UK Government

UK Food Security Index 2024

May 2024

Please use this QR code to access the online version of the UK Food Security Index 2024 on GOV.UK, and access the sources within the Index.

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Introduction

This is the first release of the new annual UK Food Security Index. The index gives an assessment of the state of UK food security 2023 to 2024, using the latest available evidence. The index is UK-wide and led by Defra, working with devolved administrations. The index is designed to complement the three-yearly UK Food Security Report (UKFSR) which is a comprehensive analysis of statistical data relating to UK food security. The UKFSR 2021 was the basis for government's assessment that the UK has a high degree of food security due largely to sustained healthy production and positive trends in global output growth. The index measures year-on-year change, building on the UKFSR evidence base but also taking into account wider intelligence and forecasts, and policy developments.

The index captures key indicators that have been selected from the wider set of indicators from UKFSR 2024 (due to be published later this year) because they:

- reflect broad trends of a key food security theme
- capture key shorter-term trends that change year-on-year and are of particular interest
- rely on data that meets the standard of Official Statistics or is high quality, is UK-wide and published annually

The indicators are all drawn from existing statistics published annually. The majority of indicators relate to 2023. However, due to the rolling programme of publication of statistics, the latest available data for some indicators relates to 2022. When available, more recent data will be published via the UK Food Statistics Pocketbook. Where data is available, indicators will be shown for the last 10 years in line with the index's focus on short to medium term trends.

The index considers 9 indicators across a range of areas. This ensures that food security is not reduced to a single metric or theme. In practice it is shaped by a range of interacting factors such as supply, demand, international and domestic trends, inputs and outputs, perception of food safety and consumer confidence. The assessment of food security below is an overall qualitative assessment based on the combination of the direction of travel of each of the indicators in the index, as compared to the previous year, with the baseline in future years set by the previous index. Some consideration is given to any significant emerging trends not captured in the published data.

Food Security Index overall assessment categories

Broad reduction in risks
Significant reduction in risks across multiple indicators or some reduction in risks across the majority of the indicators or major reduction in risks in one or more indicators.

Some reduction in risks
Significant reduction in risks in one or more indicators, or some reduction in risks across multiple, while the rest remain broadly stable.

Broadly stable
No or little change across the indicators or a mix of some reduction and some increase in risks.

Some increase in risks
Significant increase in risks in one or more indicators, or some increase in risks across multiple, while the rest remain broadly stable.

Broad increase in risks
Significant increase in risks across multiple indicators or some increase in risks across the majority of the indicators or severe increase in risks in one or more indicators.

To see the evidence and analytical base in more detail, see the individual analysis of the indicators in the pages that follow the overall assessment.

Overall assessment of UK food security

Summary

Taking a holistic view across the indicators in the index shows **a broadly stable picture** as the UK comes out of a challenging period of global supply chain shocks. However, this should be seen in the context of **longer-term risk from climate change**: an exceptionally wet winter and spring in 2024 poses significant challenges to some domestic production. See below the assessment across the indicators:

Indicator	Assessment
Indicator 1: Global food supply for human consumption	Broadly stable
Indicator 2: Share of global cereals and soyabeans internationally traded	Broadly stable
Indicator 3: Production-supply ratio	Broadly stable
Indicator 4: Agricultural total factor productivity	Some reduction in risks
Indicator 5: Agricultural land use	Broadly stable
Indicator 6: Energy and fertiliser prices	Some reduction in risks
Indicator 7: Business investment	Broadly stable
Indicator 8: Biosecurity risk	Broadly stable
Indicator 9: Consumer confidence in food supply chain actors	Broadly stable

Strong production and trade

The UK's food security is built on a foundation of strong domestic production, complemented by imports from diverse sources. UK farmers produce some of the best food in the world and the UK Government will always seek to champion and protect the UK's high production standards, including in new free trade agreements, safeguarding our ability to maintain high environmental, animal welfare and food standards. For some products, such as rice, bananas, tea or cocoa, the UK's climate is unsuitable for cultivation, and it will always rely on imports. For many others, the UK may not be fully self-sufficient in all product categories or across the whole year. Therefore, a balance between domestic production, and imports that are held to our high food standards, is integral to UK food security. The UK maintains domestic production of all food available in the UK at around 60% of consumption and indigenous food at 73% (2022 figures) and continues to see rising productivity, while there is strong global production and trade of food that the UK can access through its diverse supply chains. Imports from diverse sources make a positive contribution to UK food security as they support the UK's ability to respond flexibly to supply shocks, both domestically and internationally, such as the disruptions to global grain and oilseed markets caused by the Russian invasion of Ukraine.

Food security requires that consumers can have confidence in the food they buy, which in turn supports supply chain stability. Consumer confidence in most food supply chain actors to ensure food is safe has remained broadly stable in the UK since 2020. Where breakdowns are available, (data is only available for England, Wales, and Northern Ireland) confidence is highest in farmers, followed by shops and supermarkets.

Improving the short-term risk picture

The UK Government is not complacent about the risks to our food security, particularly those posed by increased international volatility, climate change and biodiversity loss. These risks have intensified in recent years and brought shocks to the wider supply chain. Inflated energy and fertiliser prices following Russia's invasion of Ukraine drove up production costs in 2022, creating a challenging business environment for the food sector. Fertiliser prices have been falling since late 2022 and there are early signs that the rise in energy prices being paid by UK businesses may be slowing, but both remain higher than they were before 2020.

In this challenging context, business investment in the food and drink manufacturing sector experienced a decline from 2020 to 2023 but has recently shown a small increase. The combination of these signs of recovery from a period of shock to the food system presents a reduction in risks to food security. Impacts on supply chains from geopolitical instability in the Middle East present risks, including some increased costs for inputs, but so far the impacts to UK food supply have been limited.

Longer-term trends that need to be mitigated and monitored

While some shorter-term supply chain risks appear to be moderating, the UK continues to face risks associated with longer term trends in climate and the environment that UKFSR 2024 will consider in detail. The winter and spring of 2023 to 2024 were exceptionally wet with potentially significant impacts on the UK's domestic production of some crops in 2024 and supply of some produce. For several of the months between October 2023 and March 2024, parts of the UK had monthly rainfall totals that were double the 1991 to 2020 monthly averages. As climate change drives more extreme weather both in the summer and the winter, the adoption of more climate resilient farming practices will become increasingly important. Through schemes across the UK, government is supporting farmers to invest in the equipment, technology and infrastructure needed for more sustainable and resilient food production. The schemes include the UK Government's Farming Innovation Programme, the Scottish Government's Agricultural Transformation Fund, the Welsh Government's rural small grant schemes, and the Department for Agriculture, Environment and Rural Affairs' (DAERA) in-development Capital Investment Measure in Northern Ireland.

The UK's trading relations mitigate domestic supply shock risks in the short term. The food group for which the UK is most reliant on imports is fruit and vegetables, producing 17% and 55% respectively of supply. A significant proportion of UK fresh fruit and vegetable consumption is either exotic or out of season, and supply can be affected where imports are from countries vulnerable to climate change and extreme weather.

