3 mt.

Additionally, in 2015, 0.7 mt of food surplus from manufacturing and retail was either redistributed via charitable and commercial routes (0.05 mt), or diverted to make animal feed (0.66mt). This material is prevented waste and not classified in the waste generation figures.

Source: *Handy Facts and Figures on Waste in the UK, updated January 2017, WRAP.*

[1] Based on various sector-specific WRAP reports (household, 2015 data; grocery wholesale, 2015 data; manufacturing, 2014 data; hospitality and foodservice, 2011 data; food waste in litter, 2012 data) and additional WRAP analysis of retail food waste based on 2015 British Retail Consortium (BRC) reported data8. NB data for household also includes waste to sewer, which is not currently available for other sectors.

5.2: UK cost of avoidable food and drink waste per household per week, by food group, 2012



The retail price of avoidable food and drink[2] waste from UK homes was around £9 per household per week in 2012, or 14% of the £66 spent on average each week on household food[3]. The cost to the UK of avoidable food and drink waste in 2012 was £12.5 billion.

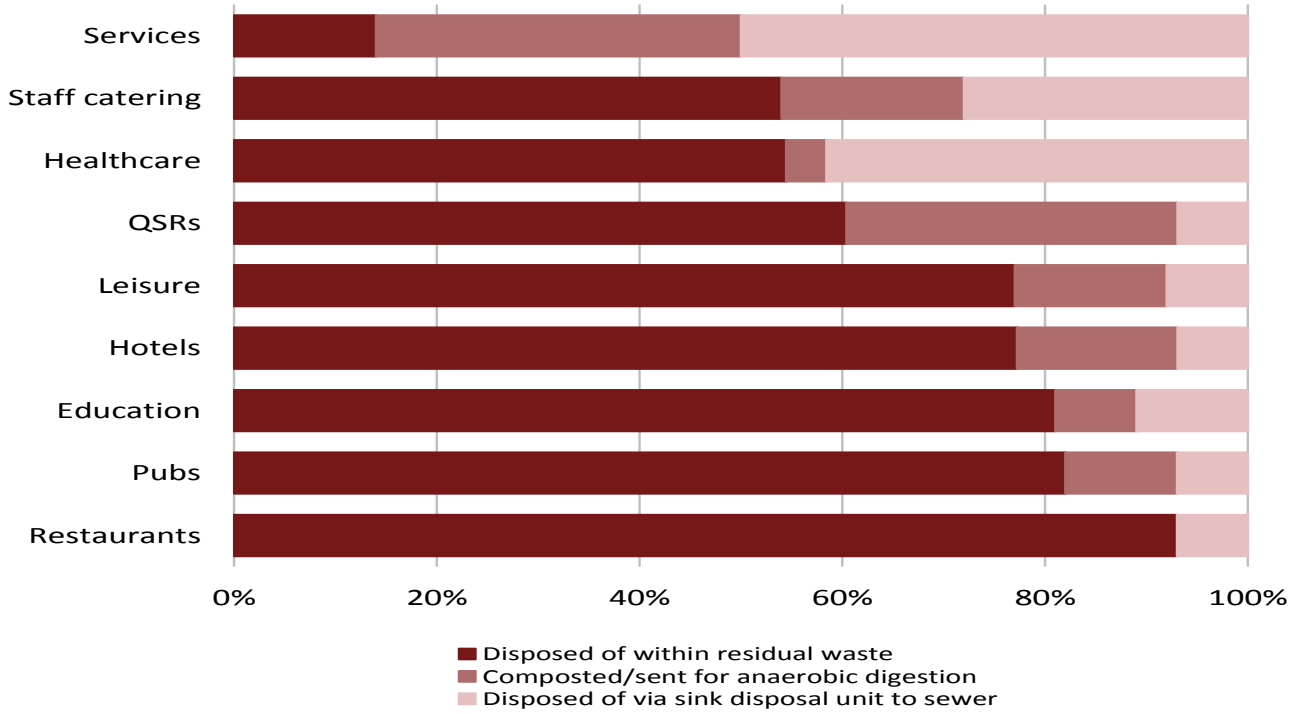
Meat and fish contributed the highest cost to avoidable food and drink waste at £1.52 (16.9%) per week, followed by homemade and pre-prepared meals at £1.50 (16.8%). Cakes and desserts contributed the least (not including other) at £0.41(4.6%), followed by condiments at £0.47 (5.2%).

Due to their high cost per kilogramme, meat and fish only contributed 7% in weight to the total avoidable food waste (17% in cost) whilst fresh vegetables and salad make up 19% in weight (13% in cost).

Source: *WRAP Household Food and Drink in the United Kingdom 2012.*

[2] Food and drink only includes those products brought back to the house, not food eaten out.
[3] Household food expenditure was sourced from Defra's Family Food 2011

5.3: Management of Food Waste in the Hospitality and Food Sector (HaFS), by subsector, UK 2013[4]



Services and quick service restaurants (QSRs) composted the most food waste at 36% and 33% respectively, while restaurants didn't compost any. Education and healthcare composted the next least at 8% and 4% respectively.

Restaurants disposed of the largest proportion of food waste (93%) into the residual waste stream while services disposed of by far the least at 14%.

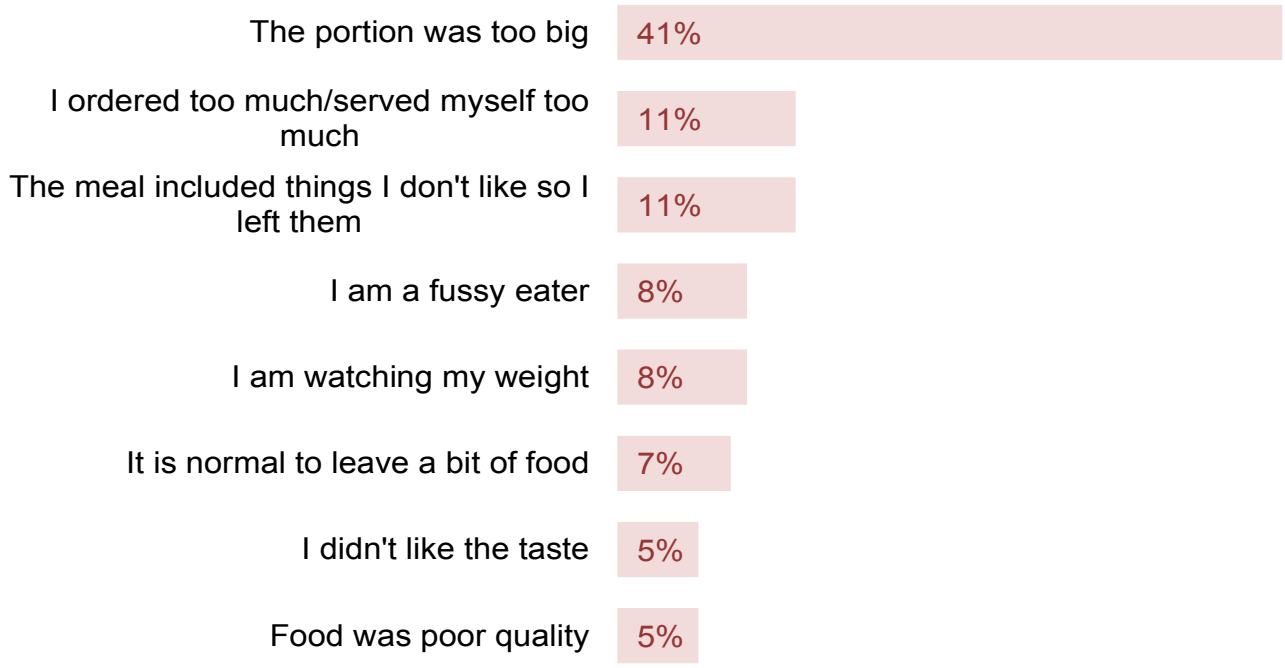
Services disposed of the majority of food waste via SDU (50%) followed by healthcare (42%). In 2013, 28% of food (by weight) purchased in services was wasted while only 3% was wasted from staff catering.

The cost in 2011 of food wasted in the HaFS was over £2.5 billion.

Source: *Overview of Waste in the Hospitality and Food Service Sector 2013, WRAP.*

[4] HaFS waste estimates have been compiled from waste reviews and surveys carried out in 2011 and 2013, and datasets collected between 2009 and 2012. Outlets from all HaFS subsectors were represented in the dataset, which included samples from 480 premises across England, Scotland and Wales.
All estimates presented in this summary report are subject to uncertainties. These relate to sampling error (i.e. the problem of trying to represent a large and varied sector based on a limited number of samples), uncertainties in extrapolating annual waste arisings from outlets based on 'snapshot' samples (typically a week's worth of waste), the extent to which samples successfully captured all HaFS waste arisings, and variation in methodology between different studies.

5.4: Understanding out of home consumer food waste (reasons why food was left)



Over half of meal leavers eating out linked leaving food to various aspects of portion sizes. Two fifths (41%) of meal leavers stated that one of the reasons why they had left food was because the portion size was too big and 11% stated that they ordered/served themselves too much.

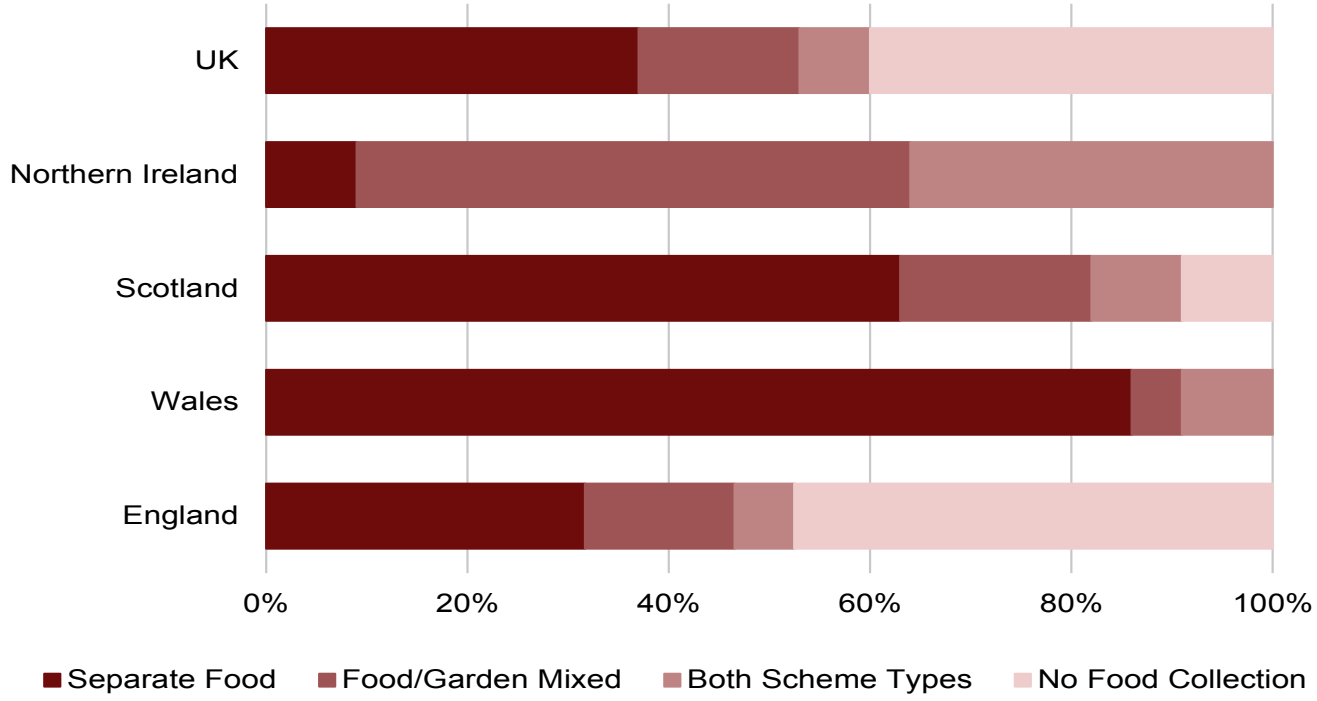
Those that left food at the end of their meal mainly stated leaving chips (32%) and vegetables (18%). This is true across all types of venue though chips are even more likely to be left in quick service restaurants (45%) and pubs (38%).

