

Key figures on the European food chain

2022 edition



KEY
FIGURES

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2022 edition

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Foreword

I am pleased to present this second edition of *Key figures on the European food chain*. The publication responds to interest in the European Commission's *Farm to Fork Strategy*, which is an integral part of the European Green Deal that sets out to make Europe the first climate-neutral continent by 2050. The *Farm to Fork Strategy* aims to establish a sustainable food system in the European Union that is fair, healthy and environmentally-friendly.

This is an important year for agricultural statistics, insofar as it marks the release of a wealth of detailed information provided by a new agricultural census (that was principally conducted during 2020). The decennial agricultural census – which forms part of a worldwide programme – delivers data for 9 million farms across the EU. It provides an opportunity for Eurostat to: anonymise individual data; aggregate information for EU totals/averages; disseminate information through its databases and publications such as this one.

Key figures on the European food chain aims to provide intuitive visualisations and innovative data presentations supported by concise text. It starts with an overview of agriculture and fisheries: while some products are sold raw (for example milk, fruit and vegetables) or processed (such as wine and olive oil) directly from farms, most pass through a much more complex food chain; the EU also relies on a range of imported goods. This journey is reflected in the different sections of the publication that cover processing, distribution, and the consumption of food and beverages. The final chapter concerns environmental issues related to various stages of the food chain, including food waste.



Most datasets included within *Key figures on the European food chain* are presented until 2020 or 2021. The COVID-19 pandemic and related restrictions affected many different aspects of life in the EU (and further afield). Its asymmetric impact can be clearly seen for some stages of the food chain: for example, while the demand for food and beverages from retailing was relatively stable through the pandemic, there was a large contraction in activity for restaurants, bars and cafés as of March 2020, followed by a (partial) rebound/recovery. For the most up-to-date statistics on economic and social impacts of COVID-19, see: <https://ec.europa.eu/eurostat/web/covid-19/overview>.

The effects of the Russian military aggression against Ukraine have not yet been fully captured by the statistical indicators presented in this edition. However, Ukraine and Russia have historically been important trading partners for a range of agricultural products (such as cereals, animal or vegetable fats and oils, and fertilisers). This edition highlights the share of selected EU agricultural imports originating from Ukraine and Russia.

I hope that you find this publication interesting and useful.

A handwritten signature in blue ink, consisting of stylized initials 'VP' followed by a surname.

Viveka Palm

Director of sectoral and regional statistics, Eurostat



Abstract

Key figures on the European food chain presents a selection of indicators concerning the food chain, from primary production in agriculture and fisheries through to consumption. Data are presented for the European Union (EU), its individual Member States and European Free Trade Agreement (EFTA) countries.

This publication may be viewed as an introduction to agriculture, fisheries and food chain statistics. It provides a starting point for those who wish to explore the wide range of data that are freely available on Eurostat's website at <https://ec.europa.eu/eurostat>, together with a range of online articles in *Statistics Explained*, some of which may be accessed through QR codes.

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For more information please consult

Eurostat's website: <https://ec.europa.eu/eurostat>
Statistics Explained: <https://ec.europa.eu/eurostat/statistics-explained>

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Introduction

Eurostat is the statistical office of the [European Union \(EU\)](#) situated in Luxembourg. Its mission is to provide high quality statistics and data on Europe. Key information on the EU's economy, society and environment may be of interest to the general public and decision makers.

Key figures on the European food chain describes the EU's food chain, from primary production in agriculture and fisheries through to consumption. For most datasets, statistics are available until 2020 or 2021. As a consequence, the information presented gives an initial idea of COVID-19 related impacts on the food chain. The full impact of the crisis will be revealed at a later date, not only when the pandemic has come to an end, but also when more recent data become available for a full range of statistics.

In February 2022, Russia launched a large-scale military invasion of the whole of Ukraine. In response, the EU – along with a number of non-EU countries – imposed a range of sanctions on Russia. Many of the sanctions imposed are economic in nature, impacting on trade and business. Although it is too soon to evaluate the full impact of the war and related sanctions, not least because it continues at the time of writing, this publication includes trade data for selected agricultural products where Ukraine and Russia have traditionally been important trading partners (prior to the war).

Structure of the publication

Key figures on the European food chain provides users of official statistics with an overview of the wealth of information that is available on Eurostat's website and within its online databases concerning the food chain.

The publication is divided into three distinct sections.

- It starts with an overview of agriculture and fisheries. While the main focus is on the production of agricultural and fishery products, this section also includes information on employment in these activities, as well as the use of land for agriculture and the size of the fishing fleet.
- The second section focuses on downstream activities, such as the processing, wholesaling, retailing and serving of food and beverages. This section also includes chapters concerning the import and export of agricultural products, food and beverages, as well as their transport. The final chapter in this section brings the food chain to its end, looking at human consumption of food and beverages.
- The third section comprises a single chapter looking at a selection of environmental issues related to various stages of the food chain, including fertiliser and pesticide use, greenhouse gas emissions in agriculture, and waste within the food chain.

This publication provides a concise overview of the EU's food chain. A number of QR codes have also been included; these give links to more detailed analysis in the form of [Statistics Explained](#) articles on Eurostat's website.



Data extraction and coverage

Data extraction

The statistical data presented in this publication were generally extracted at the end of September and start of October 2022. Data for crops (Chapter 2) and agricultural output value and economic performance (Chapter 3) were extracted at the start of November 2022. Note that data from the agricultural census 2020 are provisional, as they are still being processed. The analysis presented is based on the first datasets (as released in November 2022) and may differ slightly from revisions that are likely to be made in the coming months.

