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Introduction



The UK has faced a remarkable transformation over the years – going from a nation which was still feeling the impact of rationing and whose limited diet was largely reliant on tinned and dry goods in the early 1950s, to a globalised **food and drink manufacturing industry** that it's worth £28 billion and employs over 468,000 people across every region and nation¹.

Eating out and ordering in is as much part of British food culture as sipping organic wine at home or having a microbrewed beer at a pub. According to an ONS survey from 2020, the number of licensed restaurants in the UK is just shy of 29,000 - with take-away food outlets numbering 37,465, and pubs and bars 30,885².

The UK's popular, established brands including Twining's, Silver Spoon,
Marmite, OXO, Lea & Perrins, Cheddar,
Coleman's, Walker's Shortbread,
Guinness, Glenfiddich, Hovis, HP Sauce and Cadbury need little introduction.

The seeds of change were sown in the 60s and early 70s, when the food renaissance found its roots in technology, coupled with a burgeoning immigrant population. Blast freezing, domestic fridges and other kitchen aids brought choice and convenience to a new generation of cooks and the jet engine and an appetite for travel helped set the British palate on a new course that has gathered momentum with each passing decade³.

The numbers are now impressive. Food and drink is the **biggest manufacturing** sector in the country. According to the Food and Drink Federation (FDF), the UK's 11,675 food and drink manufacturing businesses are committed to investing, with total business investment in the industry equalling £4 billion, up by 7.9% from 2020.

Besides the pivotal international role of food and drink manufacturing, the UK is influential at international forums that set global food and animal and plant health standards. It also has an esteemed watchdog in the Food Standards Agency (FSA) - a body with global reputation for science and research, responsible for advising ministers on food safety and food authenticity. Through its range of statutory powers, it operates the Food Hygiene Rating Scheme (FHRS) in partnership with local authorities across England, Wales and Northern Ireland.

Renowned for its heritage, high calibre,

and traceability⁴, the UK food and drink industry is continually growing due to global demand for premium products. Paraphrasing Anne-Marie Trevelyan MP, Secretary of State for International Trade: 'from Scottish salmon and Welsh Lamb to Northern Irish beef and English sparkling wine [Britain's] food and drink is recognised at home and abroad for its great taste and high quality.'

The demand for organic and plant-based food and drink, and for local, sustainable suppliers has increased over the years, creating opportunities for artisan makers and producers as well as large-scale plant-based food producers. Shifting weather patterns have also made it possible for vineyards in Sussex and Kent to thrive and produce award-winning sparkling wines.

Mindful of the wider impact that food production has on the planet, the UK government has committed to being at the cutting edge of high-efficiency and sustainable agriculture. A winning combination of high-quality produce and cutting-edge technology has put the UK at the forefront of innovation in the food and drink industry. From food processing automation in Lincolnshire and precision agriculture in Telford to plant-based and alternative protein

products in the North East and aquaculture technologies in Dorset, the UK's food and drink sector is well placed to meet the demands of future generations⁵.

The UK is also renowned as a **lead innovator** in the food and drink sector, particularly in **high-tech packaging**, healthy foods and convenient food options. The pace of change in the food system continues to accelerate and this is having an impact on the way people purchase food and the way food businesses operate. Mobile food-ordering technology coupled with pandemic lockdowns – which saw the rise of cloud kitchens and sharp growth in app-based food technologies – has transformed the foodservice delivery market. Worth around £8.5 billion in 20196, the sector grew by £3.7 billion in 2020 to reach **£11.4 billion**.

Following Britain's departure from the EU, fresh trade deals are opening doors for British agriculture and food and drink businesses. The Department for International Trade (DIT) has been helping businesses to take advantage of some of these new, global opportunities.

In November 2021, the government has also announced measures to support the

UK's world-leading agri-food and drink sector. As part of a wider plan to boost exports, unlock barriers to trade and open up new exporting opportunities around the world, it will add eight new agri-food and drink attachés in priority markets including China, the USA, India, Canada and Mexico.