A bigger proportion of meal leavers tend to leave food when eating out in either pubs, hotels or restaurants than other venues. The tendency to leave food at these venues could be that these diners attach more value to enjoying a meal out in a social setting than diners who are simply out to ‘re-fuel’.

The research showed that customers take into account the cost and value of what they have actually ordered to decide whether to leave food and what part of the meal to leave. Parts of the meal which tend to be left are the main dish and the accompanying sides while appetisers, starters and desserts were less likely to be left.

Source: *Understanding Out of Home Consumer Food Waste 2013, WRAP.*

5.5: Proportion of local authorities collecting food waste, UK 2015/16[5]



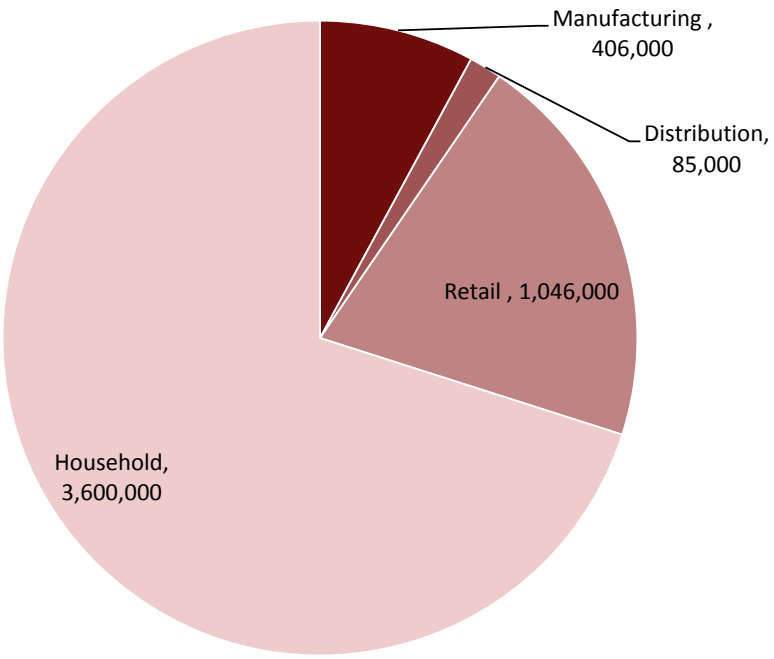
In 2015/16 44% of local authorities in the UK had separate food waste collections, including 7% that ran both separate and mixed food/garden waste collections. 40% had no food collection at all (other than inclusion in regular residual or 'black bag' collection).

In Wales and Northern Ireland there were no authorities which did not collect food. In Wales 95% of authorities had separate food collection, and in Northern Ireland 45%, with the remainder made up of mixed food and garden waste. In England about half of local authorities had no food collection.

Source: *WRAP, Local Authority Waste and Recycling Information Portal.*

[5] In any authority a scheme may not be available to every household.

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



Packaging protects products in transit and helps maintain shelf life for perishable foods. An estimated 3.6 million tonnes of grocery packaging enters households which is over two thirds of the total grocery packaging waste.

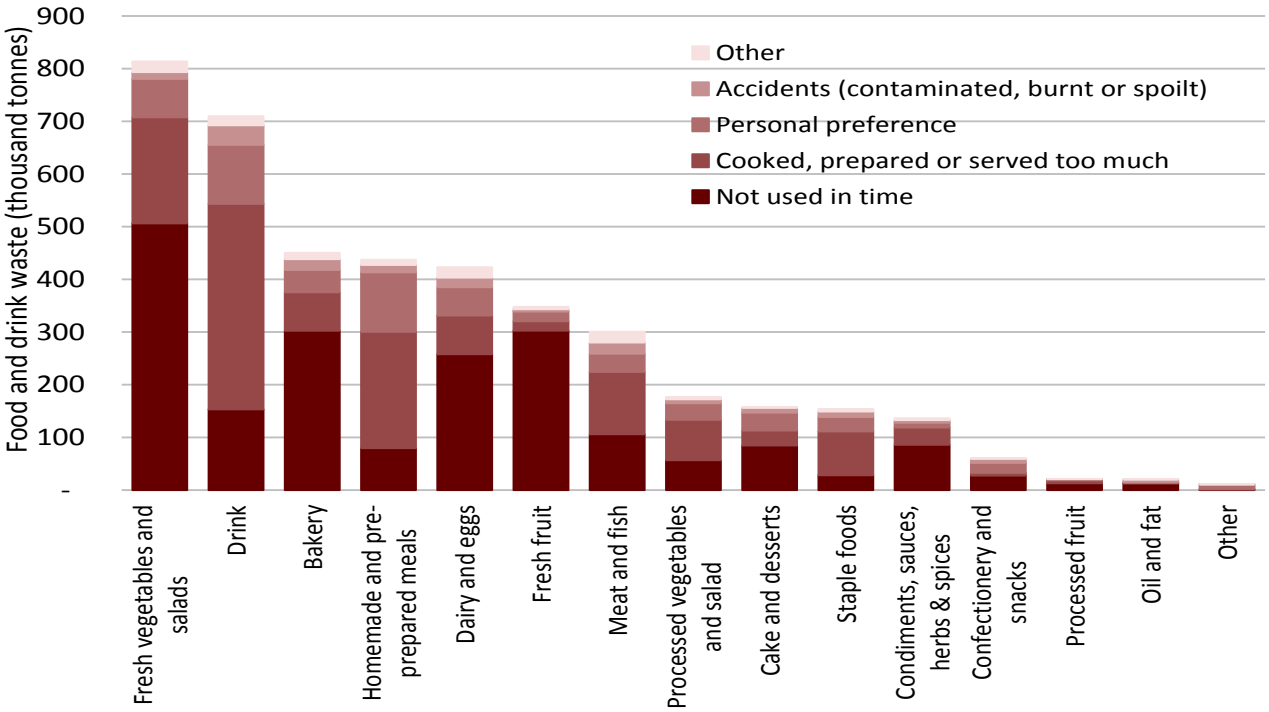
Food and drink packaging emissions amount to 8.7 million tonnes of CO2 equivalent (mtCO2e), 6.1 mtCO2e for household purchases.

The Courtauld Commitment is a responsibility deal between the UK grocery sector and WRAP, delivered in partnership with local authorities. Between 2010 and 2012 Phase 2 led to 1.7 million tonnes of food, drink and packaging waste being prevented, saving £3.1 billion. This represents a reduction of 4.8 million tonnes of CO2eq. Phase 3, to run from 2013 and 2015, aims to lead to a reduction of 1.1 million tonnes of waste, a saving of £1.6 billion and a CO2(e) reduction of 2.9 million tonnes.

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

[7] Including packaging from non-food and drink products sold in grocery shops.

5.7: UK avoidable household food and drink waste by food group and reason for disposal 2012



4.2 million tonnes of avoidable food waste[8] was disposed of in 2012 by UK households, equivalent to 12% by weight of that brought into the home. 48% was not used in time, 32% was due to too much being cooked or served and 14% down to personal preference.

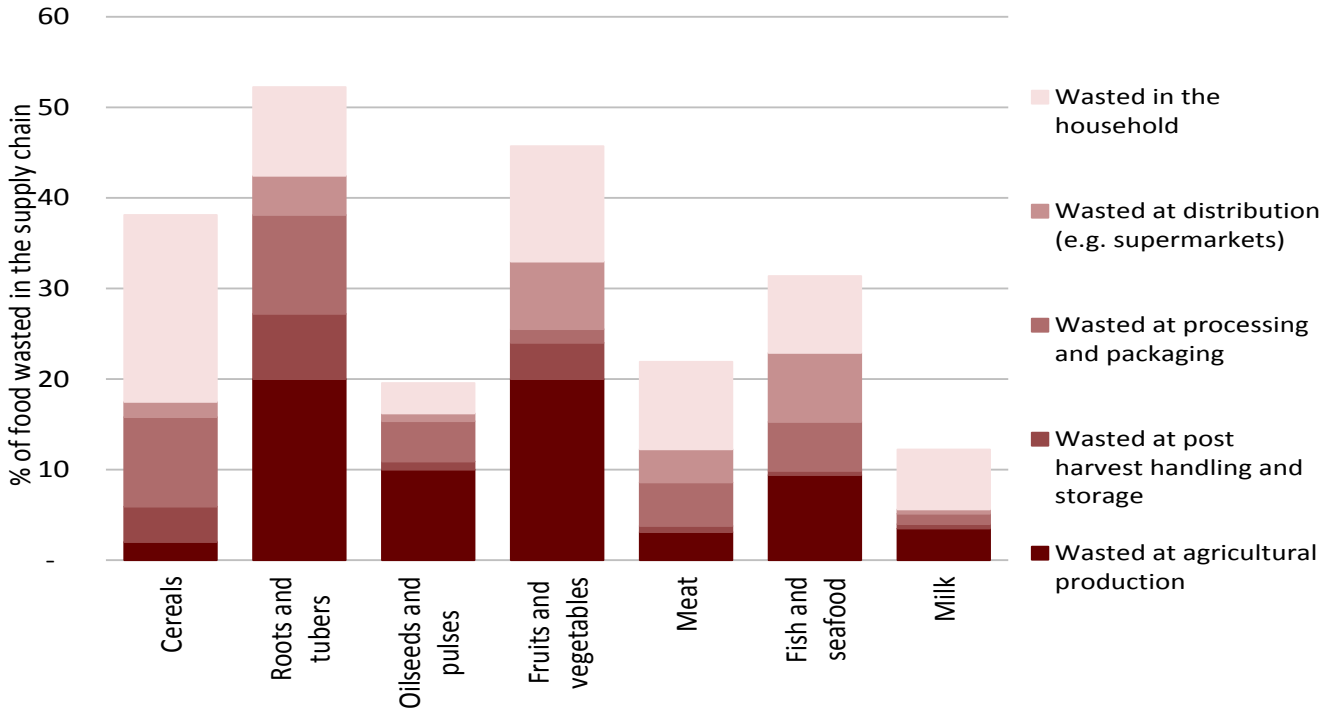
Of the 4.2 mt of avoidable food waste, 19% was fresh vegetables and salad and 17% was drink. 2 mt of food wasn't used in time. 25% was fresh vegetables and salad and fresh fruit and bakery each made up 15%.

1.3 mt of food was wasted because too much food was cooked or served. Nearly a third was drink, homemade and pre-prepared meals was 17% and fresh vegetables and salad was 15%. Over 0.3 mt of fresh fruit was wasted, 87% of which was not used in time. Over half of drinks, homemade and pre-prepared meals and staple food were wasted due to too much being cooked or served.

Source: *Household Food and Drink Waste in the United Kingdom, WRAP 2012.*

[8] Food waste refers to food and drink waste brought into the home, not eaten out.

5.8: Food wasted at each stage of the supply chain[9] in Europe and Russia, 2010



Roots and tubers and fruit and vegetables had the most wasted throughout the supply chain with 52% and 46% respectively. Both also had by far the highest waste at agricultural production at 20%. Only 12% of milk products was wasted in total.