With this in mind, the UK Government and devolved governments are supporting increased domestic production, particularly of UK fruit and vegetables, to strengthen our food security. There is a range of funding offers as part of the wider reform in agricultural policy open to fruit and vegetable growers across the UK. These include the UK Government's Sustainable Farming Incentive (SFI), the Scottish Government's Fruit and Vegetable Aid scheme, the Welsh Government's Horticulture Development and Start-up Schemes and DAERA's in-development Horticulture Sector Growth Support Scheme in Northern Ireland. These schemes help growers across the UK to deliver improved environmental sustainability, and to increase productivity and innovation.

Through a range of reforms, the UK Government and devolved administrations are driving the agricultural transition to deliver complementary outcomes of the regeneration of nature and food productivity. These outcomes can and must go hand in hand. Healthy soil, biodiversity, abundant pollinators and clean water are some of the foundations of food security and a thriving, resilient agriculture sector over the long term. Given the significant changes the UK is undertaking it is important that we monitor the impacts of any changes on food production. This annual index will allow us to remain agile in monitoring any trends.

Increased food security will also rely on maintaining the UK's robust and responsive biosecurity, particularly as climate and health risks interact. The UK's approach to biosecurity is internationally recognised for delivering the highest standards of protection from pests, disease and invasive non-native species. In response to recent unprecedented outbreaks of Highly Pathogenic Avian Influenza (HPAI) H5N1 between October 2021 and February 2024, the UK Government stood up its well-established outbreak structures to control and eradicate disease, restore normal trade, and assist local communities' recovery. The UK has self-declared zonal freedom from HPAI for Great Britain with effect from 29 March 2024, following the UK declaring on behalf of Northern Ireland on 31 March 2023. The virus is still circulating at low levels in wild birds in Great Britain and Europe (with some continued outbreaks in poultry and other captive birds in other European countries) and all bird keepers should remain vigilant for signs of the disease. Government will continue to work to limit the impacts for the poultry sector.


ENGLISH CARROT
60p PER POUND
1·32 PER KILO
BRAMLEY COOKING APPLES
80p
1·76 PER
LOCAL FLAT MUSHROOMS
1·80 PER POUND
3·96 PER KILO
CHERRY VINE TOMATOES
1·99 POUND
4·38 KILO
BROCCOLI
1·20
PER POUND
SWEET VINE TOMATOES
99p
2·18
KILO

Indicator 1
Global food supply for human consumption

Figure 1: Global food supplies available for human consumption
Source: FAO Food Balances

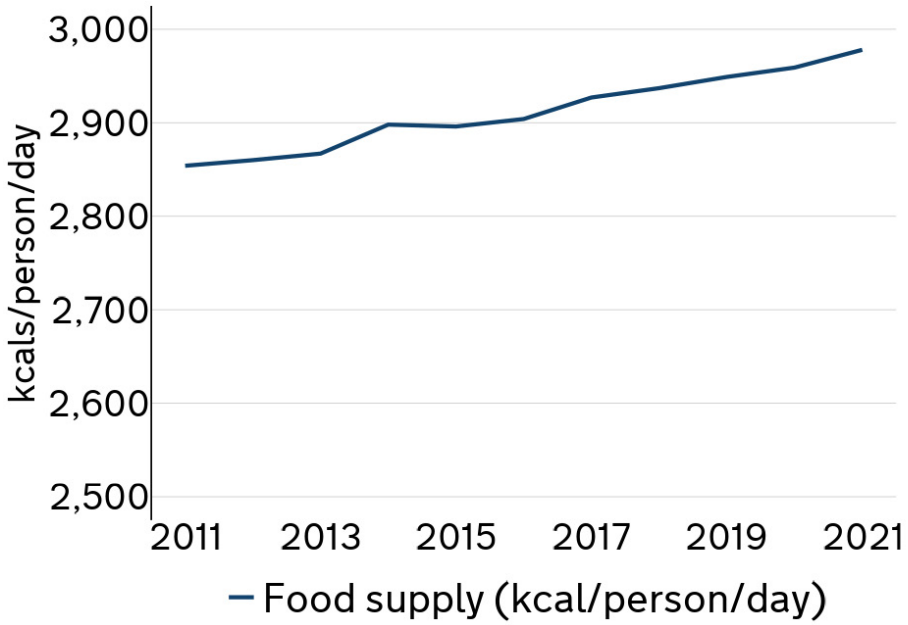
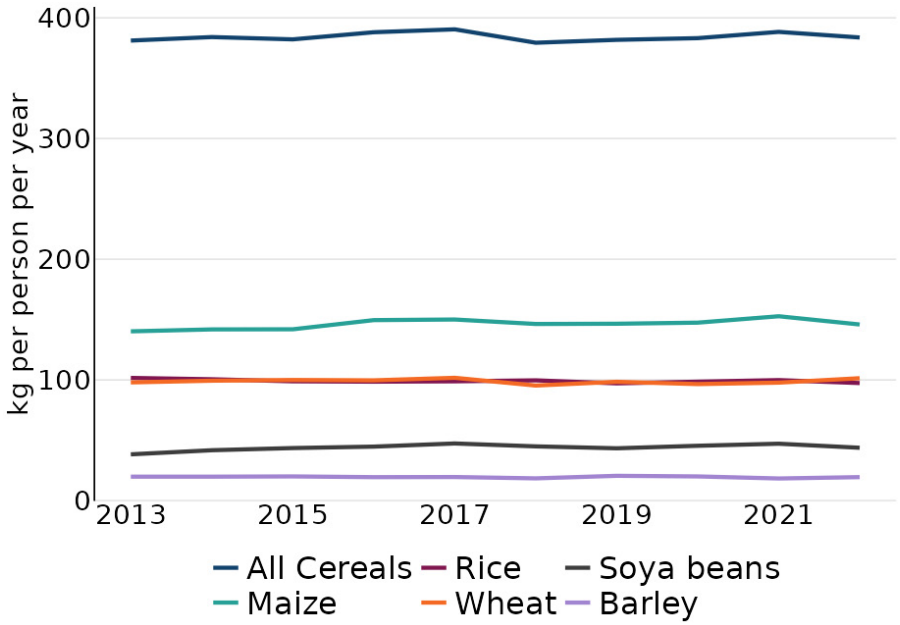


Figure 2: World cereals & soyabean production per capita
Source: FAO Crops and Livestock Products



UN Population estimate used to calculate 2022 per capita production.

Rationale

This indicator shows the global food supplies available for human consumption in calories per person per day (figure 1). It represents the amount of food produced and stocks minus food used for other purposes (such as animal feed, seed, food put to manufacture for food use and non-food uses) and losses during storage and transportation (FAO Food Balance Sheets). It is therefore a useful indicator of the global availability of food on which UK food security is dependent.

Assessment

Between 2020 and 2021 food supply (figure 1) increased by 19 calories per person per day, indicating a **broadly stable** trend of global food supply which has been increasing at a steady pace.