Spatial data coverage

This publication presents information for the **EU** (a sum/average covering the 27 Member States of the EU) as well as the individual **EU Member States** and the four **EFTA countries**. The order of the Member States and EFTA countries in the illustrations usually reflects their ranking according to the values for (one of) the indicator(s) illustrated.

The map presented on the inside of the cover identifies the EU Member States and the EFTA countries, as well as pinpointing their capital cities.

Codes for EU Member States and EFTA countries

BE Belgium	HU Hungary
BG Bulgaria	MT Malta
CZ Czechia	NL Netherlands
DK Denmark	AT Austria
DE Germany	PL Poland
EE Estonia	PT Portugal
IE Ireland	RO Romania
EL Greece	SI Slovenia
ES Spain	SK Slovakia
FR France	FI Finland
HR Croatia	SE Sweden
IT Italy	
CY Cyprus	IS Iceland
LV Latvia	LI Liechtenstein
LT Lithuania	NO Norway
LU Luxembourg	CH Switzerland

Temporal data coverage

If data for a reference year (or other [reference period](#)) are not available for the EU, a particular Member State or EFTA country, then efforts have been made to complete the coverage using data for recent earlier reference years (these exceptions are footnoted). Particular attention should be paid to these deviations when the standard reference year is 2020 or 2021, as for some indicators – particularly those impacted by the COVID-19 crisis – data for earlier reference periods (prior to 2020) may not be a good proxy for missing values in the most recent period(s).

Economic activity coverage

The [statistical classification of economic activities in the European Community](#) (NACE Rev. 2) is used to define economic activities. Within this publication, the following terms related to economic activities are applied, all based on the NACE Rev. 2 classification.

- Agriculture, forestry and fishing – Section A
 - Agriculture (officially crop and animal production, hunting and related service activities) – Division 01
 - Fishing and aquaculture – Division 03
- Food and beverage (F&B) processing
 - Manufacture of food products – Division 10
 - Manufacture of beverages – Division 11
- Wholesaling, retailing and serving of food and beverages (F&B)
 - F&B wholesaling (includes tobacco wholesaling)
 - F&B wholesale agents – Class 46.17
 - F&B wholesale resellers – Group 46.3
 - F&B retailing (includes tobacco retailing)
 - Non-specialised in-store F&B retail – Class 47.1
 - Specialised in-store F&B retail – Group 47.2
 - F&B retail via stalls and markets – Class 47.81
 - F&B serving (covers restaurants, bars, cafés and other food and beverage outlets) – Division 56



In Chapter 5, data for F&B processing are compared with the manufacturing total, which is defined in NACE as Section C. In Chapter 8, data for the wholesaling, retailing and serving of F&B are compared with the total for non-financial services, which is defined as NACE Sections G to J and L to N and Division 95.

For more information about the NACE Rev. 2 classification, please refer to: <https://ec.europa.eu/eurostat/web/nace-rev2/overview>.

Notes and flags

Notes and flags are means of explaining and defining specific data characteristics. In this publication, these have been restricted to the main notes required for interpretation of the data and to highlight when data for one year has been replaced with data for another. Where data for a particular indicator are not shown in individual illustrations this is because the required data are not available or are confidential. A full set of notes and flags are available on Eurostat's website (see below) via the online data code(s) given in each source.

Accessing European statistics

The simplest way to obtain Eurostat's wide range of statistical information is through its website (<https://ec.europa.eu/eurostat>). Eurostat provides users with free access to its databases and its publications in portable document format (PDF). The website is updated daily and presents the latest and most comprehensive statistical information available on the EU, its Member States, the EFTA countries, as well as enlargement countries (for some datasets information may be provided for a wider range of non-member countries).

Eurostat online data codes, such as *ef_lus_main*, allow easy access to the most recent data on Eurostat's website (<https://ec.europa.eu/eurostat/web/main/data/database>). In this publication these online data codes are given as part of the source below each illustration.

Some of the indicators presented in this publication are relatively complex. *Statistics Explained* provides a comprehensive online glossary with definitions for a broad range of statistical indicators, concepts and terms; it is organised under thematic headings (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Thematic_glossaries).

1

Farms and farm labour force



Farmland

Land used for agriculture

(% share of land area, 2020)

Land used for agriculture covered 38 % of the EU's land area in 2020



Source: Eurostat (online data codes: ef_lus_main and reg_area3)

Farming is principally about growing crops and raising livestock. It provides key primary ingredients for food and drink. Statistics on farmland and farms are taken from the 2020 [agricultural census](#). As part of a global programme, this exhaustive survey is carried out every 10 years. Every 3–4 years between each census, a sample-based farm structure survey is conducted in the EU.

The area used for agricultural production is known as the [utilised agricultural area](#). This is somewhat smaller than the farm area, as that also includes wooded areas or land on farms that

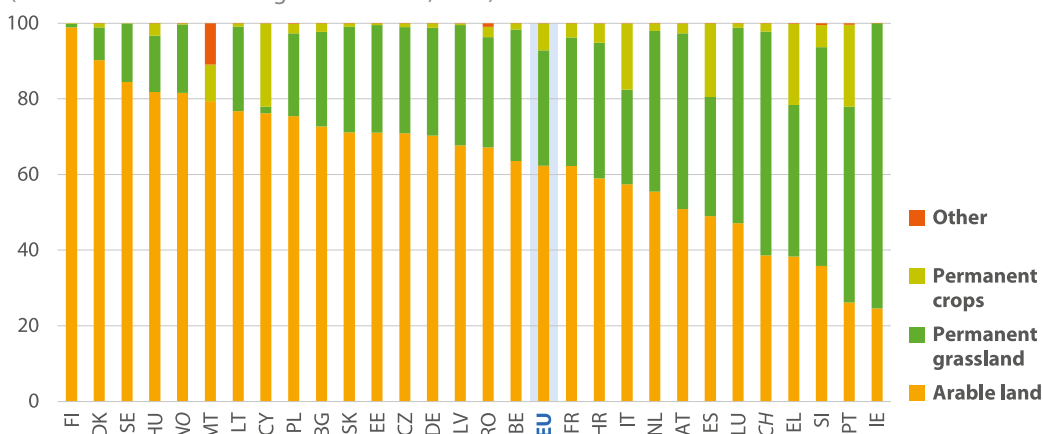
is unsuitable for production, for example that covered by buildings, roads and water areas.