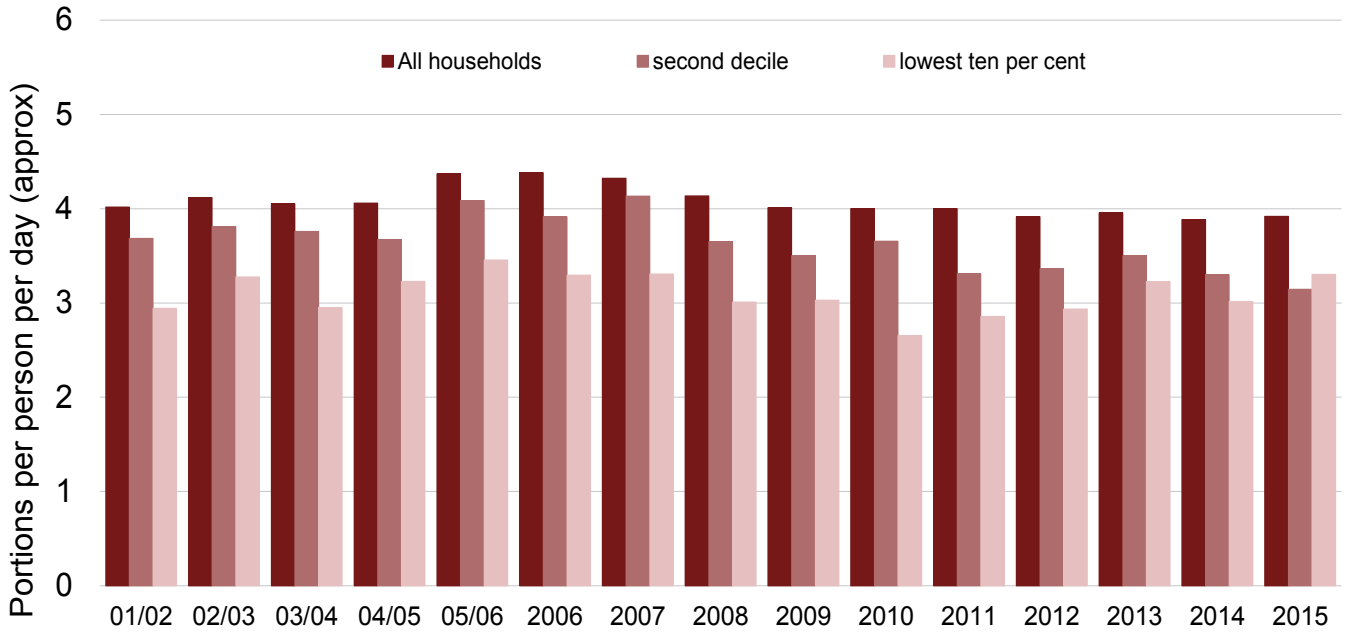
Cereals contributed the most to food wasted in the household, with 21% not being consumed, while fruit and vegetables contributed the next most at 13%. Oilseeds and pulses only contributed 3%.

The three stages between agricultural production and the household were generally the least wasteful stages, with no food group wasting more than 11% at each stage.

Source: *Global Food Losses and Food Waste, 2011*

[9] It is assumed that product that hasn't been wasted has been consumed.

6.1: UK trend in purchases of fruit and vegetables (excluding potatoes) to 2015



UK household purchases of fruit and vegetables were 0.9% higher in 2015 than in 2014 but 11% lower than the peak in 2006.

Purchases of 5 A DAY[2] across all households remained at 3.9 portions when compared to 2014.

The lowest income households[3] purchased an average of 3.3 portions per person per day of 5 A DAY in 2015, an increase on the 3.0 portions in 2014 and the highest since 2007.

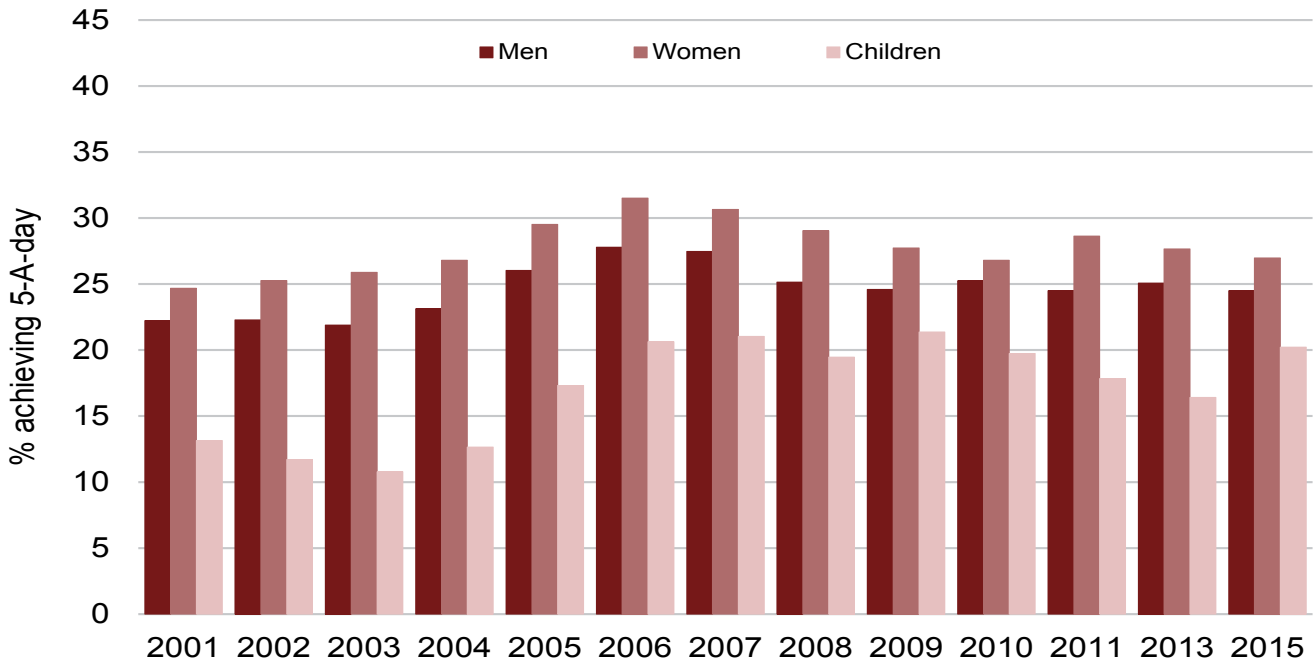
Households in the second decile saw a fall to 3.1 portions per person per day of 5 A DAY in 2015 compared to 3.3 portions in 2014. This was a 24% reduction from the peak of 4.1 portions in 2007.

Defra estimates that 22% of edible fruit and vegetables are wasted[4].

Source: *Family Food 2015, Defra, March 2017.*

[2] 5 A DAY calculated as all purchases of fresh and processed fruit and vegeatbles including fruit juice divided by the adult portion size of 80 grams.
[3] Lowest income households are those with incomes in the lowest ten percent of all households. Data on low income households is available from 2001.
[4] Household Food and Drink Waste linked to Food and Drink Purchases, Defra July 2010.

6.2 Trend in the consumption of fruit and vegetables in men, women and children in England to 2015[5,6]



In 2015, 24% of men, 27% of women and 20% of children (aged 5 to 15 years) consumed trhe recommended 5 A DAY.

In 2015, 20% of children achieved 5 A DAY. This was an increase of 23% on 2013 and 88% on 2003. The peak percentages achieving 5 A DAY were 21% in 2006, 2007 and 2009.

The peak for women and men achieving 5 A DAY was in 2006 with 32% of women and 28% of men achieving 5 A DAY.

In 2015, 7.3% of adults and 5.9% of children included no fruit or vegetables in their diet. Those aged 65 to 74 eat the most fruit and vegetables.

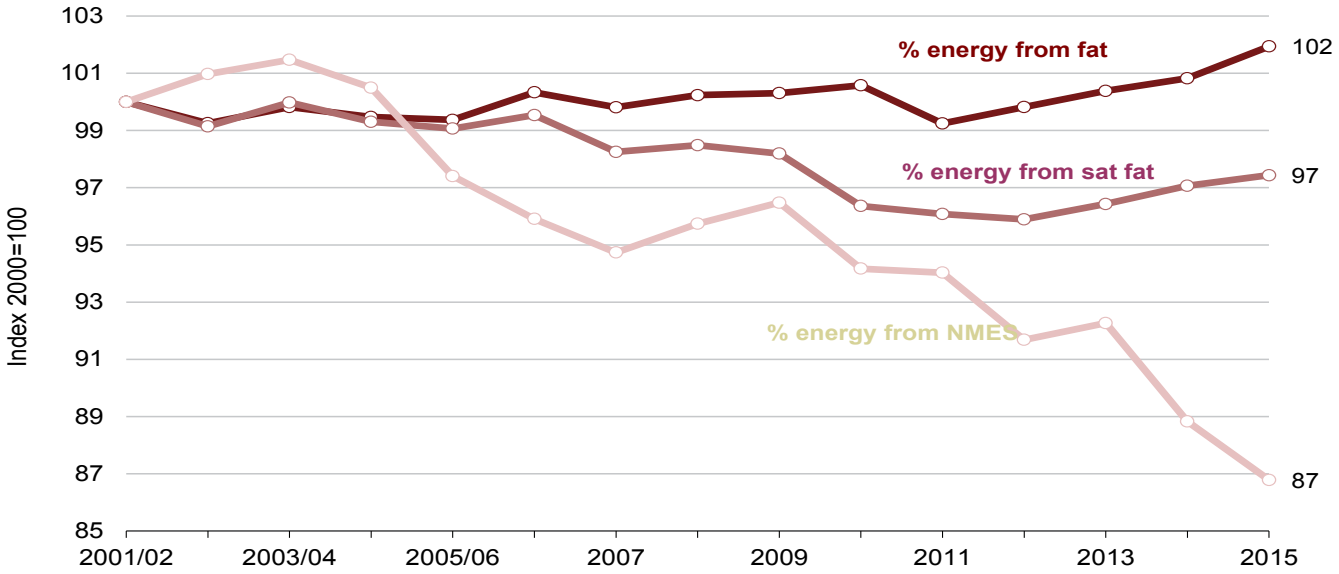
Between 2013 and 2015 fruit and vegetable consumption by those aged 35 to 44 decreased to an average of 3.6 portions per day for men and 3.7 portions per day for women.

Source: *Health Survey for England 2015, (NHS Information Centre)*[6]

[5] No data is available for 2012

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

6.3 UK trends in intakes of fat, saturated fatty acids and non- milk extrinsic sugars[7] to 2015



The downward trend of sodium intake ended with an increase to 2.65g per person per day in 2015. This is an increase of 1.3% on 2014 and 18% lower than 2001-2. The SACN8 recommendation for intake of sodium 9including table salt) is 2.40g per person per day.