¹fdf.org.uk (Dec, 2020)

²ons.gov.uk (Jan, 2020)

³Food industry's 90 years of innovation, Food Manufacture (Sep 2017)

https://www.thegrocer.co.uk/results/how-britains-50-fastest-growing-food-and-drink-companies-beat-the-pandemic/656989.article

v2 Our Industry at a Glance 2021 Factsheet for website (fdf.org.uk)]

https://www.fdf.org.uk/fdf/business-insightsand-economics/facts-and-stats/



Sector in Stats



- In 2020 the food and drink sector had a turnover of more than £105 billion, accounting for 20% of total UK manufacturing
- The UK's top 15 food manufacturers spend £900 million annually, on research and development
- In 2019 the food and drink industry was the biggest manufacturing sector in the country by turnover and larger than automotive and aerospace combined
- The food and drink industry generated almost £5 billion to the local economy last year and employs upwards of 100,000 people across its supply chain
- The UK domestic aquaculture industry is worth an estimated £1.4 billion and is the world's eighthlargest producer of finfish from marine and coastal aquaculture

- Welsh food and drink businesses represent almost 5% of all UK businesses in the sector, and make up for 3% of total UK food and drink exports
- Scottish food and drink businesses make up only 10% of all UK businesses in the sector
- Over 97% of the 11,675 food and drink manufacturing businesses are SMEs
- The UK's food and drink exports exceeded £21 billion in 2020, including £1.8 billion worth of exports to the USA and £257 million to the UAE
- Scotland's £15 billion food and drinks sector has grown by 40% over the last 10 years
- The UK meat-free foods market is expected to be worth £1.1 billion by 2024





Sub-sectors



Agri-Tech

Having led the agricultural revolution of the 18th century, introducing innovative farming practices such as crop rotations and new equipment such as seed presses to other parts of the world, the UK is no stranger to agricultural innovation⁹.

Building on that tradition of innovation and engineering excellence, the UK's world-class agricultural technologies help farmers in the UK and overseas, increasing agricultural productivity in a more sustainable way. The UK's new Agriculture Bill will help farmers stay competitive and invest in new technology. Agri-research is supported with around £320 million per year, with an additional £90 million through its Industrial Challenge Fund to help transform food production.

Agri-Tech production systems underpin agriculture across the country, including livestock in Wales, the West and the South West, arable in the North East and East and aquaculture in Dorset and Scotland. In the UK, investors will find a business environment, comprising world-leading farmers, veterinarians and agronomists, that allows new and established companies to thrive and a scientific and educational base, providing access to highly skilled talent.

From robotics and sensors to precision architecture, technology is rapidly changing the way farmers will work over the coming decades.

Precision farming is expected to be worth £170 billion globally by 2050. The Agricultural

Engineering Precision Innovation Centre operates in the new, fast-moving market of precision agriculture to help the UK's agri-food sector develop advanced technologies that will increase productivity and sustainability in UK agriculture. Telford, in the West Midlands, has a particularly good infrastructure and the capabilities to develop solutions for the UK and global Agri-Tech markets. Companies here are involved in the design and development of satellite positioning systems, variable rate technology, geo-mapping, energy management systems, remote sensing and automated steering systems. The Lincoln **Institute for Agri-food Technology (LIAT)** is a pioneer in robotics that aid in the automation of food manufacturing, and Lincolnshire has a great research and development capability with the world's first Centre of Excellence in Agricultural Robotics.

Working in partnership with several key bodies, including the **Commercial Horticultural Association (CHA)** and the **Agricultural Engineers Association (AEA)**, the Agri-Tech Team for the UK Department for International Trade¹⁰ is the first port of call for overseas companies looking for investment opportunities in the UK. The team champions the role of Agri-Tech in strengthening agri-business success in both UK exports and investments, and leverages Government support to address trade barriers.

Agri-Food

The UK Agri-Food sector is worth £125 billion annually. It creates a clear pipeline of sustainable Agri-Tech projects for national and international markets.

Well-known for producing exceptional food and drink at every stage from farm to fork, the UK offers international buyers and investors products they can trust. As the UK's largest manufacturing sector, **UK food and drink exports** were £23.7 billion in 2019, representing an increase of 4.9% from 2018. The strength of the industry, coupled with its potential to keep developing, brings opportunities for UK businesses to take advantage of the international demand for UK products and services in these sectors.

Processing Technology

The growth in vegetarian and vegan diets presents exciting opportunities for the food industry as manufacturers seek to create plant-based and alternative sources of protein. A key opportunity in the market for alternative protein is the **development of lab-grown meat** – an emerging industry, with the UK potentially at its forefront.