The EU's utilised agricultural area covered 157.4 million hectares of land in 2020, equivalent to 38.4 % of the land area. This share of the utilised agricultural area within the land area ranged from less than one tenth in Sweden and Finland to more than half in Luxembourg, the Netherlands, Hungary, Romania and Denmark and peaked at 71.7 % in Ireland.

France (27.4 million hectares) and Spain (23.9 million hectares) had the largest utilised agricultural areas in the EU in 2020, 17.4 % and 15.2 %, respectively, of the EU total.

Farm land use

(% share of total utilised agricultural area, 2020)



Source: Eurostat (online data code: ef_lus_main)

In 2020, more than three fifths (62.3 %) of the EU's utilised agricultural area was [arable land](#) used to produce crops for human and animal consumption. [Permanent grassland](#) accounted for almost one third (30.5 %) of the utilised agricultural area and

was mainly used to provide fodder and forage for animals. The remaining share was used almost exclusively for [permanent crops](#) (7.1 %) such as fruit, olives and grapes.

Farms

Distribution of farms and farmland by farm size

(% share of total, EU, 2020)

There were 9.1 million agricultural holdings (simply referred to as farms) in the EU in 2020. Almost one third (31.8 %) of these were located in Romania, with more than one tenth in each of Poland (14.4 %), Italy (12.5 %) and Spain (10.1 %).

The average (mean) size of a farm in the EU in 2020 was 17.4 hectares. However, almost two thirds (63.8 %) of the EU's farms were less than 5.0 hectares in size, while just over one tenth (11.4 %) of the farms in the EU had 30.0 hectares or more. The largest size category of farms, those with at least 100.0 hectares, accounted for 3.6 % of the total number of farms, but collectively had slightly more than half (52.5 %) of the total area used for agricultural production in the EU. As such, there were very many semi-subsistence farms in the EU and only a few particularly large ones.

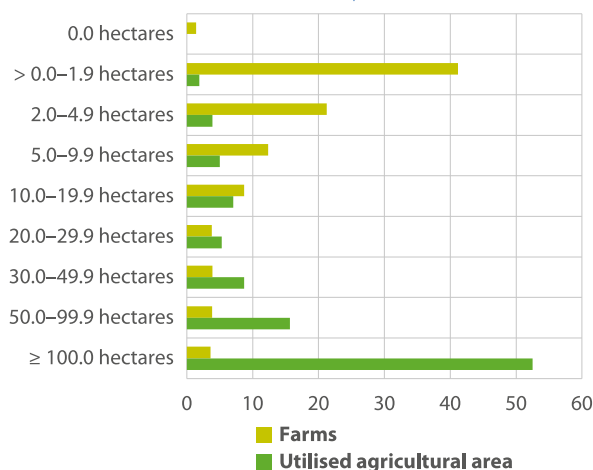
Overall change in farms and farmland by farm size

(%, EU, 2005–2020)

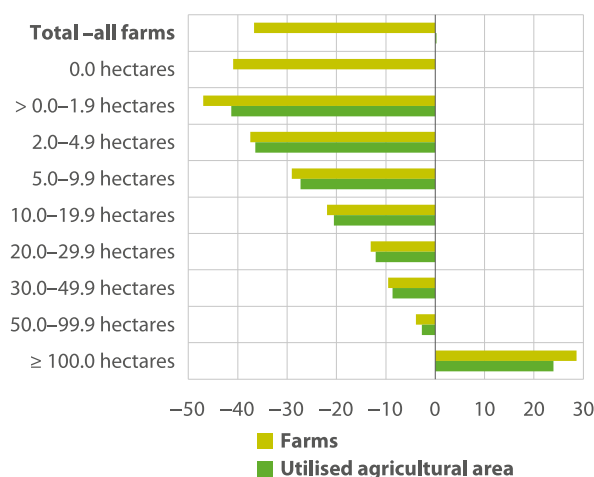
There were about 5.3 million fewer farms in the EU in 2020 than in 2005, a decrease of 37 %⁽¹⁾. The vast majority of the decrease in farm numbers concerned farms smaller than 5.0 hectares in utilised agricultural area; there were 4.6 million fewer farms in this category during the period under consideration. The only category of farms for which an increase in farm numbers was observed was for those with at least 100.0 hectares. As the overall area used for agricultural production in the EU hardly changed between 2005 and 2020 (an increase of 0.3 %), the falling number of farms among all size categories except for the largest reflects mergers or takeovers of farms.

⁽¹⁾ Some of this observed change may reflect methodological difference in the statistics for 2005 and 2020 (in particular changes in survey thresholds). Note also that the EU figure for 2005 includes 2007 data for Croatia.

Family farms accounted for 94.8 % of EU farms in 2020



Source: Eurostat (online data code: [ef_m_farmleg](#))



Note: 2005 includes 2007 data for HR.