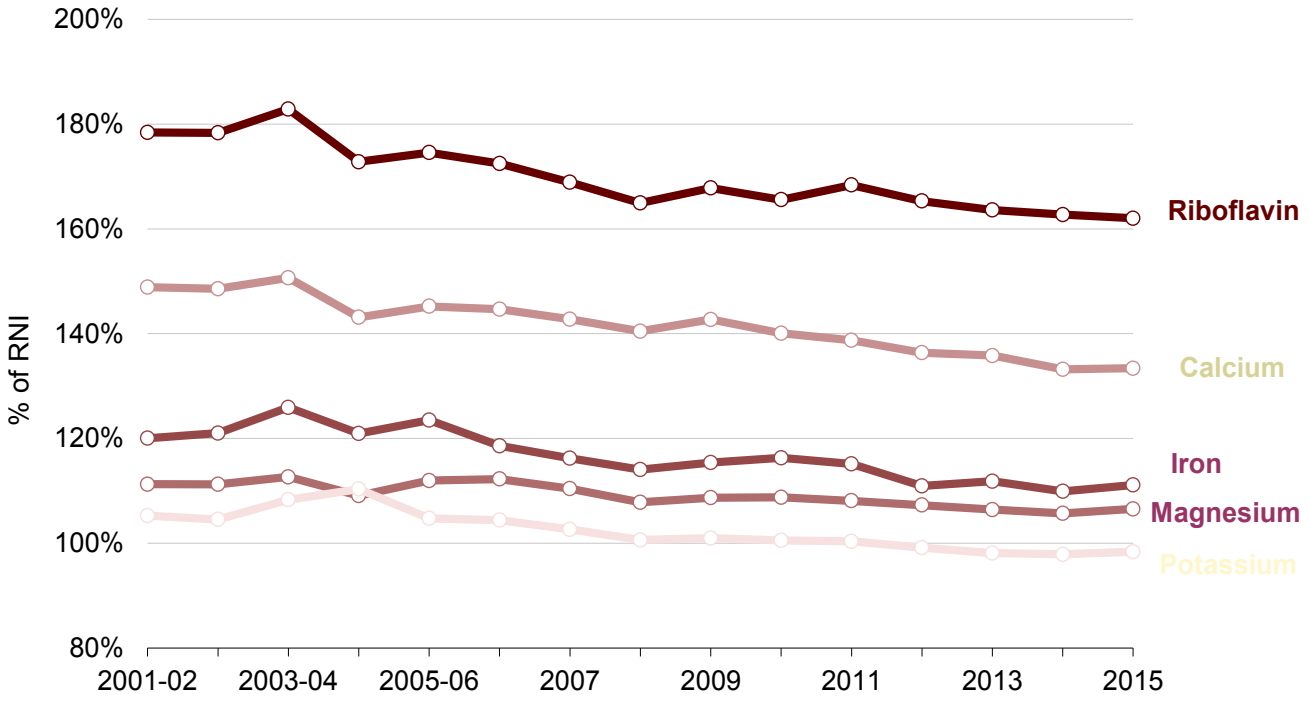
The percentage of food energy from NMES at 12.8% and from saturated fatty acids at 14.4% both exceed the SACN recommendation at 11% of total energy intake.

Total fat should contribute no more than 35%9 of food energy intake (excluding alcohol). Estimates based on food purchases in 2015 from the Family Food survey exceed this at 39.1%, an increase of 1.9% compared to 2001-02.

Source: *Family Food 2015, Defra, March 2017.*

[7] NMES - free sugar not bound in foods e.g table,sugar, honey and sugars in fruit juices, but excluding milk sugar.
[8] Scientific Advisory Committee for Nutrition.
[9] For recommended intakes see Dietary Reference Values for Food Energy and Nutrients in the United Kingdom, 1991 (Department of Health).

6.4: UK average micronutrient intakes, 2001-02 to 2015[10]



Based on food and drink purchases , average micronutrient intakes except potassium reached at least 100% of their reference nutrient intake value, where one is set, in 2015

Intake of vitamin B12 has been consistently high since 2001-02 and remains at around four times the recommended level.

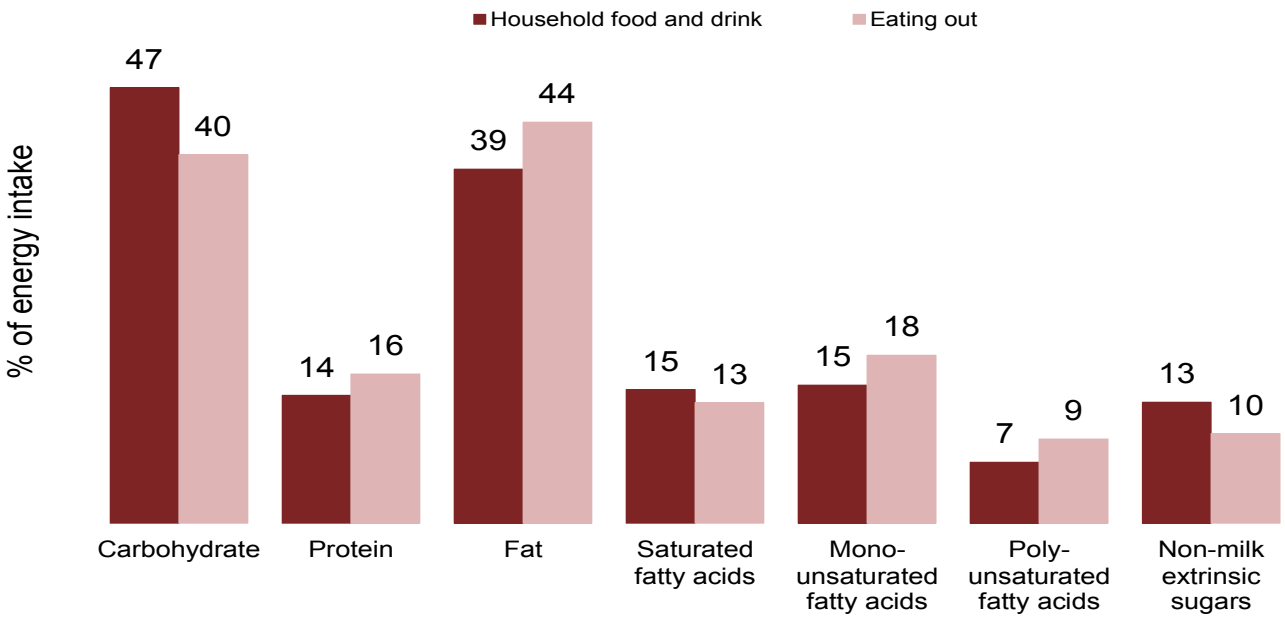
Over the four years 2012 to 2015, intakes of most vitamins and minerals (per person per day) showed downward trends including Thiamin and Vitamin B6 , with decreases of 3.1% and 2.5% respectively. Over the same period, Iron and Vitamin E showed upward trends[11].

Source: *Family Food 2015, Defra, March 2017.*

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

[11] These trends are partly explained by changes in food composition data over time, due to new analytical data becoming available or changes in the formulation of food products.

6.5: The UK household diet compared with the eating out diet in 2015[12]



Eating out food and drink are products that are consumed before entering the household.

In 2015 eating out contributed 10.7% of energy intake excluding energy from alcohol.

The percentage of energy intake from eating out had fallen steadily from 12% in 2002-03 to 9.5% in 2012 but has risen since then and is now at 10.7% which is the highest since 2010.

The eating out diet is higher in fat and protein but lower in carbohydrate and non-milk extrinsic sugars.

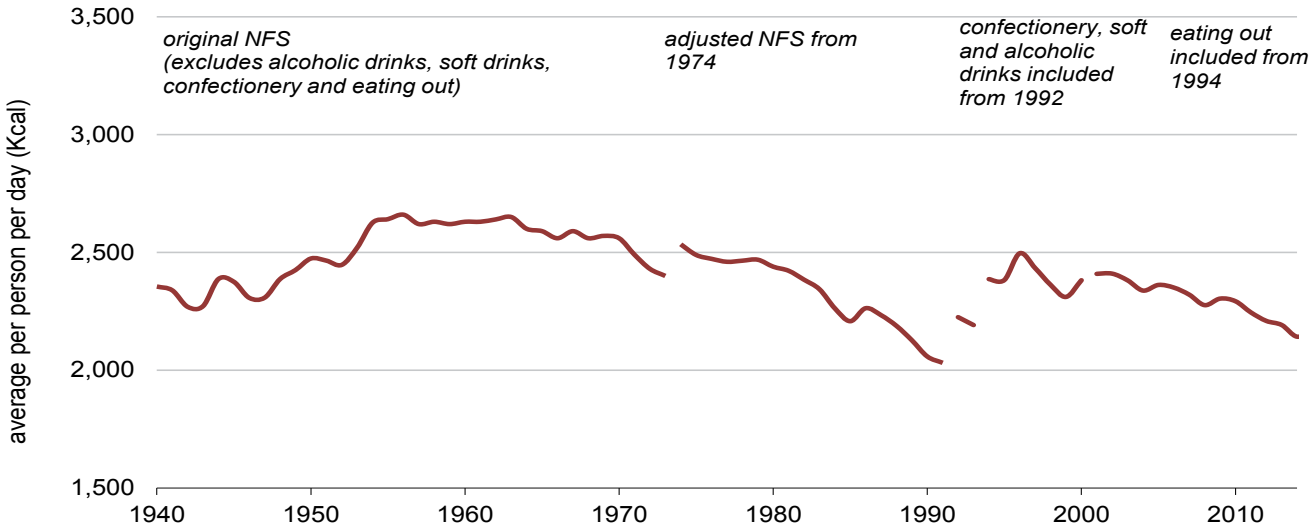
Mono-unsaturated and poly-unsaturated fatty acids are higher in the eating out diet. They are found in olive oils, rapeseed oil, vegetable oils, fish oils, nuts, milk and some meat and meat products.

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.

Source: *Family Food 201, Defra, March 2017.*

[12] For recommened intakes see Dietary Reference Values (DRV's) for Food Energy and Nutrients in the United Kingdom, 1991 (Department of Health).

6.6: Trends in average energy intake from food and drink to 2015



NFS: National Food Survey 1940 to 2000
EFS: Expenditure and Food Survey from 2001-02 (now known as Living Costs & Food Survey)

Care needs to be taken when interpreting long term energy intake estimates, as there is evidence that under reporting of food consumption in the surveys which measure it has increased in recent times. The 2016 *Counting Calories* report from the Behavioural Insights team addresses this in some detail. Nevertheless, this data is the only long term assessment of intake available.

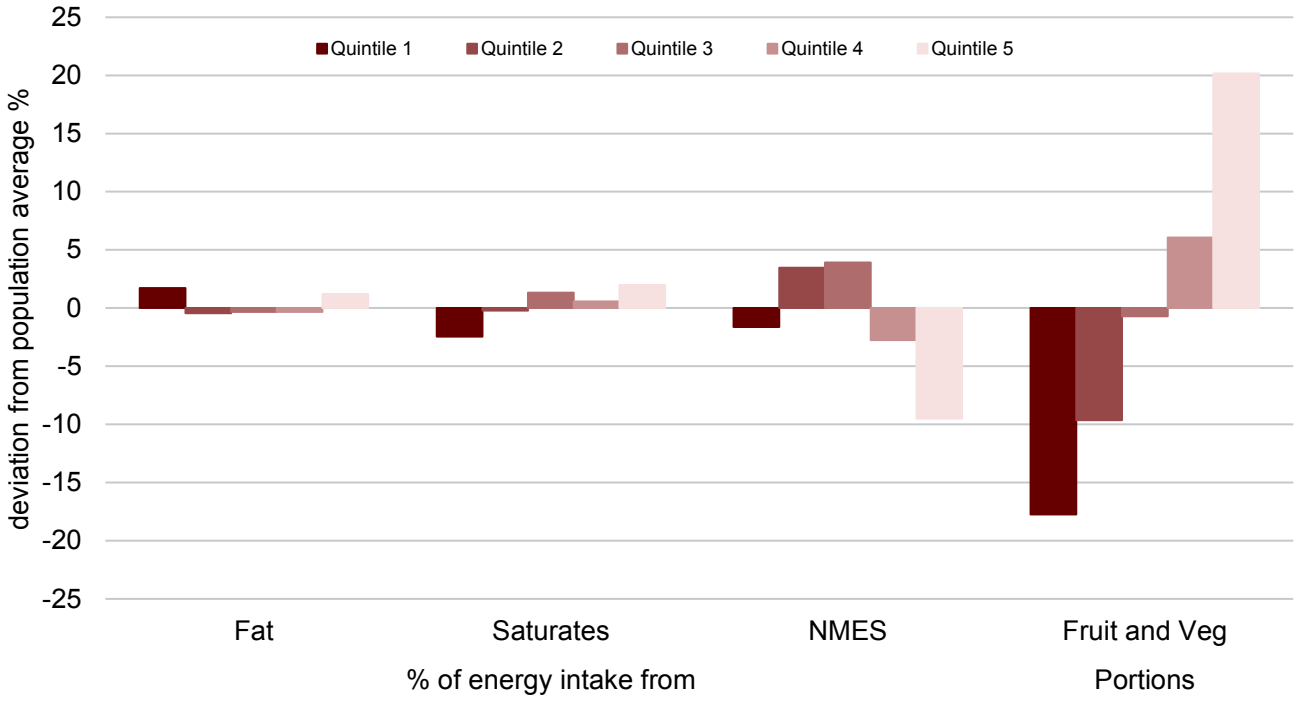
Average energy intake based on all food and drink purchases increased by 1.4% to 2173kcal per day in 2015. Average energy intake based on all food and drink purchases has fallen 9.8% between 2001-02 and 2015. Energy intake from food and drink recorded as eating out rose 6.1% in 2015 but has fallen by 23% since 2001-02.