Commentary

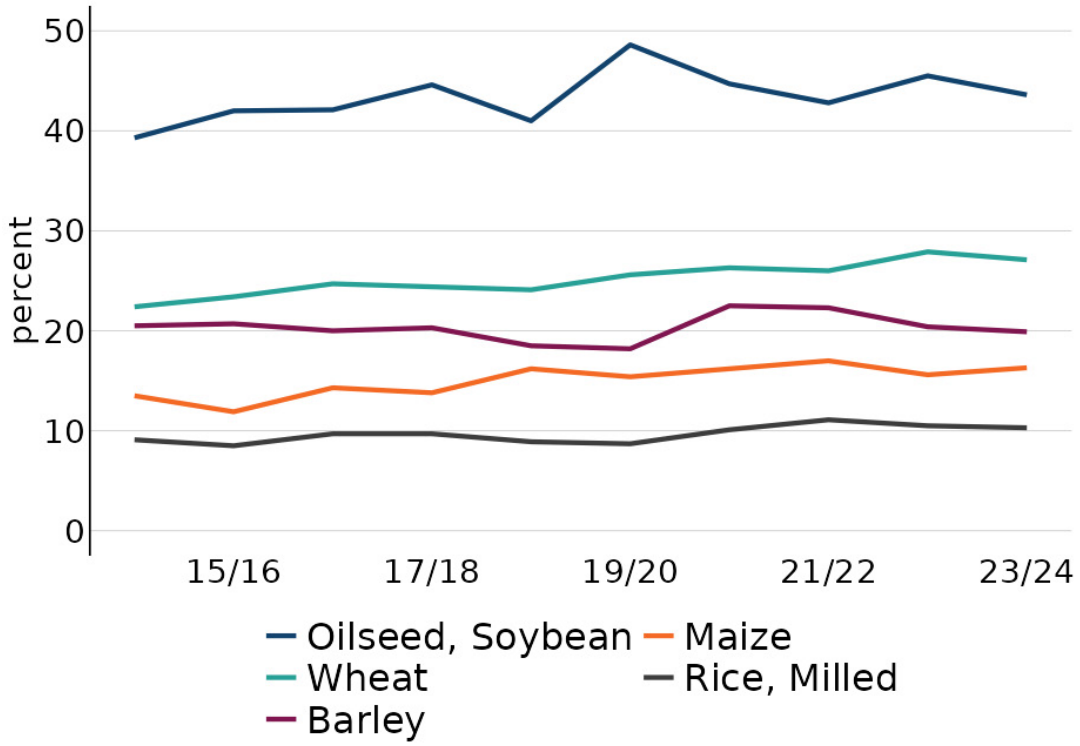
There is enough food available to feed the current global population (2978 kcals per person per day which exceeds the recommended average of 2500kcal for men and 2000kcal for women). The 2020 to 2021 trend is consistent with the trend of increases over the previous decade, which from 2012 to 2021 added up to an increase of 118 calories per person per day. However, this gradually improving picture needs to be balanced with risks to food security that will be discussed in more detail in UKFSR 2024. Sufficient supply at the global level does not translate into food security for all. It is estimated that in 2022 735 million people were undernourished and 900 million were severely food insecure, representing 9.2% and 11.3% of the world population respectively (FAO Food Security Indicators).

The largest contributors to global supply are cereals at 43.3% in 2021 which is a reduction from 44.6% in 2012. Other significant contributions were from vegetable oils 10.5%, sugar and sweeteners 7.8%, meat 6.8% and milk 5.5%. Sufficient calories do not necessarily equate to availability of the right mix of calories globally; the world consumes too few wholegrains and fruit and vegetables, which can cause long term health problems (Lancet). The calorific contribution to the rise in global food supply between 2012 and 2021 was mainly driven by foods other than cereals: milk, palm oil, groundnuts, poultry meat and soyabean oil all contributed more to the increase in calories than wheat which made the largest contribution of any cereal.

Cereals remain an important part of global diets and are also a significant component in animal feed. Cereals and meat combined contributed 57% of global protein supply. Cereals production (see figure 2 for global volumes of production per capita) remains stable although there is growing competition between agricultural production for food and use for biofuels. In 2022, biofuels accounted for 16% of global maize production, and 17% of global vegetable oil production, compared to 15% and 13% respectively in 2014 (OECD FAO Agricultural Outlook Database). Rapid increase in meat consumption in Asia may increase the amount of production needed for animal feed, which is at 25% of global output (FAOSTAT Food Balances Database) and represents a less efficient use of calories than direct human consumption.

Indicator 2
Share of global cereals and soyabeans internationally traded

Figure 3: Percentage of global production internationally traded
Source: USDA PSD



Rationale

This indicator measures global trade in key cereals and soyabeans. Trade supports both the distribution and affordability of food globally by moving products from surplus regions with more suitable conditions to areas with less ideal conditions or higher demand and by spreading risks of supply shortages and price spikes. Cereals are the focus due to the importance of traded cereals for world food supply and soyabeans are an important source of animal feed.

Assessment

The percentage of global key cereals and soyabeans traded by volume remains **broadly stable**. In 2023 to 2024 there was a small average decrease of 0.1 percentage points (pp). Trends vary across globally traded commodities including key staples. In 2023 to 2024 the percentage of maize (+0.7pp) globally traded rose while the rate for rice (-0.2pp), barley (-0.5pp), wheat (-0.8pp) and soyabeans (-1.9pp) decreased between 2022 and 2023.

Commentary

The last decade saw overall growth in international trade of wheat (+4.7pp), soyabeans (+4.3pp), maize (+2.8pp) and rice (+1.2pp). The figure for barley (-0.6pp) indicates a negligible reduction in trade. This positive trend has been complemented by stable market concentrations for most key staples which have remained diverse. Between 2023 and 2024, wheat had the most diverse export supply, followed by rice, barley and maize. Soyabeans remain the exception with the least diverse export supply (USDA). A more diverse supply is generally considered more food secure as it spreads the risks to supply from supply chain disruption. Over the coming years, the overall percentage of global cereals production traded is expected to continue to increase. However, there have been shifts in the importance of different countries in global markets with implications for supply chain risks, including geopolitics and climate change. Russia's invasion of Ukraine had a considerable impact on Ukraine's agricultural exports leading to price spikes for staple commodities. Since then, prices have declined significantly due to several factors including the reopening of crucial ports and transport routes out of Ukraine and other suppliers such as the EU, Australia, and North American countries increasing wheat and corn exports.