Source: Eurostat (online data code: [ef_m_farmleg](#))



Farm specialisations

(% share of all farms, EU, 2020)

About three fifths (58.3 %) of all farms in 2020 were categorised as **specialist crop farms**: just under one third (34.0 %) of all farms were specialised in field cropping, more than one fifth (22.1 %) in **permanent crops** and a small share (2.3 %) in horticulture.

Approximately one fifth (21.6 %) of the EU's farms were **specialist livestock farms**. Specialisations in dairying were the most common (5.1 % of all farms), followed

by cattle-rearing and fattening (4.2 %), poultry (3.9 %) and **sheep, goats** and other grazing livestock (3.6 %).

Mixed farming comprises farms with crops and livestock, farms with various types of crops and farms with various types of livestock. As a whole, mixed farms accounted for just under one fifth (19.3 %) of all farms in the EU.

Some farms (0.8 % of the total) were holdings that were not classified.



Crop specialist
58.3



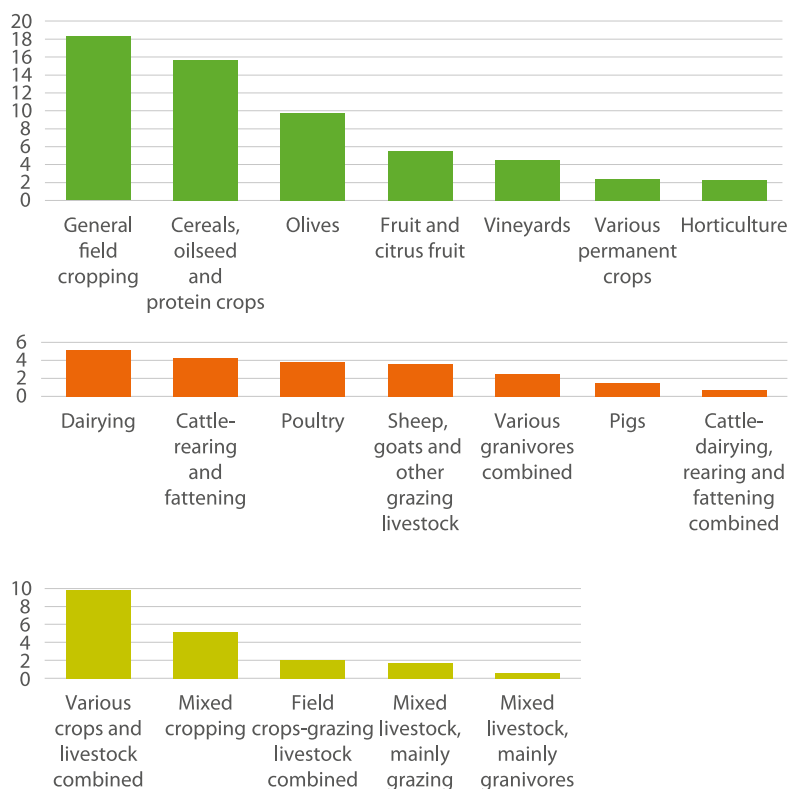
Livestock specialist
21.6



Mixed farming
19.3



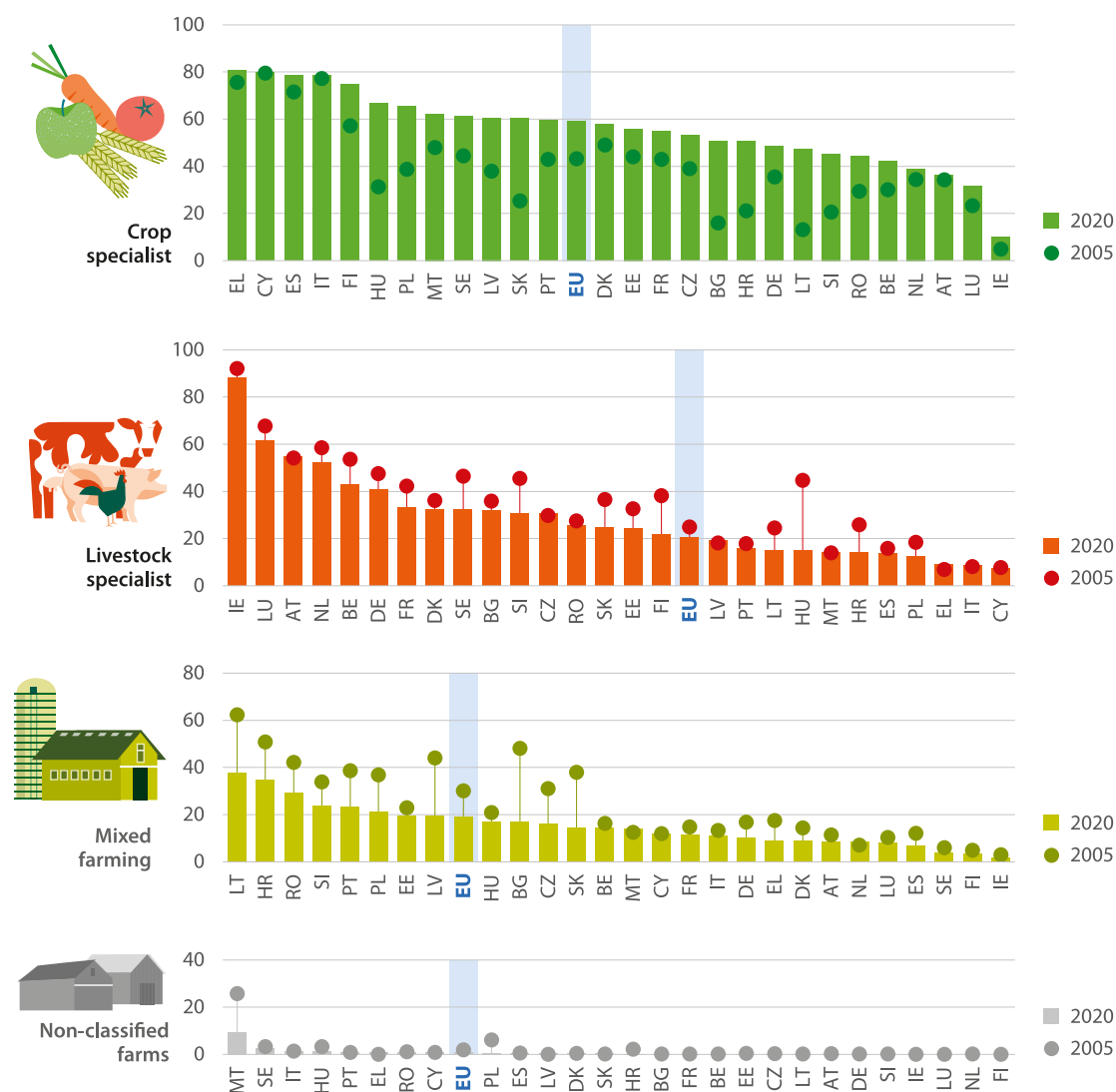
Unclassified farms
0.8



Source: Eurostat (online data code: [ef_m_farmleg](#))

Farm specialisations

(% share of all farms, 2005 and 2020)



In terms of farm types, there was a notable move in the EU away from mixed farms (and to a lesser extent livestock specialists) towards crop specialists between 2005 and 2020.

The largest increases in the share of crop specialists between 2005 and 2020 were observed in Hungary, Slovakia, Bulgaria and Lithuania (with increased in the range of 34.0–35.4 percentage points); none of the EU Member States recorded a fall in their share of crop specialists. By contrast, the Netherlands and Malta were the only Member States where the share of mixed farming rose.