There is a long term downward trend in energy intake since the early sixties (visible in all components of the chart). Combining year on year changes of estimates on like bases suggets that average energy intake per person is 32% lower in 2015 than in 1974.

Lowest income decile households purchased 1.2% less food for the household than the UK average in 2015, when measured by energy content.

Source: *Family Food 2015, Defra, March 2017.*

6.7: UK dietary indicators by equivalised income[13]



The percentage of food energy derived from total fat does not vary much with income.

Food energy derived from saturated fatty acids is 4.5% higher in quintile 5 than quintile 1.

The percentage of food energy obtained from NMES[14] tends to fall when income rises.

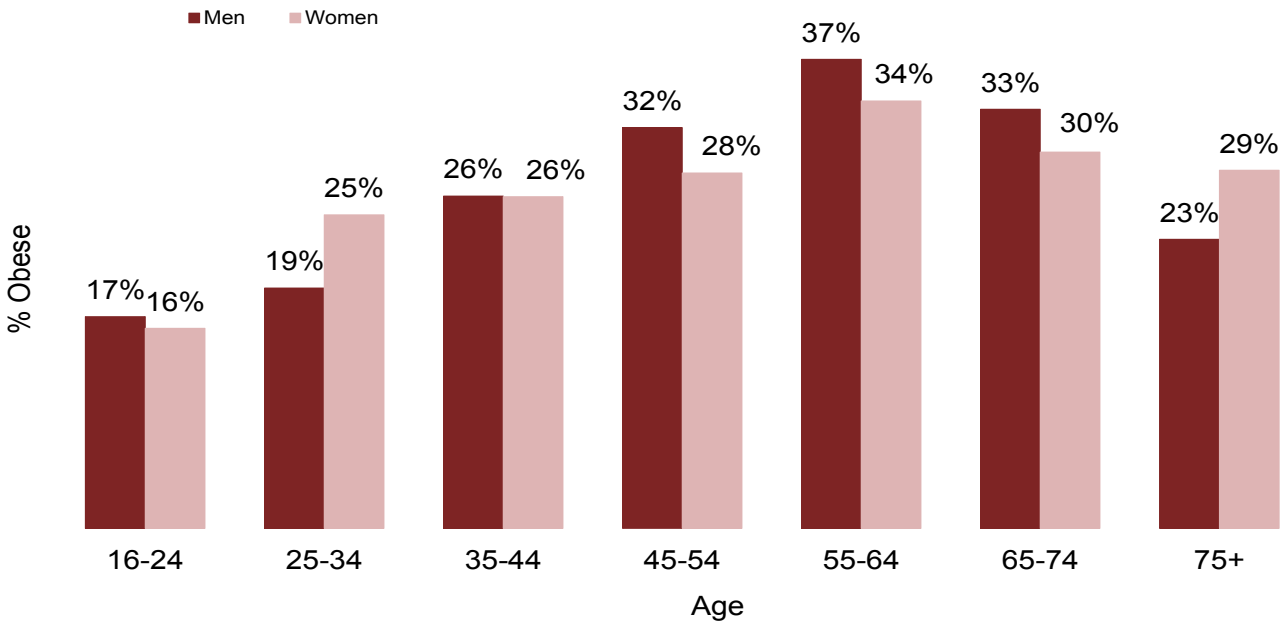
Fruit and vegetable purchases rise strongly with income, 46% more being purchased in the highest income quintile compared to the lowest in 2015.

In 2015, the highest income quintile purchased an average of 4.7 portions of fruit and vegetables per day. The lowest income quintile purchased 3.2 portions per day. (see Chart 6.2 for trends). The average across all households is 3.9 portions per day.

Source: *Family Food 2015, Defra, March 2017.*

[13] Household income adjusted for size and composition using the OECD scale
[14] NMES – free sugar not bound in foods e.g. table sugar, honey and sugars in fruit juices, but excluding milk sugar.

6.8: Levels of adult obesity in England[15]



Health problems associated with being overweight or obese are estimated to cost the NHS around £5bn 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 2015 26% of adults were obese and a further 36% were overweight.

The obesity rate across all men was 27% in 2015, having increased on 2014. The percentage of overweight (including obese) men was 68% in 2015 an increase on 2014. The obesity rate in men aged 65-74 increased 22% in 2015 and increased 47% in men aged 16-24.

The obesity rate across all women was 27% in 2015. The obesity rate in women aged 45-54 decreased 12% in 2015.

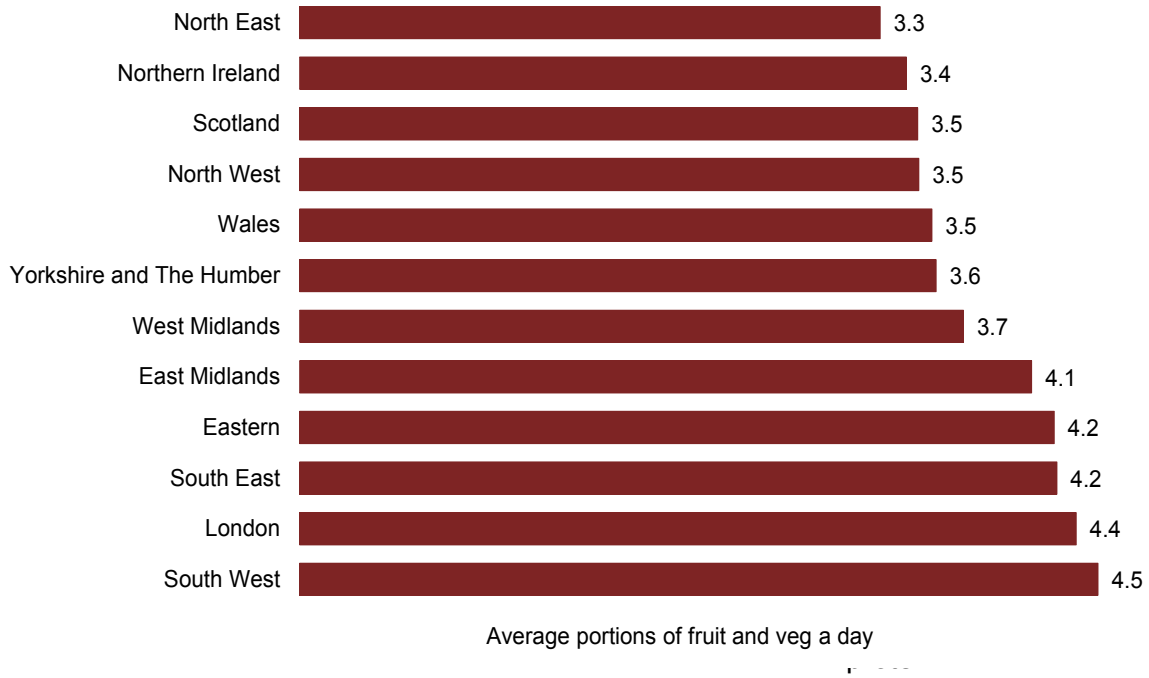
The OECD[16] reported in 2011 that the prevalence of overweight and obesity in adults exceeds 50% in 19 of 34 OECD countries.

Source: *Health Survey for England 2015, NHS Information Centre.*

[15] 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.

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

6.9: UK Regional household consumption of fruit and vegetables, 2013-2015[17]



Within England, household purchases of both fruit and vegetables were lowest in the North East.

Scotland and Wales had the same combined total purchases of fruit and vegetables (excluding potatoes) at 3.5 portions per person per day. Northern ireland was slightly lower at 3.4 portions. Purchases of fruit were lowest in Wales.

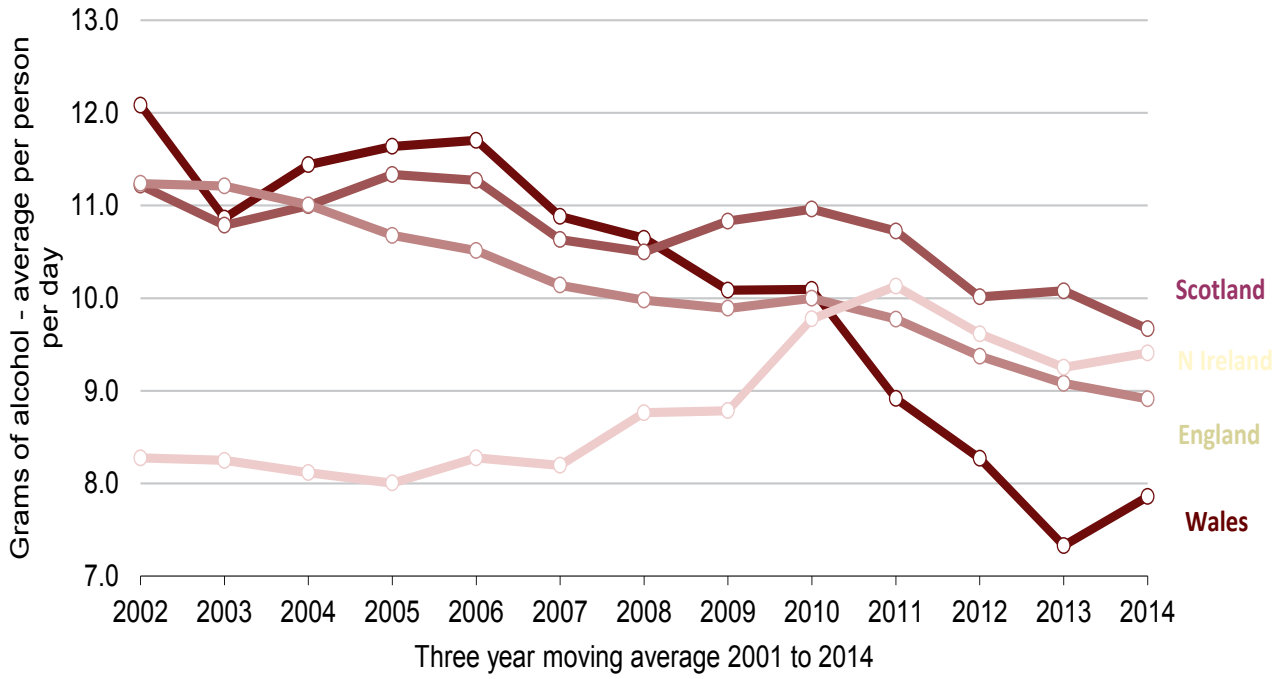
Much of the regional variation may be explained by differences in income. In general, purchases of fruit and vegetables increase with income (see Chart 6.7).

Waste and inedible content are not taken into account here. See Chart 6.2 for trends over time and Chart 5.2 for estimates of edible household waste.

Source: *Family Food 2015, Defra, March 2017.*

[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

6.10: UK Trend[18] in average alcohol intake (including eating out)



Care needs to be taken in assessing alcohol estimates - as they are particularly susceptible to under reporting by respondents (see 6.6).