Indicator 3
Production-supply ratio

Figure 4: UK food production to supply ratio
Source: Agriculture in the UK (Defra)

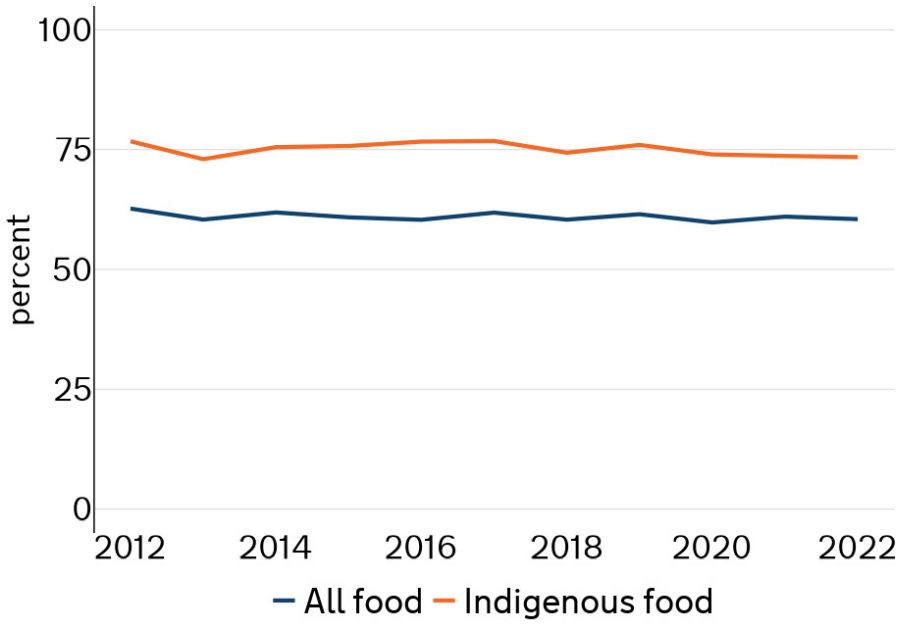
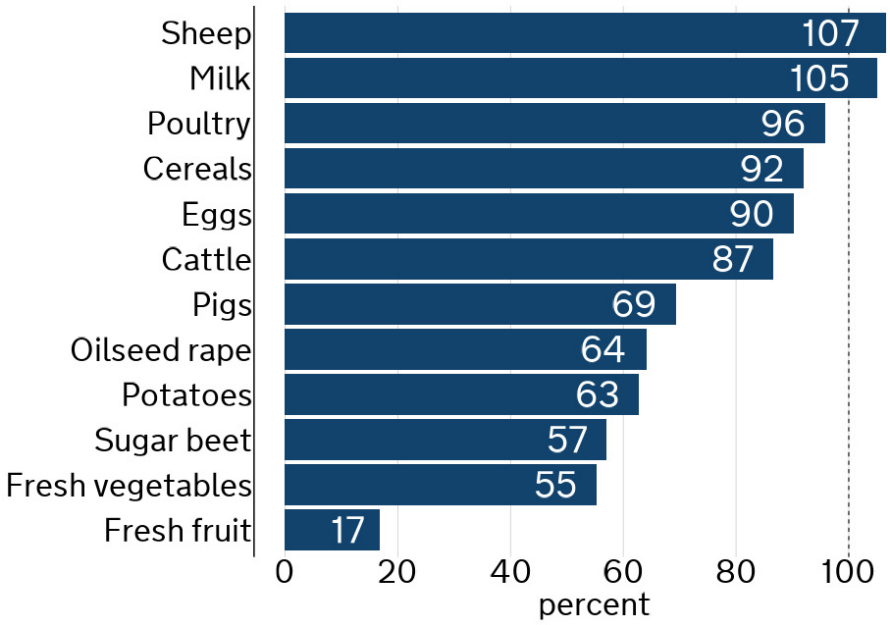


Figure 5: UK production to supply ratio by food type, 2022
Source: Agriculture in the UK (Defra)



Rationale

The production to supply ratio is generally understood as a broad measure of national self-sufficiency. This indicator is useful in food security terms as it represents a balance of factors: the relative contribution of UK domestic production and trade to our supply. The ratio is calculated as the farmgate value of raw food production divided by the value of raw food for human consumption. It compares the value of what is produced in the UK with what is consumed. Viewing the ratio by food type shows the varying levels of reliance on imports. At food type level the ratio does not include processed products, so actual self-sufficiency levels for some food types will be lower than stated. The 2023 data is due to be published in June 2024, so the analysis is based on 2022 data.

Assessment

The production to supply ratio 2022 data shows a **broadly stable** trend. Production was at 60% for all food and 73% for indigenous foods (figure 4), changing from 61% and 74% in 2021. The UK relies on imports for roughly 40% of its food. Strong production mitigates international risks to supply and strong trade mitigates national risks to supply.

Commentary

The UK produces most of the cereals, meat, dairy, and eggs that it consumes. This figure is lower for vegetables (55%) and fruit (17%) due to climate, seasonality and consumer and producer choices. The UK's ability to trade internationally supports diversified supply and stability. Ten countries provided 69% of all UK imports in 2023, showing a diversity of sources. However, the UK is reliant on specific countries for some key products such as Spain for citrus fruit, the Netherlands for tomatoes and India and Pakistan for its rice (HMRC Trade Data). India is a climate vulnerable country that has been subject to extreme heat and floods in recent years.

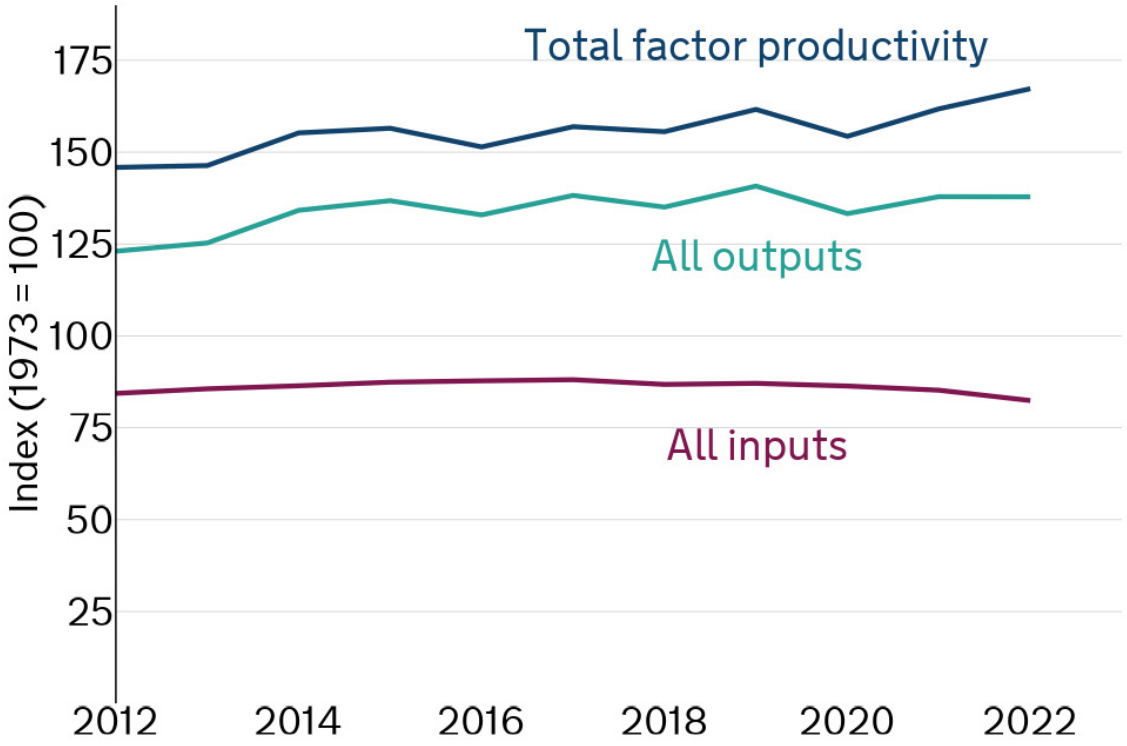
While the overall production to supply ratio has not changed significantly since the 2000s, cereals production is susceptible to year on year change due to extreme weather events. In 2020 there was a 26% drop in production due to bad weather, while 2022 saw an 8.5% increase. Reductions in the 2024 harvest are anticipated, particularly for wheat, due to the recent exceptionally wet weather and flooding, with less severe impacts on wheat in Scotland (AHDB). The medium to long term expectation is that demand and production for arable crops will continue to increase due to population and GDP growth and demand for animal feed.