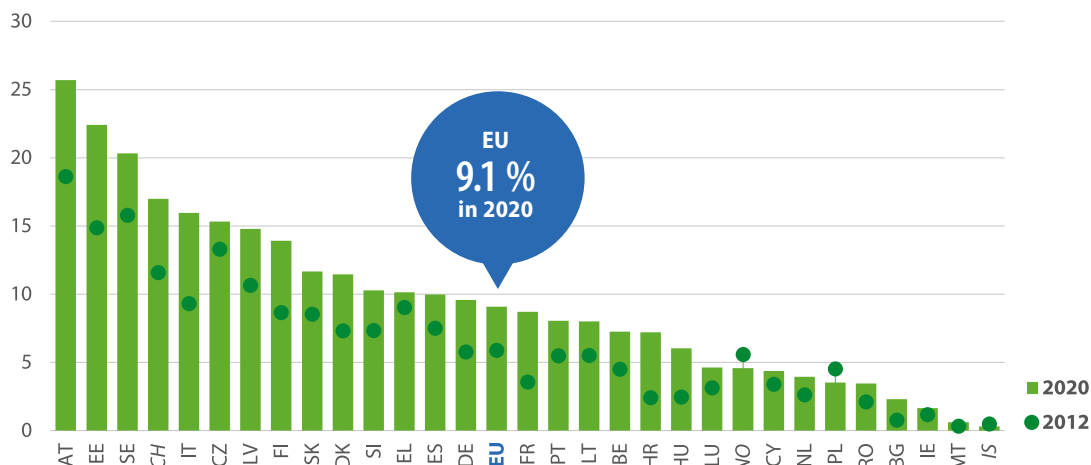
Note: EU, 2005 includes 2007 data for HR. HR: 2007 instead of 2005.

Source: Eurostat (online data code: [ef_m_farmleg](#))

Organic farming

Organic area

(% share of total utilised agricultural area, 2012 and 2020)



Note: includes fully converted areas and areas under conversion. IS: 2013 instead of 2012.

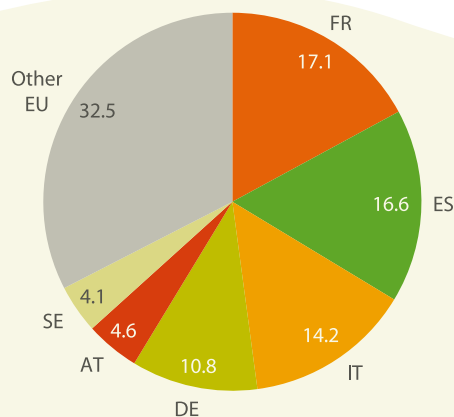
Source: Eurostat (online data code: [org_cropar](#))

Organic farming is a method that aims to use natural substances and processes and to do so in a more sustainable way than conventional farming. The EU's *Farm to Fork Strategy* set an objective that at least 25 % of the EU's agricultural land should be farmed using organic processes by 2030.

In 2020, the area used for organic agricultural production within the EU was 14.7 million hectares. The total organic area in the EU increased by 5.3 million hectares between 2012 and 2020, equivalent to a rise of more than one half (55.7 %). The share of the total

utilised agricultural area that was organic increased from 5.9 % in 2012 to 9.1 % in 2020. During this period, the share of the agricultural area used for organic farming increased in all EU Member States except for Poland.

In 2020, the highest shares of organic farm areas within the total utilised agricultural area were in Austria (25.7 %), Estonia (22.4 %) and Sweden (20.3 %). By contrast, the share of organic farming was below 5.0 % in eight EU Member States, with the lowest shares in Ireland (1.7 %) and Malta (0.6 %).