Averaged across 2013 to 2015, alcohol intake per person fell in England and Scotland but Wales and Northern Ireland increased. Wales showed the greatest increase at 7.3% to 7.9 grams per person per day.

Over the last 10 years alcohol intake has been on a downward trend in England and Wales but intake has increased in Wales most recently. In Scotland, intake has fluctuated but is little changed whilst in Northern Ireland intake has increased by 16% over the same period.

Within England in 2015, average alcohol intake was highest in the North East and lowest in London.

In Scotland and Wales in 2015, over 80% of alcohol intake was from household purchases.

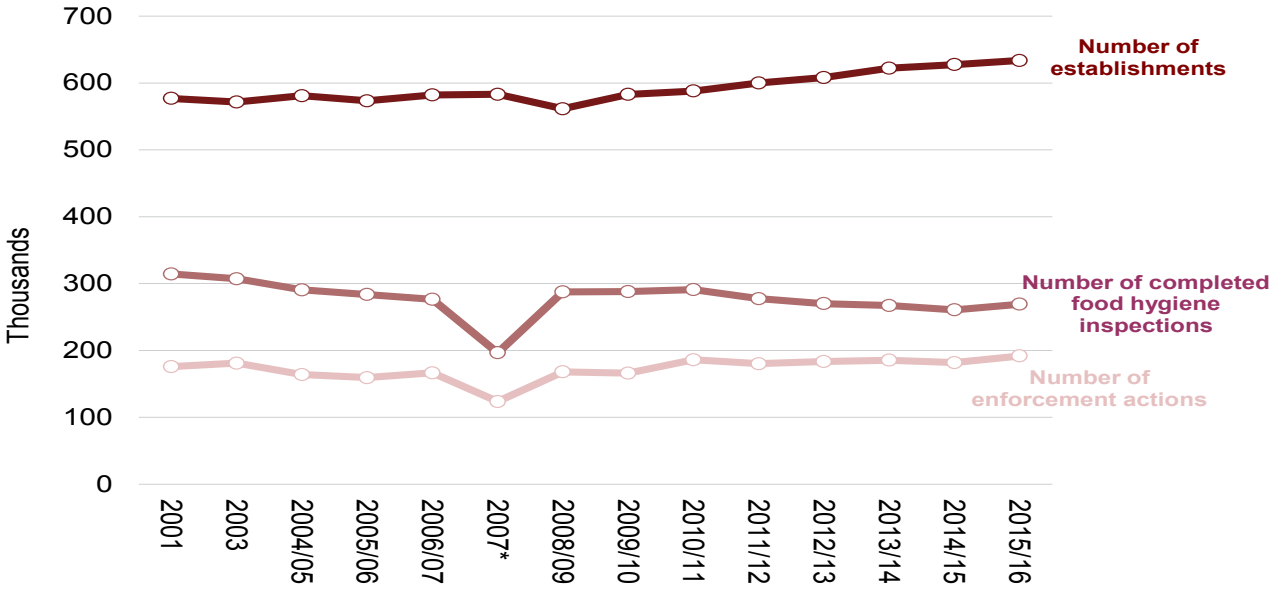
The Department of Health is responsible for Government health policy on alcohol misuse. Regular drinking above the recommended daily limits significantly increases the risk of ill health.

Source: *Family Food 2015, Defra, March 2017.*

[18] Three year moving average, 2012 to 2014

7 Safety and Confidence

7.1: UK Inspections and enforcement actions of food businesses to 2015-16



** 2007 data is for 9 months only*

The 434 UK Local Authorities (LAs) are responsible for inspections and enforcement of food hygiene and food standards legislation. Submitted returns are monitored, audited and reported on by FSA.

There were 663,638 food establishments under LA control at 31 March 2016, 1.0% up on 2014-15.

522,428 interventions were carried out by LAs in 2015-16 (404,551 food hygiene and 128,364 food standards), an increase of 0.4% on the reported number carried out in 2014-15 (520,352).

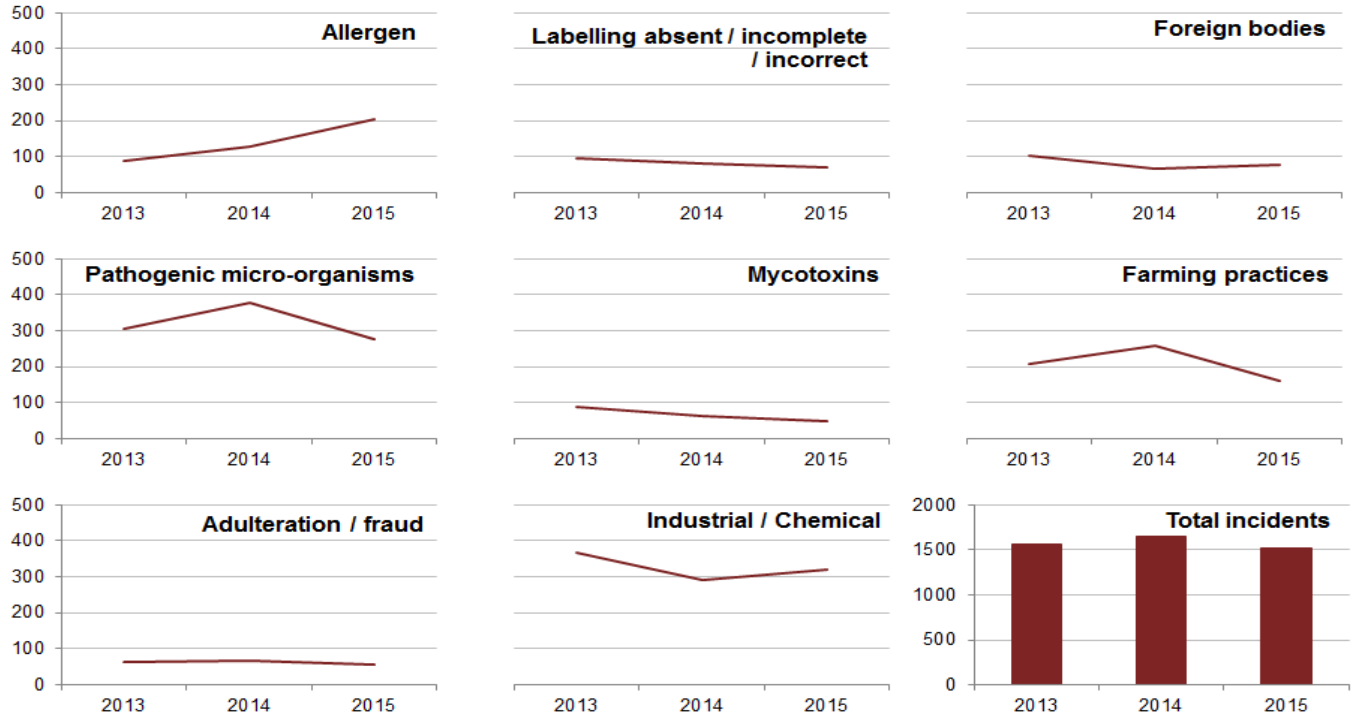
191,719 formal enforcement actions were carried out in 2015-16, an overall increase of 5.4% from 2014-15 (181,877). 5.0% of establishments were not yet risk rated in 2015-16, an increase of 0.1% on 2014-15.

The proportion of rated establishments achieving 'broad compliance'[1] increased from 93.0% to 93.5%.

Source: *Food Standards Agency Board report on monitoring of food law enforcement activity, 2015-16.*

[1] LAs assess compliance in accordance with statutory guidance set out in the Food Law Codes of Practice for England, Wales and Northern Ireland at www.food.gov.uk/enforcement/codes-of-practice/food-law-code-of-practice-2015 and for Scotland at www.foodstandards.gov.scot/food-law-code-practice-2015. Scores are given for three compliance criteria: hygiene; structure; and confidence in management. Businesses that score not more than 10 under each of these three criteria are defined as 'broadly compliant'. This is equivalent food hygiene ratings of 3 to 5 under the Food Hygiene Rating Scheme operating in England, Wales and Northern Ireland.

7.2: Contamination incidents investigated by the Food Standards Agency (FSA) by RASFF category[2], UK 2013-2015



In 2015, the Food Standards Agency and Food Standards Scotland were notified of and investigated 1,514 foods, feed and environmental contamination incidents in the UK. The overall number of incidents was similar to those seen in recent years. However, in most categories, the numbers of incidents differ considerably from year to year.

In 2015, 67% of the pathogenic micro-organism incidents were related to either Salmonella species or Escherichia coli. However, 49 of the 75 E. coli incidents resulted from shellfish bed monitoring. There are many different types of E. coli. Some live harmlessly in the intestines of humans and animals, whereas pathogenic strains can cause illness if contaminated food is consumed. High counts of E. coli can signify a risk that faecal pathogens are present and are used as an indicator of poor hygiene conditions but are not necessarily harmful.

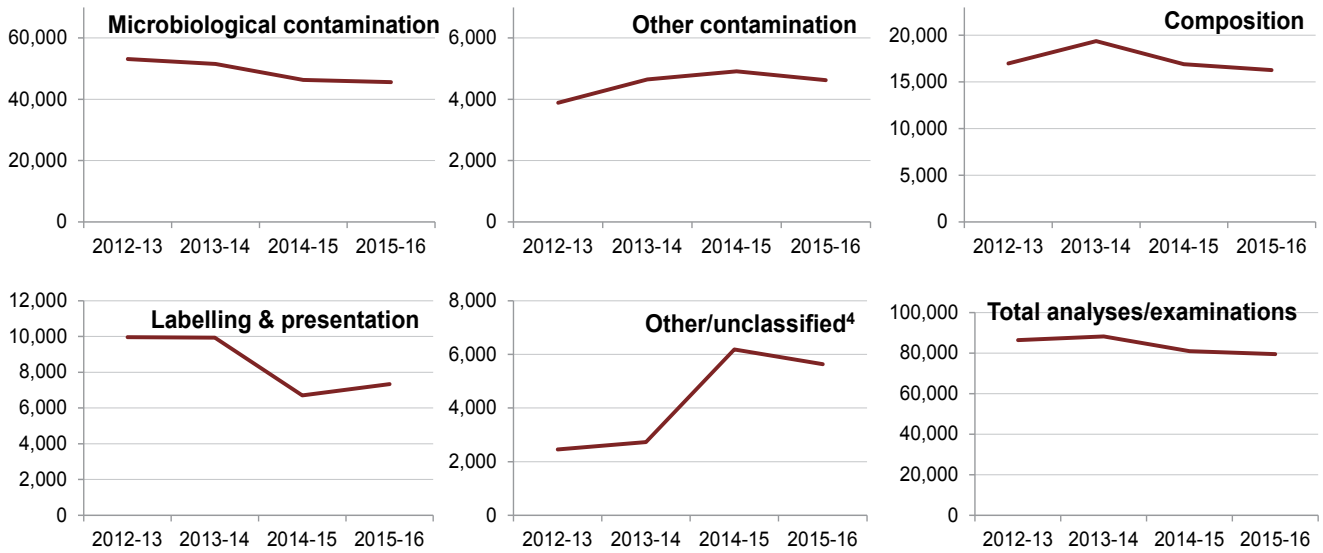
In 2015, fires were the cause of almost all chemical contamination (other) incidents. The number of allergen incidents has increased from 89 in 2013 to 206 in 2015. This may be related to new rules on providing allergen ingredients information from December 2014.

Following a change in reporting procedures, the frequency of veterinary medicine incidents in 2014 and 2015 is much higher than in 2013. This is due to more notifications from on-going surveillance programmes since late 2013.