Domestic food production is not necessarily independent of global supply chains since production can be reliant on global inputs at the farming (such as fertiliser) and the processing stages (such as packaging and critical dependencies like CO2).

Strong domestic production is dependent on sustainability of the whole food system, particularly on healthy biodiversity, soil, and water, which will be explored in UKFSR 2024.

Indicator 4
Agricultural total factor productivity

Figure 6: Total factor productivity (UK agriculture)
Source: Total factor productivity of the agricultural industry



Rationale

Total factor productivity (TFP) is the ratio of inputs to outputs, giving a measure of efficiency of production. More efficient production strengthens UK food security by allowing the UK to produce the same amount of food with less inputs, reducing dependencies on finite resources like land and fertiliser. Increased agricultural productivity can be either damaging or conducive to environmental sustainability depending on the nature of the change. The latter is known as sustainable productivity growth and is important to long term food security. Inputs included in agricultural TFP are seeds, energy, fertilisers, plant protection products, veterinary expenses, animal feed, total maintenance, bank charges, other goods and services, consumption of fixed capital, all labour, and land.

Assessment

TFP in 2022 reached a high of 167.3, a 3.4% increase on the previous year, driven by a decrease in the volume of all inputs (-3.3%) which offset a very slight decrease in the volume of all outputs (-0.1%). This means production requires less of inputs such as seeds, fertiliser, labour and land, indicative of **some reduction in risks**.

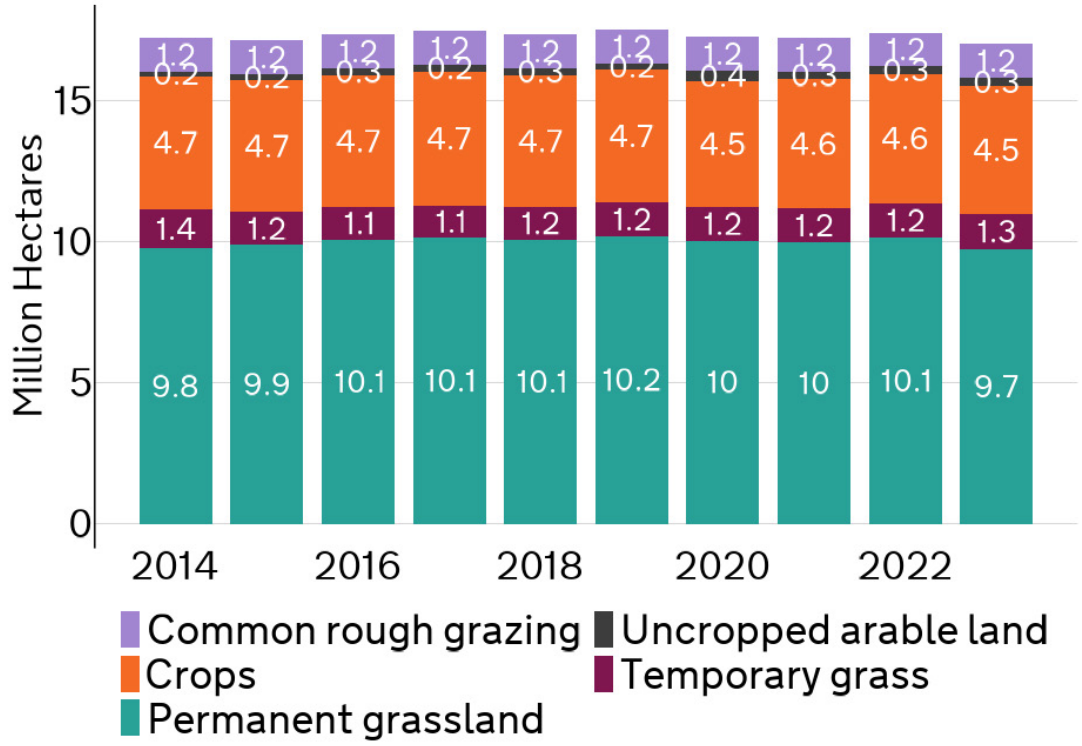
Commentary

2022 saw an increase in total crop output of 1.7% while total livestock output decreased by 1.7% from 2021 levels. A 3.3% decrease in inputs was seen across almost all input items, but most notably fertilisers and seeds. Since the series began, in 1973, agricultural TFP has increased by 67.3%, driven by an increase in the volume of all outputs (particularly in cereals and oil seeds) of 37.9% and a decrease in the volume of all inputs of 17.6%. TFP has grown at an annual average rate of 1.1% between 1973 (the start of the data series) and 2022. In the last decade, since 2012, annual growth has been higher at 1.4% on average with an increase in all outputs (by 14.3%) and a decrease in all inputs (by 2.3%). These values are averages across agriculture and sectoral variations can differ significantly. An example of increased productivity on a sector level is dairy where efficiency gains in milk production are up 11% from 2000, with a 21% reduction in number of dairy cows.

Although external factors such as prices, weather conditions or disease outbreaks may have a short-term impact on productivity, it is technological development and innovation that improve productivity over a longer period. The sustained general upward trend in the UK is therefore an indicator of recent innovation in the sector. A specific example of innovation is where yields of wheat increased by 5-10% with the introduction of the Reduced Height genes during the Green Revolution. Further research is underway helping semi-dwarf wheat grow in water-limited environments, mitigating potential impacts of climate change. Another example is the collaboration between Cranfield University and the European Space Agency in 2014 to create 'FarmingTruth', a precision agriculture service which combines soil data with satellite images to improve crop yields. This led to a reduction in nitrogen fertiliser.

Indicator 5
Agricultural land use

Figure 7: Total utilised agricultural area (UAA) by type
Source: Agricultural Land Use in the UK



Rationale

Measuring utilised agricultural area (UAA) gives a high-level view of how the UK is using the agricultural land available to produce the UK's food. There is not a direct link between UAA and food production and indeed a decline in UAA with increased efficiencies can still produce an increase in food production.

Assessment

In 2023, 69.7% of the UK's land (17 million hectares) was used for agricultural production, a 2.3% decrease in UAA from 2022. This is a **broadly stable** trend consistent with previous years.