Share of EU organic area

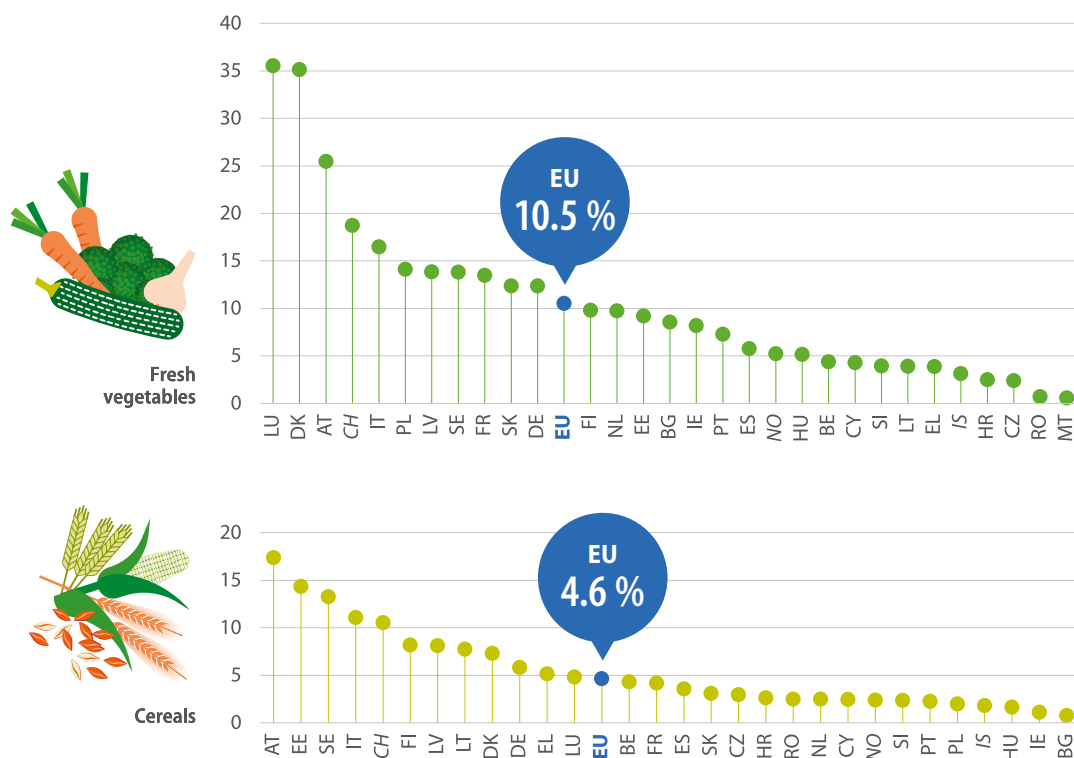
(%, 2020)

Nearly three fifths (58.7 %) of the EU's total organic area in 2020 was located in four EU Member States: France (17.1 %), Spain (16.6 %), Italy (14.2 %) and Germany (10.8 %).

Source: Eurostat (online data code: [org_cropar](#))

Organic area for fresh vegetables and cereals

(% share of utilised agricultural area, 2020)



Note: fresh vegetables include melons and strawberries.
Cereals: MT, not available.

Source: Eurostat (online data codes: [org_cropar](#) and [apro_cpsh1](#))

Cereals and fresh vegetables are among the main arable crops, along with root crops, green fodder and industrial crops.

The area used for the organic farming of fresh vegetables in the EU was 219 thousand hectares in 2020, equivalent to 0.1 % of all land used for agricultural production. About one tenth (10.5 %) of the land used for the production of fresh vegetables in the EU was farmed organically. Luxembourg, Denmark and Austria had notably higher shares of organic

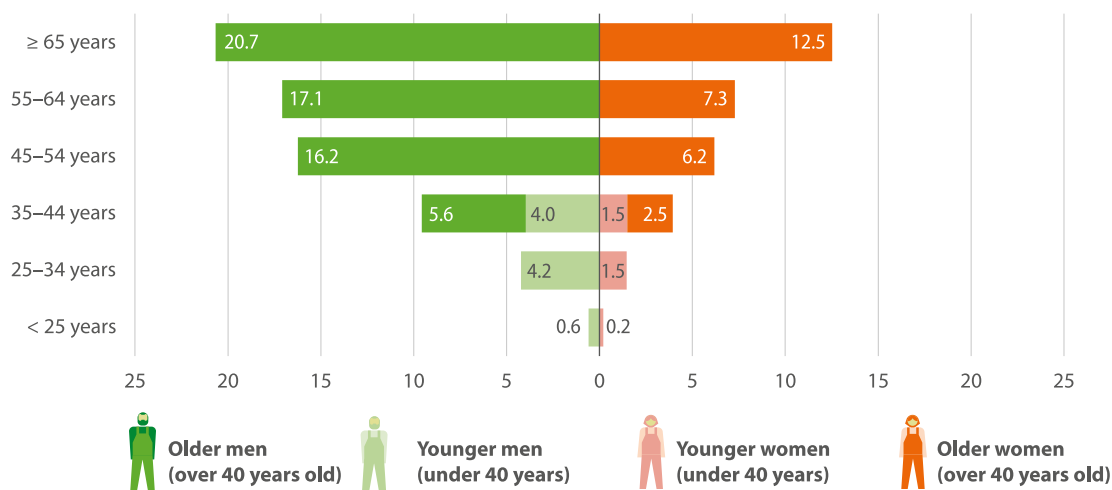
farming within their total area of land used for growing fresh vegetables.

The area used for the organic farming of cereals in the EU was 2.4 million hectares in 2020, equivalent to 1.5 % of all land used for agricultural production. Some 4.6 % of the land used for the production of cereals in the EU was farmed organically. Austria, Estonia and Sweden had the highest shares of organic farming within their total area of land used for growing cereals.