Source: *Annual Report of Incidents, 2015 (FSA).*

[2] Rapid Alert System for Food and Feed (RASFF) categorisation is used for notifications to the European Commission. The long time series data in the 2014 Pocketbook is no longer available.

7.3: Analyses/examinations carried out on official samples



[4] In 2015-16, in some cases the analysis type could not be mapped to the LAEMS analysis type and these samples have been added to the "Other/unclassified" category.

Official samples are those analysed/tested by official control laboratories. The FSA Local Authority Enforcement Monitoring System (LAEMS) collects data on official samples.

A total of 67,165 official food samples[5] were reported to be taken in 2015/16, a decrease of 1.9% from 2014/15 (68,4717).

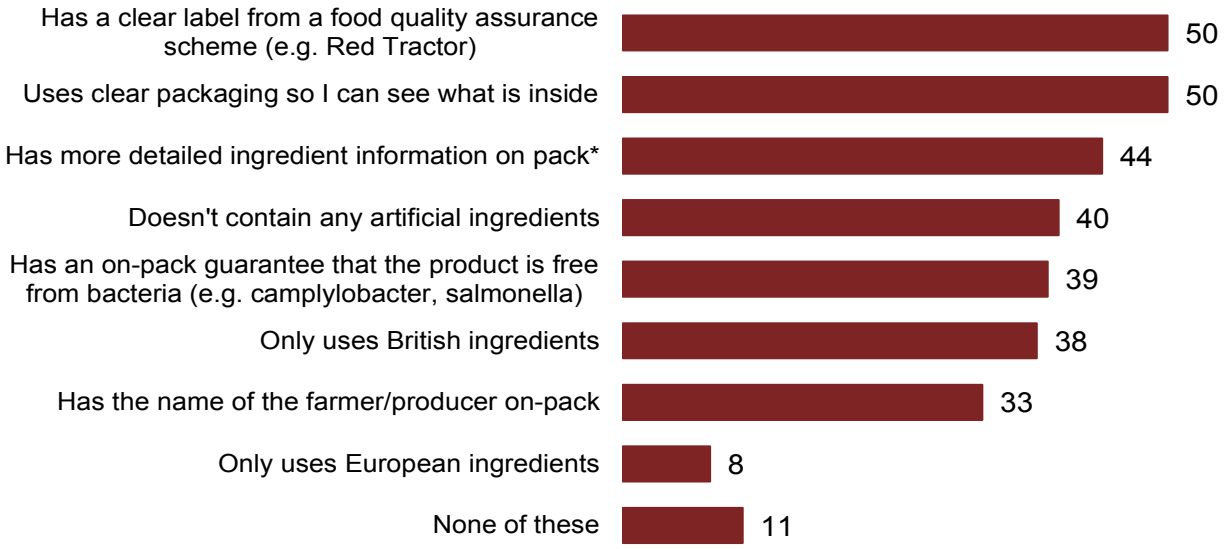
There has been a reduction since last year for most types of analysis/tests. The rise in overall sample numbers and in compositional analysis in 2014/15 may have been a reflection of the increased activity in monitoring food fraud following the horse meat incident, and the decline over the past year, a relaxation in this activity.

Those Local Authorities that record their food samples on the UK Food Surveillance System (UKFSS) have the option to provide their sampling return from that system. There continued to be issues with extracting data from UKFSS on the analyses carried out on some samples. The figures provided may therefore be subject to under-reporting. Also, in some cases the analysis type could not be mapped to the LAEMS analysis type and these samples have been added to the "Other/unclassified" category.

Source: *LAEMS Annual reports 2012-13, 2013-14, 2014-15, FSA.*

[5] Official samples are those analysed/tested by official control laboratories. The FSA monitoring returns only collect data on official samples.

7.4: Factors that would make people trust food and drink companies/brands more, March 2015



** eg where ingredients are sourced, how the ingredient is used*

EU regulation requires that country of origin details be provided for various food products, primarily unprocessed meat and fruit and vegetables. The country of origin must also be provided 'whenever its absence is likely to mislead consumers as to the true country of origin'.

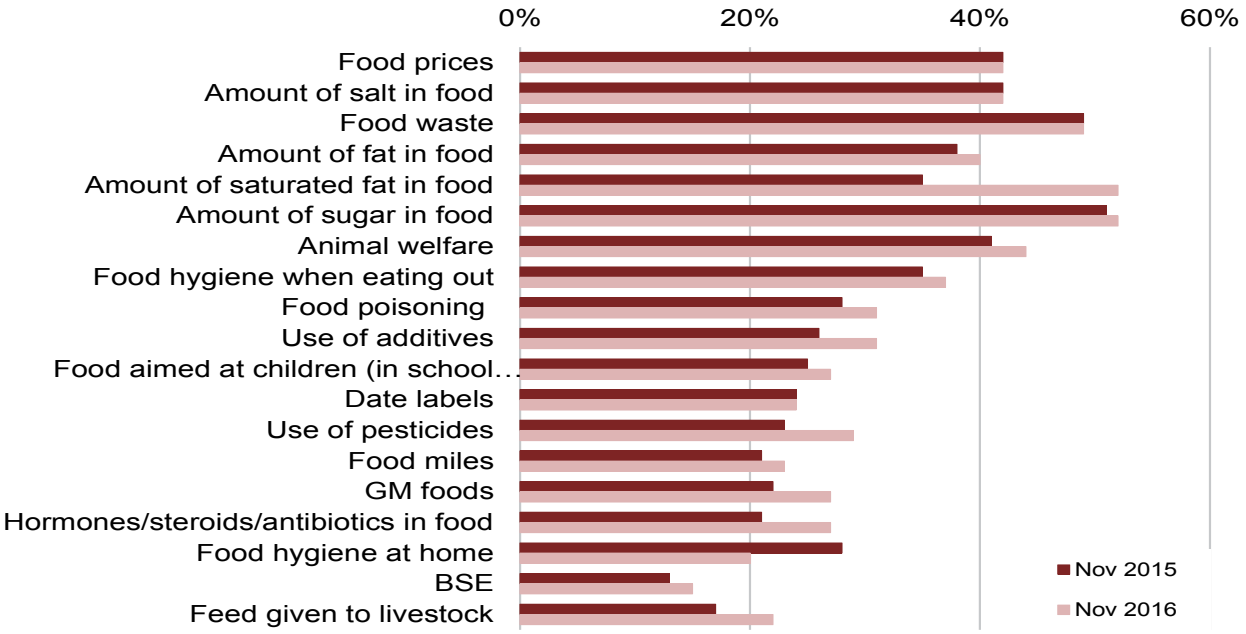
Reflecting this and a voluntary initiative by Food and Drink Federation members, fresh meat, poultry and fish now carry origin details, highlighting a British provenance when applicable. Referencing British origin is clearly worth doing as 38% of people say only using British ingredients encourages their trust in a product. This falls to 8% for European ingredients.

While the experiences of for example Weetabix and Hovis show that commitment to British ingredients can pose challenges in the event of poor crops, highlighting such ingredients where they are present should benefit operators.

However, nearly half of British consumers say that more detailed ingredient information, such as the origin or how it is used, on-pack would encourage them to trust a food/drink company or brand more. This suggests significant scope for operators to build trust among consumers by providing more information on ingredients, where they come from and why they are used.

Source: *Consumers' Food Safety Concerns Report, UK, May 2015, Lightspeed GMI/Mintel.*

7.5: Percentage of people concerned about certain food issues, 2015-16



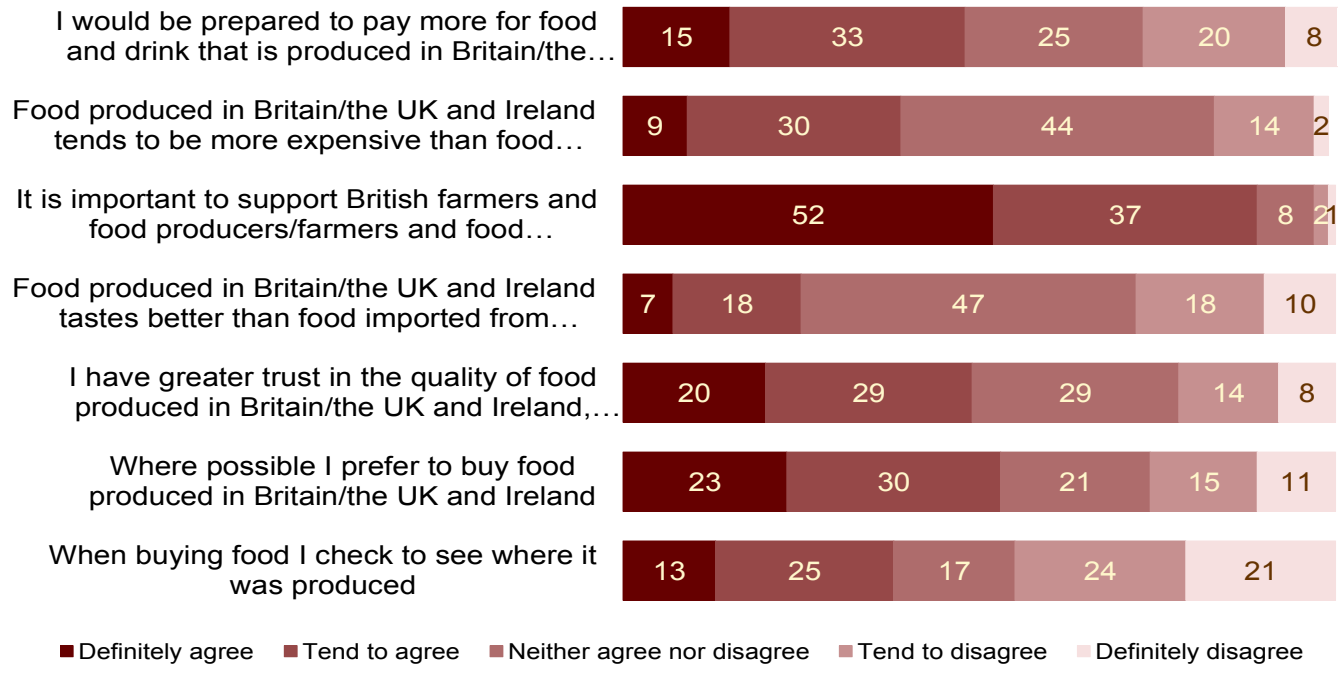
The main food issue of concern to people was the amount of sugar in food, with 52% concerned in November 2016, an increase from 51% in November 2015. Food waste was the second highest concern to people, at 49%.

Nearly all food issues showed an unchanged or higher level of concern than the previous year. The only exception to this were concerns about food hygiene at home.

Food prices, salt, sugar, fat, waste and animal welfare were the issues where more than 40% of people were concerned. In November 2016, 49% of respondents reported concerns over food safety in UK restaurants, pubs, cafes and takeaways compared to 43% over food safety in shops and supermarkets.

Source: *Biannual public attitudes tracker (FSA) November 2016*

7.6: Percentage of people concerned about where food is produced



Whilst 38% of respondents agreed (definitely agreed or tended to agree) that when buying food they check to see where it was produced, a higher proportion (45%) disagreed.

Half (53%) of all respondents agreed that where possible they prefer to buy food produced in Britain/the UK and Ireland. Those more likely to definitely agree were women (25% compared with 21% of men).

Around half of respondents (49%) had greater trust in the quality of food produced in Britain/the UK and Ireland, compared with food imported from overseas.