Commentary

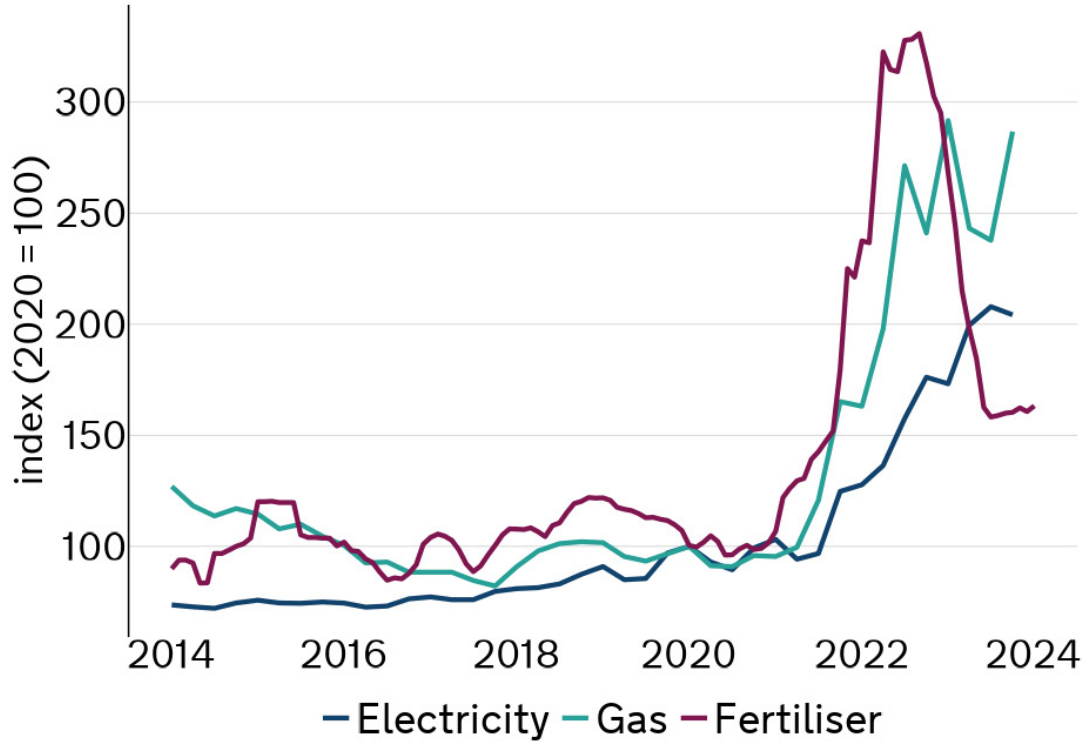
The amount of UK land in production has seen a gradual but small decrease over the last 40 years. UAA has fallen by 7% between 1984 to 2023 (Agriculture in the UK) but the total area on agricultural holdings has only fallen by 2% over the same period in part due to a rise in woodland on farms. Reduction in UAA does not mean a drop in production. TFP has continued to climb for this period (see figure 6 above) supporting similar levels of food production on less land. For example, in 2022 the cereals crop area fell by 1.7%, but the production of cereal crops increased by 8.5% to 24.3 million tonnes.

The distribution of types of agricultural land use shows that the majority of UAA (57%) was permanent grassland in 2023. 27% of UAA was used for crop production (arable and horticulture). The total area of cereal crops in the UK decreased by 2.7% between 2022 and 2023 and stands at almost 3.1 million hectares. Horticultural crops land use has decreased by 5.2% since 2022 and accounts for 145,000 hectares of UAA in 2023. This area was mostly used for outdoor vegetables (approximately 69% of horticultural land) and outdoor fruit (22%). The remaining horticultural area was used for protected crops (2%) and ornamental plants (7%).

Year-on-year land use change is typically in the range of 0.0% to 5.0%, so the scale of change seen in recent years is broadly within or close to what would be considered normal. The decrease in horticultural use is at the higher end of the range, which may reflect a response to multiple factors affecting land use planning, such as rising input costs (for example labour and fertiliser), weather and yield variability, and final market values. How the UK uses its land to produce food is complex and will be explored more fully in UKFSR 2024.

Indicator 6
Energy and fertiliser prices

Figure 8: Non-domestic energy and fertiliser price index
Source: (Energy Prices): Non-domestic energy prices (DESNZ) 2004 to Q4 2023
Source: (Fertiliser Price Index): Agriculture Price Indices (Defra)



Rationale

Fertilisers and energy are important inputs for food production and the UK is dependent on the global supply chain for them. Their prices are also linked, with some fertilisers dependent on gas as an input for production. Non-domestic energy prices are the prices paid by businesses for electricity and gas.

Assessment

Following a supply shock from 2020 to 2022, energy and fertiliser prices have shown **some reduction in risks** in 2023. Fertiliser prices have halved since their peak in late 2022. However, they remain 50% higher than at the start of 2022 and energy prices have sustained high levels. The data for the first quarter of 2024 will be published in June 2024 so is not factored into this assessment.

Commentary

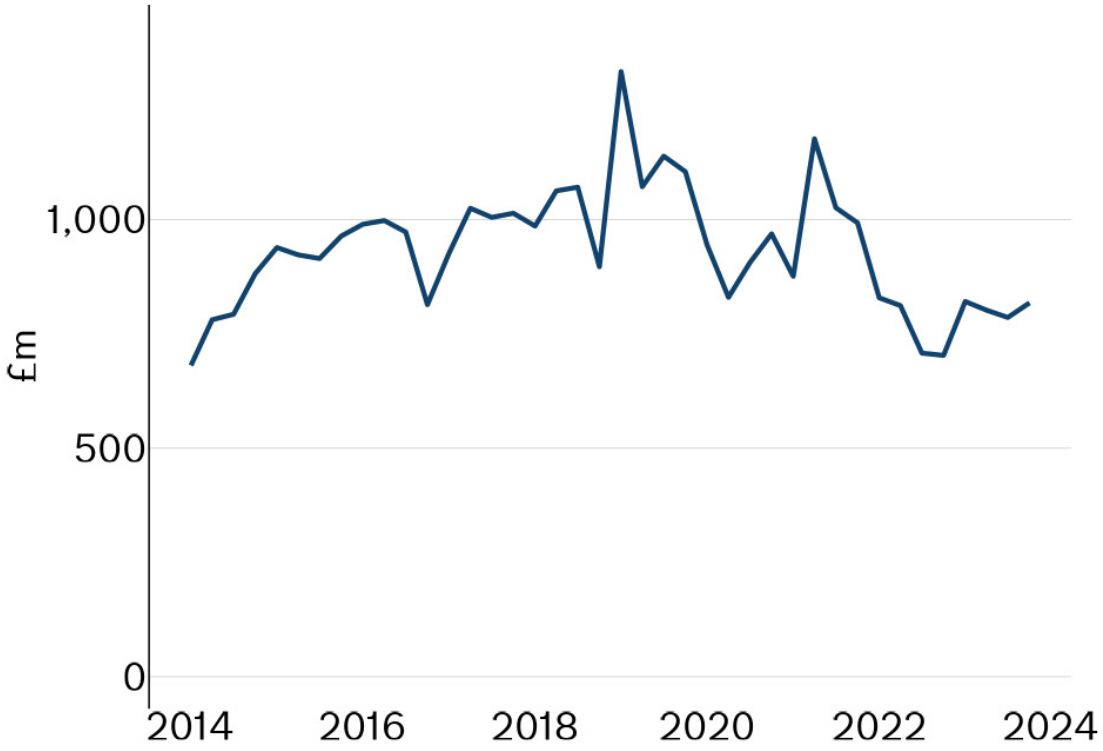
Energy and fertiliser prices have reflected geopolitical shocks to energy supply such as Russia's invasion of Ukraine. Both electricity and gas prices climbed significantly from mid-2020 onwards, doubling for electricity and nearly tripling for gas compared to the 2020 baseline (electricity +100%, gas +187%). Prices remain high for both. Fertiliser prices also surged from mid-2020, peaking in September 2022, with prices more than tripling. Recent months show a downward trend, but fertiliser prices remain significantly higher (over 60%) than levels before 2020.