The North East of England is leading the way when it comes to developing environmentally friendly and sustainable plant-based and alternative protein products and is home to the UK's only 100% dedicated plant-based manufacturing facility. Companies such as Quorn Foods have

established operations in this region, attracted by low costs for industrial space and ample research capability for further innovations.

Elsewhere, scientists at the universities of Glasgow and Strathclyde have developed an artificial tongue that can taste subtle differences between whiskies and can be used to tackle the counterfeit alcohol trade.

Northern Ireland has a progressive industry based on family farms and fishing businesses, as well as state-of-the-art processing facilities. It's also the location of numerous research centres, including Queen's University Belfast's Institute for Global Food Security, and Ulster University's Nutrition Innovation Centre for Food and Health.

⁴Exports.campaign.gov.uk

⁵Food & Drink, great.gov.uk

⁶Statista.com

⁷Fdf.org.uk

⁸Fdf.org.uk

The agricultural engineers association, agritech-uk.org

¹⁰Agritech-uk.org



Research and development



The UK provides an exceptionally strong base in research and development in food and drink. Its top 15 food manufacturers spend £900 million annually on research and development, and it has a wide range of research universities.

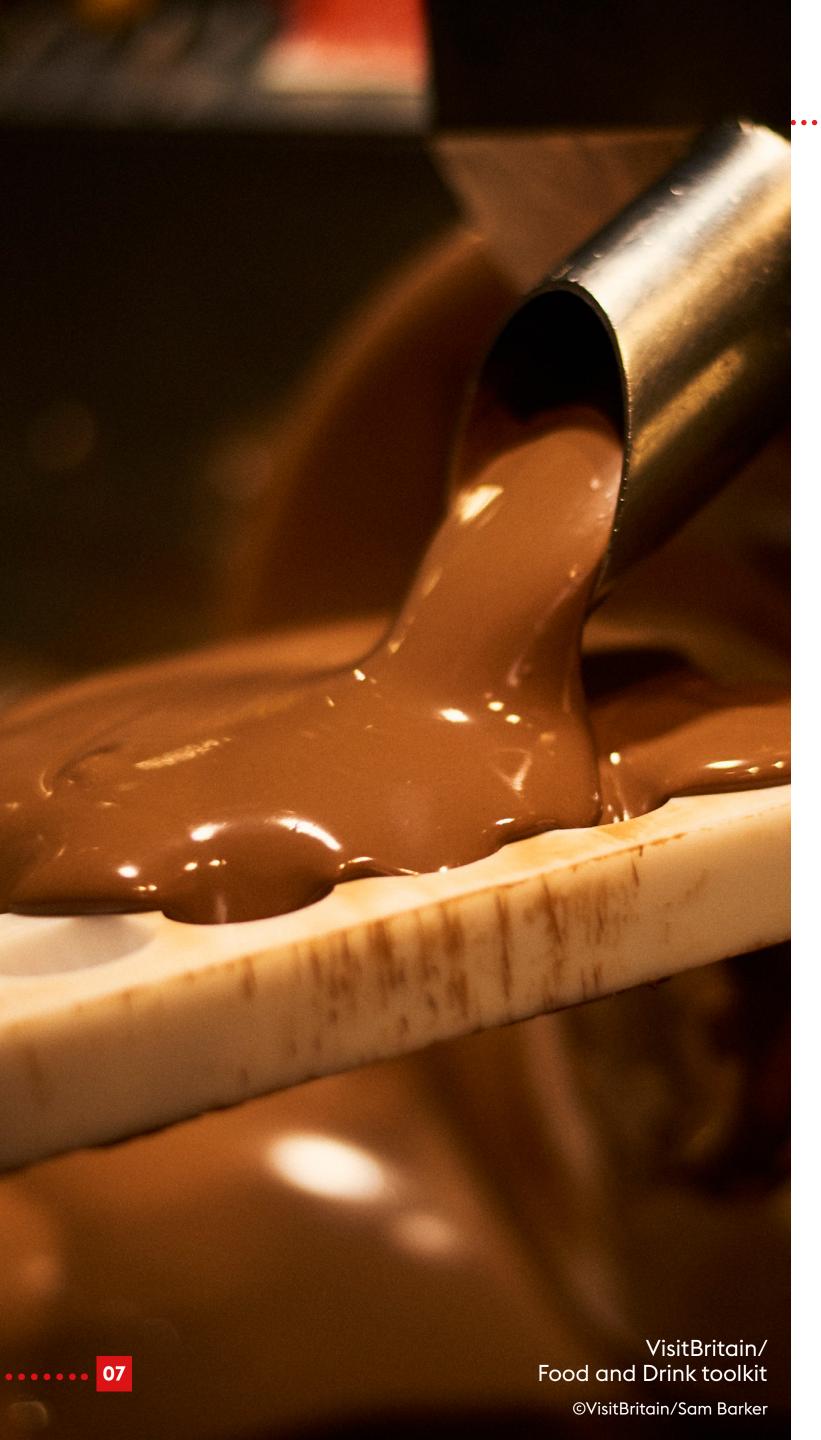
In 2021, the UK government outlined its

Research and Development Roadmap, aiming to increase public investment in research and development to £22 billion per year by 2024-25. Over the next decade, the Food and Drink Federation forecasts a potential £55.8 billion value added to the industry through the implementation of existing digital technology¹¹.

In its 2021 Food and Drink Report, accountancy and business advisory firm, BDO, reported that 77% of food and drink manufacturers stated they were increasing their focus on new product development and innovation, showing an industry-wide commitment to fulfilling the changing demands of the public.

• "Food & Drink, great.gov.uk







Sustainability in food & drink



As societies and governments around the world become increasingly conscious of the impact that food production has on the planet, the reliance on sustainable farming and fishing, alternative protein sources and sustainable food packaging grows.

Vegetarian and vegan diets are increasing in popularity. In 2021, Strategy Consulting and Research firm Frost and Sullivan reported that the market revenue for plant-protein ingredients and alternative sources of protein is projected to reach £16.8 billion by 2026. In addition, the Waste and Resources Action Programme (WRAP) aims to make all plastic packaging recyclable, reusable, or compostable by 2025.

In 2020, members of the **Food and Drink Federation (FDF)** reported an absolute **reduction of 58% in CO2 emissions** from