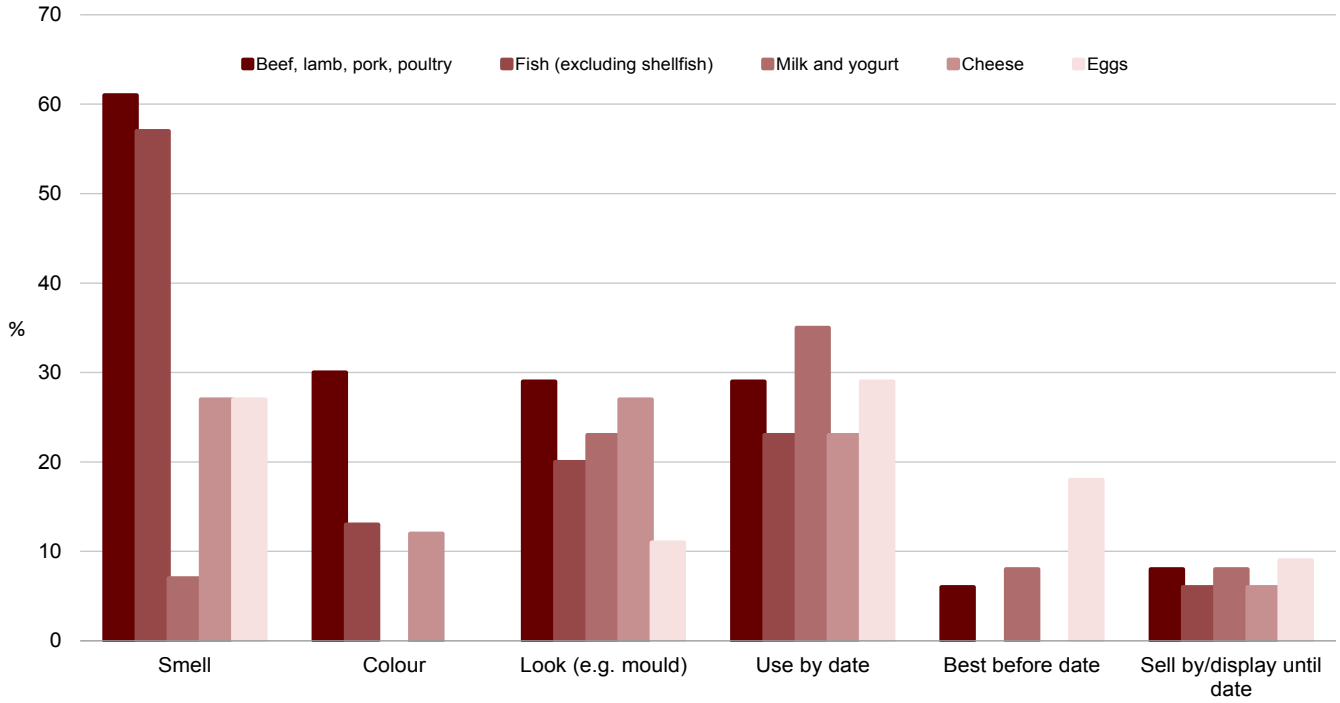
Eighty-nine per cent of respondents agreed with the statement that it is important to support British farmers and food producers/farmers and food producers in the UK and Ireland.

Almost half (47%) of respondents said that they would be prepared to pay more for food and drink that is produced in Britain/the UK and Ireland.

Source: *Food and You Survey 2016*[6]*, (FSA).*

[6] Survey sample was a stratified, clustered random probability sample of private UK Households.

7.7: Methods used to assess whether food is safe to eat



FSA guidance is that even if a food looks and smells fine, the use by date is the best indicator of whether it is safe to eat. In 2016, three quarters of the survey respondents cited use by dates as an indicator of whether food was safe to eat.

How food smelled was the method used by between 57% and 71% of respondents to indicate whether meat, fish, milk and yogurt were safe to eat.

How food looks e.g. the appearance of mould, was the most common practice for assessing whether cheese is safe to eat.

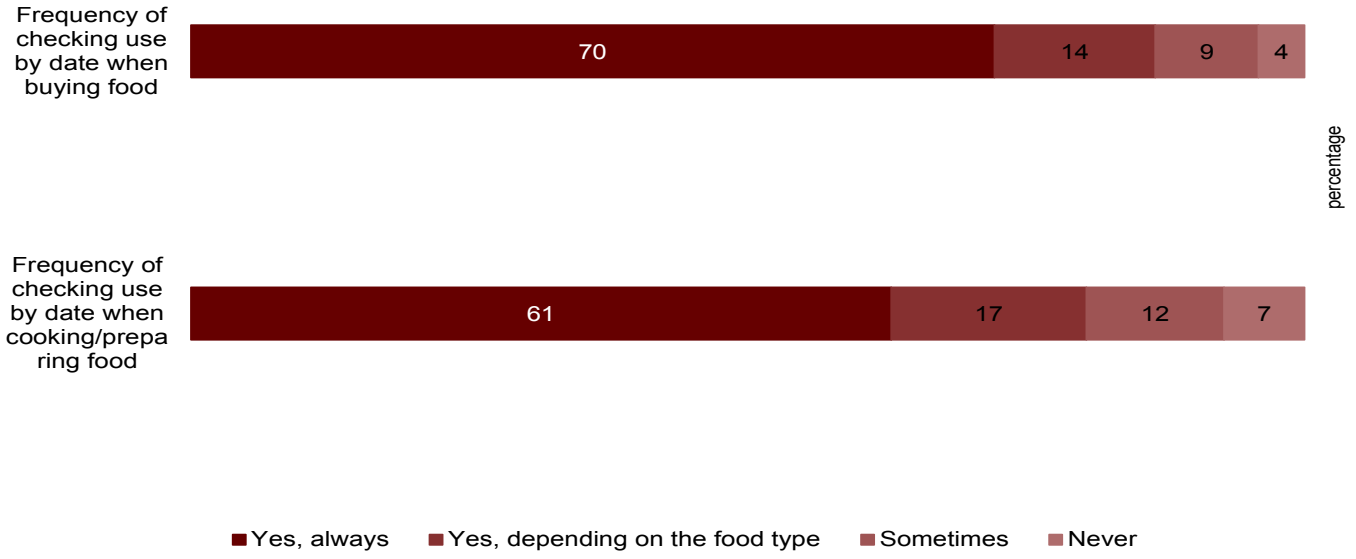
17 % of respondents said that their preferred method for assessing whether eggs were safe to eat was whether the eggs floated in water.

Promoting food safety and protecting public health are central strategic objectives of the Food Standards Agency (FSA).

Source: *Food and You Survey 2016*[7]*, FSA*

[7] Survey sample was a stratified, clustered random probability sample of private UK Households.

7.8: Frequency of checking use by dates



Respondents in households with children were more likely than those in adult-only households to always check use by dates before cooking. For example, 70% of respondents in households with children aged under 6 always checked use by dates before cooking compared with 60% of households without young children.

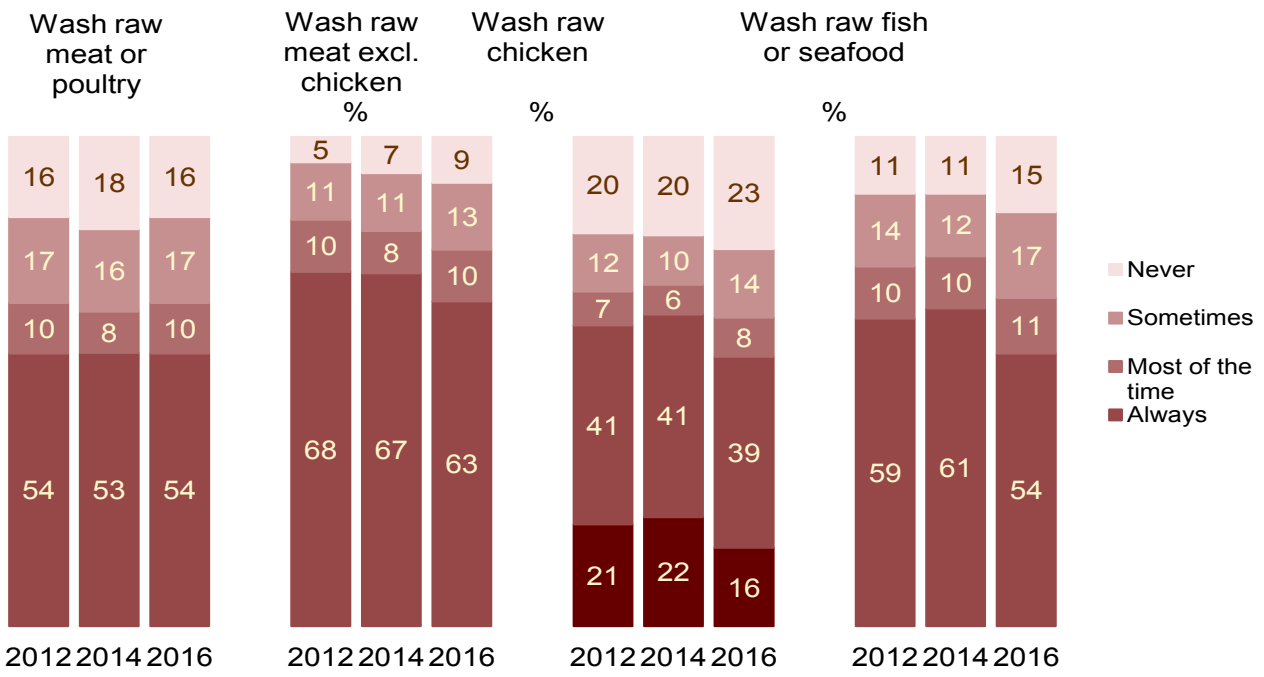
Thirty-one per cent of respondents said they found labels on food products difficult to read because of the size of the print. The proportion reporting difficulty in reading labels is generally associated with age: 57% of people aged 75 and over reported at least some difficulty.

Women were more likely to always check use by dates when shopping (76% compared with 64% of men) and before cooking or preparing food (64% compared with 58% of men).

The FSA recommends that foods should be consumed before the specified use by date as it could be dangerous to eat food after this, even though it might look and smell fine. The FSA also recommends storing opened foods in the fridge and using within two days, unless the manufacturer's instructions state otherwise.

Source: *Food and You Survey 2016, (FSA).*

7.9: Frequency of washing raw meat, fish or poultry[8]



Respondents were more likely to report washing vegetables that were going to be eaten raw; 63% said that they always did, 23% said they did this at least some of the time and 9% said they never did this.

Half (54%) of respondents reported that they always washed fruit which was going to be eaten raw whilst 16% of respondents reported that they never washed fruit.

The FSA recommends that, unless packaging around vegetables says it is 'ready-to-eat', these foods should be washed, peeled or cooked before consumption. Vegetables which are going to be eaten raw should be washed to help minimise the risk of food poisoning (for instance from soil).

Source: *Food and You Survey Wave 2 (2012), Wave 3 (2014), Wave 4 (2016), FSA*

[8] The FSA recommends that raw meat and fish are not washed prior to cooking due to the risk of cross contamination from water splashing on the sink, surrounding surfaces, and utensils, which may come into contact with ready to eat food.

Glossary

Economic Definition of food and agri-food sector

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:	46.3 (excluding 46.35) + 46.17
Food Retailing:	47.2 (excluding 47.26) + 47.11 + 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.

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.

Low income
The most commonly used threshold to determine relative low income is having an income which is less than 60% of the median in that year.
Absolute low income is considered to be having an income which is less than 60% of the median in that year, adjusted by the inflation level of (currently) 2013-14.

Equivalised income
The income a household needs to attain a given standard of living will depend on its size and composition. Equivalisation is a means of adjusting a household's income for size and composition so that the incomes of all households are on a comparable basis.

Small and Medium Enterprises (SMEs)
Outside of these statistics, the definition of a SME can depend upon several factors, including turnover. For these statistics, a 'small' business is a private sector business with fewer than 50 employees. A 'medium' business is a private sector business with between 50 and 249 employees.

A 'micro' business is a private sector business with between 1 and 10 employees, which, for the purpose of these statistics is incorporated within the 'small' category.