The increased prices have been drivers of higher costs for food producers in the last few years, placing pressure on the viability of businesses. This has also led to increasing food prices as costs are passed on to consumers. UK fertiliser prices have mirrored trends in international prices and decreased in 2022 and 2023. Changing farming practices, such as the use of cover crops and rotational cropping help to reduce the impact of chemical fertiliser prices on farm businesses. UK non-domestic electricity prices remain high in comparison to the rest of the world, but gas prices are relatively low compared to EU and G7 prices.

Indicator 7
Business investment

Figure 9: Business investment quarterly figures – food, drink and tobacco. Chained Volume Measures (CVM) are used to show real terms value, removing the effect of inflation. Tobacco is minimal in graph, representing about 4% of the total.

Source: ONS



Rationale

Food and drink manufacturing plays a major part in how food gets to the consumer. It transforms farm outputs like wheat and livestock into foods that are directly consumed like bread and ham. This means it is important that the manufacturing sector is resilient. A resilient sector has the economic health to adapt through shocks and bounce back. There is no single indicator of business resilience, but business investment levels can be a useful barometer of overall trends. Business investment means net capital expenditure by businesses. It includes spending on machinery, building work, transport equipment and computer hardware. Investment reflects industry confidence and strengthens the sector's resilience to international market competition and shocks by building capacity and flexibility in manufacturing supply.

Assessment

Business investment trends suggest **a broadly stable picture** in 2023. After a dip since 2020, they show signs of recovery and are stabilising at around £800 million per quarter. Total investment increased by 5.7% in 2023 compared to 2022.

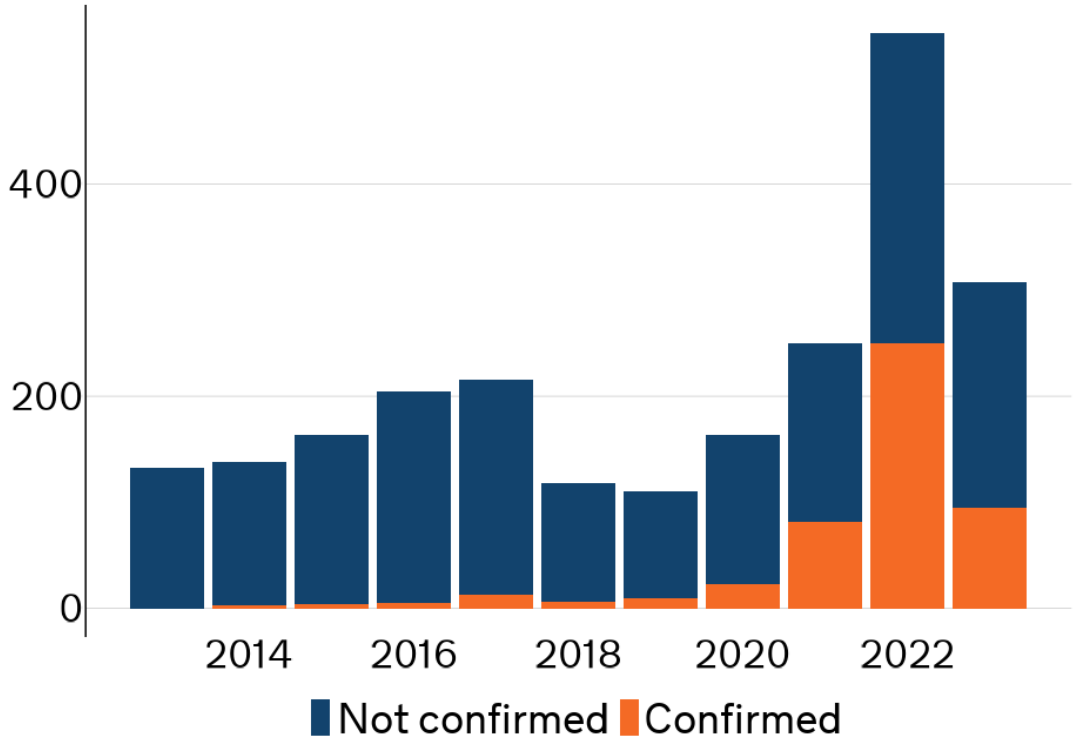
Commentary

After generally increasing for several years, investment reached a peak in 2019 of over £1 billion per quarter. Since 2020 the trend was downward, dipping below total UK business and total manufacturing investment rates in 2022. The increase in investment in 2023 moves it closer to overall investment rates.

Investment trends, while varying, demonstrate that the sector has been resilient in the face of challenges such as COVID-19, Russia's invasion of Ukraine and rising input costs. The trends should be considered alongside other statistics to understand fully the complexities of business resilience. Other data sources support the picture of a resilient food and drink manufacturing sector in the UK. The business birth rate for food and drink manufacturing in 2022 was 12.8%, higher than the UK average of 11.5%, indicating sustained high levels of market competition. The business death rate was lower than average at 10.1% compared to 11.8%. In 2022 there were 170 high-growth businesses in food and drink manufacturing, meaning they grew by more than 20% per year over a three-year period, an increase from 150 high-growth businesses in 2021 (ONS Business Demography Statistics). Another measure is total factor productivity, which shows a general upward trend in the last 10 years, with a dip in 2020 likely due to COVID-19, returning to the upward trend in 2021.

Indicator 8
Biosecurity risk

Figure 10: Notifiable disease investigations in Great Britain, APHA, 2013 to 2023
Source: APHA



Rationale

UK food security is dependent on the UK's management of risks to animal and plant health (biosecurity) given some animal and plant diseases can cause significant production losses. This indicator captures biosecurity risk and awareness of risk to help assess the level of threat to food security. For the purposes of this index, changes in animal disease case numbers are tracked to surface trends in biosecurity risks. Plant pests and diseases will be considered more fully alongside animal diseases in UKFSR 2024. Notifiable diseases are animal diseases that cause a significant risk to human or animal health. There is a legal obligation to report them, even if it is only a suspected case. Notifiable diseases can be either endemic, meaning they are already present in the UK, or exotic, meaning they are not normally present in the UK.