their use of energy in manufacturing
operations compared to 2019 and its
members are committed to achieving Net
Zero by 2040. Additionally, regions around
the UK are playing their part in sustainable
food production. Innovations that improve
sustainability in manufacturing by reducing
material waste or energy consumption are
supported by the £20 million Made Smarter
Innovation programme, a huge opportunity
to launch significant project benefiting our
planet and helping to achieve Net Zero.

As Europe's largest centre for advanced materials research, Greater Manchester is well placed to lead the charge in sustainable, smart and digital packaging solutions¹². A 2019 YouGov report found that 82% of consumers are actively trying to reduce their plastic waste and that nearly half of consumers would be willing to pay extra for more sustainable packaging. In this region, investors can access cutting-edge innovation in composites, polymers and graphene – whose atom-thin composites can be used to make lighter packaging, reducing energy consumption.

Sustainable farming is playing a key role in improving the efficiency of crop growing and livestock raising. The use of **precision agriculture technologies** will allow future farmers to make more efficient and informed decisions on the crop, animal husbandry, and farm management. Telford and Wrekin, in West Midlands, is home to **Ni.PARK** – a new industrial innovation park for AgriTech companies with the infrastructure and capabilities to develop new AgriTech solutions to enable sustainable food production across the globe¹³.

With more indoor farms than any other European country, the UK is also implementing growing methods such as **hydroponics and indoor farming**, meaning crops and plants can be grown on a large scale. Aquaculture, which is making huge waves in the global food sector, is projected to be the prime source of seafood by 2030. Initiatives involving the production of this resource-efficient farming method are happening at a pace on England's South West coast¹⁴. Through an ambitious plan called Seafood 2040 - A Strategic Framework for England (SF2040), the seafood supply chain and government in England are working together to create a sustainable and thriving future¹⁵.

Scotland is aiming to be among the lowest carbon and most efficient food producers in the world, by 2032, and has **opted out of the production of genetically modified (GM) food**¹⁶. Several leading brands in the Scottish beverage sector area are also picking up the sustainability baton – among them Rock Rose Gin, Tennent's Lager, Black Isle Brewery, Laphroaig and Glengoyne and Arbikie.

¹²Sustainable packaging in Greater Manchester, great. gov.uk

¹³Sustainable farming systems in Telford and Wrekin, great.gov.uk

¹⁴Sustainable aquaculture in Dorset, great.gov.uk

¹⁵Seafish.org

¹⁶Scottish food and drink, Scottish Development International