Farmers

Age and sex of farm managers

(% share of all farm managers, EU, 2020)



Slightly more than two thirds (68.4 %) of **farm managers** on the EU's 9.1 million farms in 2020 were men.

A majority (57.6 %) of farm managers (both sexes combined) were at least 55 years of age, while only about 1 in every 10 (11.9 %) were young farm managers – defined here as those under the age of 40 years.

Older farm managers tended to work on the smallest farms (when measured in economic terms or in relation to their agricultural area), while younger farm managers tended to work on larger farms. Whereas 11.9 % of all farm managers in the EU in 2020 were under 40 years

of age, they managed 17.6 % of the total utilised agricultural area. By contrast, older farm managers tended to work on very small (semi-subsistence) and small farms: one third (33.2 %) of EU farm managers were aged 65 years and over, together they managed 16.9 % of the total utilised agricultural area.

Source: Eurostat (online data code: [ef_m_farmang](#))



Overall change in the number of farm managers

(%, 2016–2020)



Note: ranked on the overall change for both sexes (men and women).

Source: Eurostat (online data code: [ef_m_farmang](#))

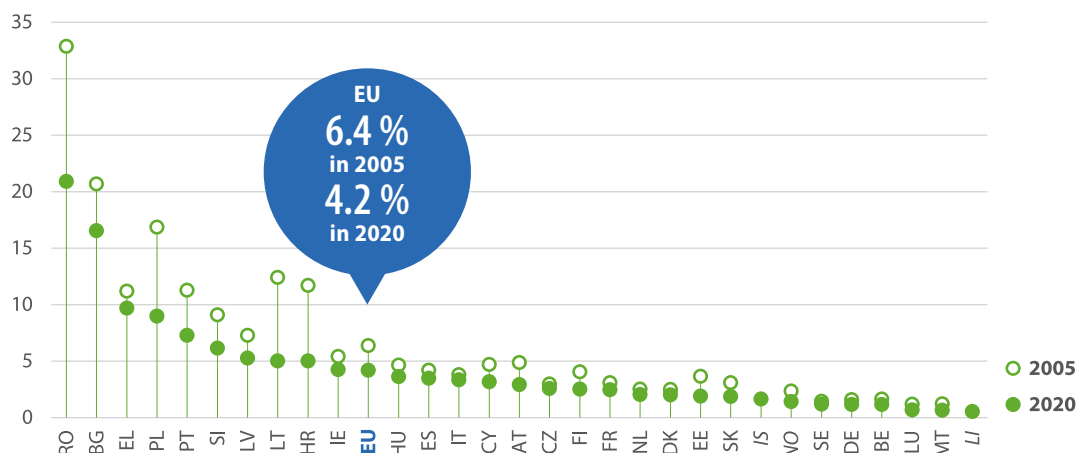
Alongside the decrease in the number of farms, the number of farm managers fell 11.2 % between 2016 and 2020. The number of male farm managers declined at a faster rate (down 14.6 %) than that for female farm managers (down 2.3 %). The number of farm managers (both sexes combined) increased for younger age groups below 35 years. When analysed by age and sex together, increases were recorded for female farm managers for all age groups below 55 years, whereas for male farm managers increases were observed for the two age classes below 35 years.

Most of the EU Member States recorded an overall decline in the number of farm managers between 2016 and 2020. The decreases in Hungary, Bulgaria and Estonia (down 46.0 %, 34.1 % and 31.9 %, respectively) were the largest. Slovenia, Denmark, Croatia and Czechia recorded increases in their respective number of farm managers, with growth ranging from 3.7 % to 9.0 %, with a somewhat faster growth rate in Portugal (up 12.1 %).

Farm workforce

Employment in agriculture, hunting and related service activities

(% share of total employment, 2005 and 2020)



Note: LI and NO, 2019 instead of 2020.
IS and LI: 2005, not available.

Source: Eurostat (online data code: [nama_10_a64_e](#))

In 2020, there were 8.7 million people working ⁽²⁾ in agriculture (including hunting and related service activities) in the EU, the equivalent of 4.2 % of total employment. As the number of farms in the EU has declined over time, so has agricultural employment. Agriculture's share of employment in the EU fell from 6.4 % in 2005 to 4.2 % in 2020.

Agriculture is a particularly big employer in Romania, accounting for more than one in every five persons employed (20.9 %) in 2020. Agriculture also accounted for a relatively high share (16.6 %) of total employment in Bulgaria, while shares that were just below one tenth of total employment were recorded in Greece and Poland. By contrast, the share of agriculture in total employment was less than 2.0 % in Estonia, Slovakia, Sweden, Germany, Belgium, Luxembourg and Malta.

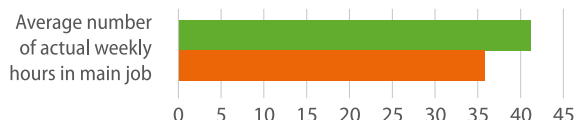
As a share of total employment, the largest fall in agricultural employment after 2005 was observed in Romania (down 11.9 [percentage points](#); 2005–2020).

⁽²⁾ Note that simple counts of employed persons do not take into account the extent of part-time work in different economic activities.