Assessment

Levels of UK biosecurity risk are **broadly stable**. For exotic notifiable disease (figure 10) there were 308 report cases in 2023 of which 95 were confirmed. This total is lower than 2022, when there were 542 report cases of which 257 were confirmed. There were fewer Avian Influenza (AI) report cases in 2023 compared to 2022 (58 compared to 235), which reflects a reduction in risk as the UK recovered from a series of unprecedented AI outbreaks since October 2021. However, the risk of Bluetongue increased in 2023. Higher reported cases of suspected Bluetongue (48 compared to 10 in 2022) points to greater vigilance by farmers as a result. African Swine Fever risk and Foot and Mouth Disease risk have remained stable, which is reflected in the case numbers staying low, with 2 Swine Fever cases and 2 Vesicular Disease cases in 2023. This Great Britain data is broadly consistent with Northern Ireland risk assessments (AI, ASF).

Commentary

Having a reasonable number of report cases and a high ratio of suspected to confirmed cases is a good indicator that livestock keepers are alert to the dangers of animal disease and treating biosecurity seriously. All reports of notifiable disease are investigated by the Animal and Plant Health Agency (APHA). This passive surveillance is supported by active monitoring programmes for new threats, risk assessment processes and awareness raising with livestock keepers. For animal diseases, Defra's international disease monitoring team publishes preliminary outbreak assessments to cover new and emerging diseases and exotic disease outbreaks of interest such as Bluetongue and Epizootic haemorrhagic disease.

Some diseases, such as Foot and Mouth Disease, can be transmitted via infected animal products. The prevalence of these diseases in the UK is used to inform border controls. The UK does not import livestock, plants or products of animal origin (POAO) from areas of the world that pose a significant disease risk. All imports of animals, plants and POAO must be certified to state that they are free from pests and diseases. To provide additional reassurance there is a programme of post-import testing in place with 73,500 post-import tests performed on imported livestock in 2023.

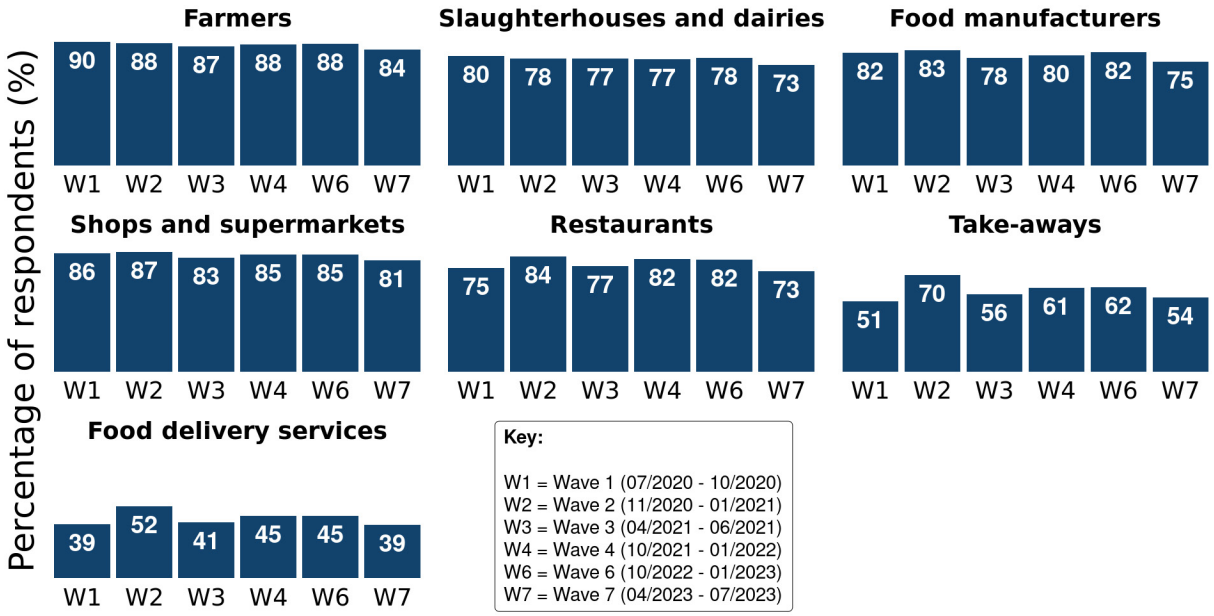
Diseases such as AI and Bluetongue can be transmitted by other means including vectors such as midges. With changing climatic conditions, there is likely to be an increased risk from vector-borne diseases in the future. This will be explored further in UKFSR 2024.

Indicator 9
Consumer confidence in food supply chain actors

Figure 11: Consumers' confidence that actors in the food supply chain ensure that the food they buy is safe to eat (England, Wales and Northern Ireland)

Source: FSA Food and You 2 Survey Waves 1-7 (England, Wales and Northern Ireland)

The questions were not asked in Wave 5 of the survey.



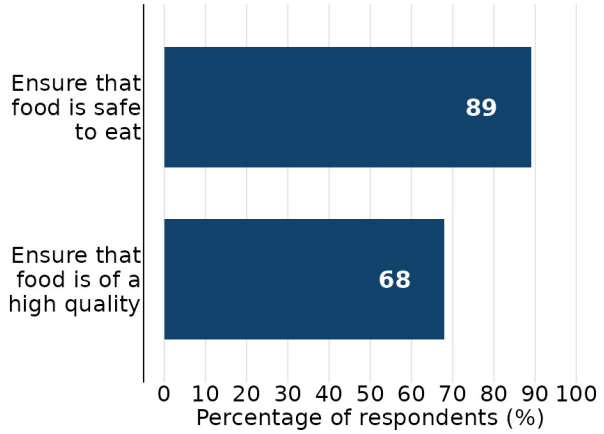


Figure 12: Consumers' confidence in UK food supply chain actors to ensure that food is safe to eat, and that food is of a high quality (Scotland)

Source: Food Standards Scotland Consumer Tracker Wave 17 (December 2023)

Due to a change in the FSS Consumer Tracker questionnaire, there is no comparable data for this question for the preceding years.

Rationale

Awareness, transparency, media coverage and other factors can influence consumer trust. High levels of trust add value to the UK food system. Its loss can lead to reduced demand and long-term and significant economic damage. An erosion in trust can also affect how government and industry communicate risk to the public.

Assessment

In **England, Wales and Northern Ireland**, confidence in farmers, slaughterhouses and dairies, food manufacturers and shops and supermarkets has remained **broadly stable** since July 2020, with a slight decline in the latest survey (Wave 7, April to July 2023). Confidence in restaurants, takeaways and delivery services is more variable but shows no consistent trend either up or down over the reporting period.

In **Scotland**, consumers' confidence in UK food supply chain actors to ensure food is safe is high, while confidence that they ensure food is of high quality is lower.

Commentary

In **England, Wales and Northern Ireland**, confidence in food supply chain actors to ensure food is safe to eat varied by actor. Respondents were more likely to report confidence in farmers (84%) and shops and supermarkets (81%) and least likely to report confidence in takeaways (54%), and food delivery services (39%). This pattern has been consistent since tracking began in 2020.

In **Scotland**, 89% of consumers were confident that those involved in the food supply chain (farmers, manufacturers, shops and supermarkets) ensure that food is safe to eat. Two thirds (68%) had confidence in food supply chain actors to ensure food quality is high.

UK Government

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