Agricultural workforce characteristics

(EU, 2021)

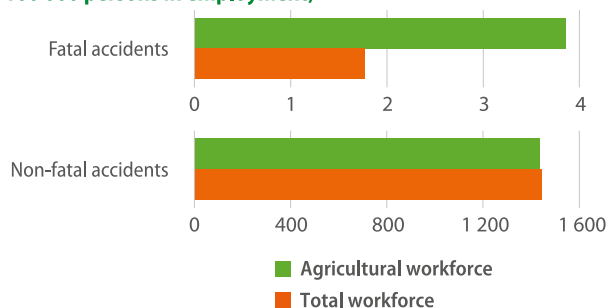
Working time (hours)



Workforce characteristics (%)



Incidence rates of accidents at work (per 100 000 persons in employment)



In many respects, the agricultural workforce differs from the overall workforce in the EU. **Average working hours** are longer than typical, reaching 41.2 hours in 2021, compared with an economy-wide average of 35.9 hours. This is reinforced by the fact that 23.5 % of people working in agriculture worked long hours (49 hours or more per week), nearly three times the average share (7.4 %) for all persons in employment.

As well as differences concerning working time, the characteristics of agricultural workers in the EU were also atypical. The share with a low level of education in 2021 was relatively high (36.0 %), more than double the average for all persons in employment (16.1 %); the share with a high level of education was relatively low in agriculture, 12.0 % compared with 36.6 % for the whole workforce.

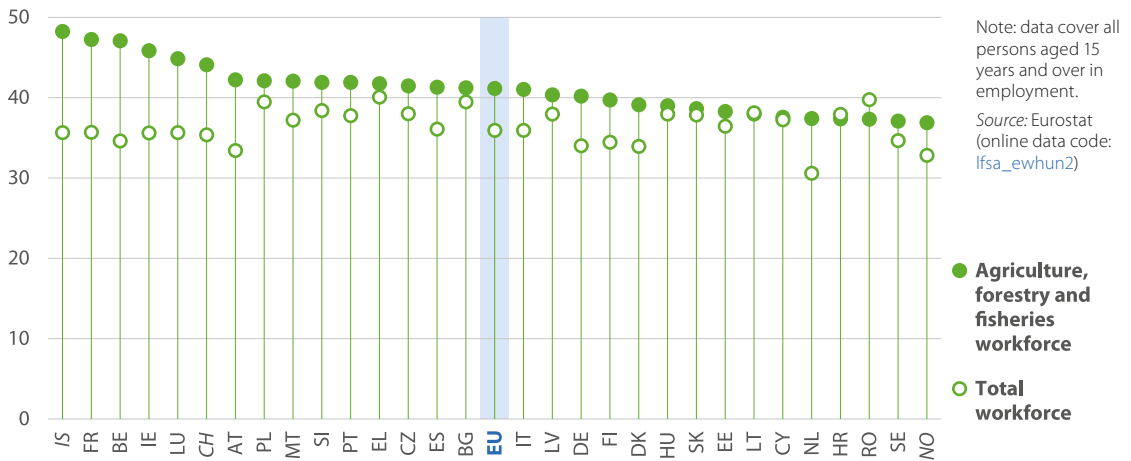
In 2021, temporary employment was more or less as common in the EU's agricultural workforce (12.4 %) as in all activities (12.0 %). In terms of working status, agriculture differed in two respects from the overall workforce in the EU. The shares of family workers and of **self-employment** were both considerably higher in agriculture, 10.8 % (compared with an average of 0.7 %) for the former and 54.0 % (compared with an average of 13.8 %) for the latter.

Note: data cover all persons aged 15 years and over in employment. Accidents: 2020.

Source: Eurostat (online data codes: [lfsa_ewhan2](#), [lfsa_qoe_3a2](#), [lfsa_egised](#), [lfsa_etgan2](#), [lfsa_egan22d](#), [lfsa_egaps](#), [lfsa_esgan2](#), [hsw_n2_02](#) and [hsw_n2_01](#)) and special data extractions

Average number of usual weekly hours of work in main job

(hours, 2021)

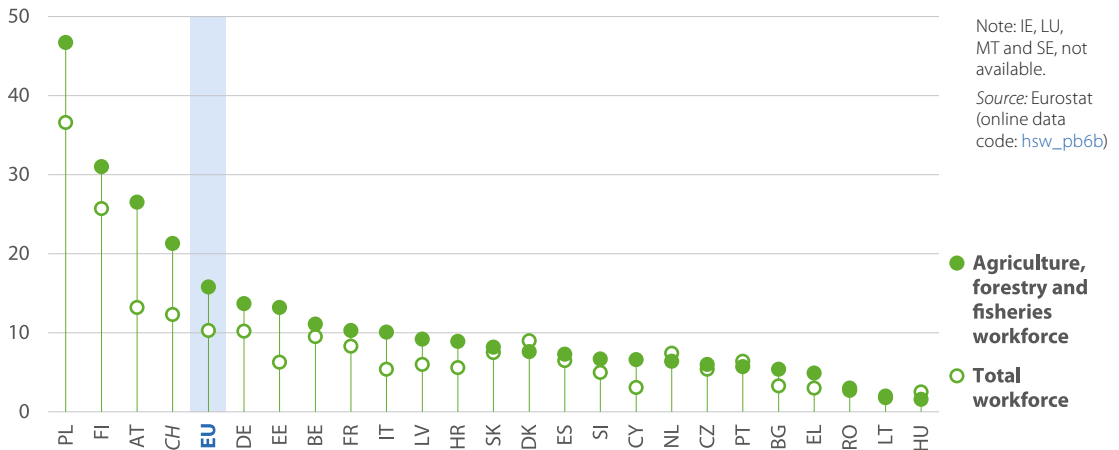


Nearly all EU Member States had above average working hours within agriculture in 2021: Romania, Croatia and Lithuania were the only ones where average working hours in agriculture were below the

economy-wide average. The largest difference was observed for Belgium, where people in agriculture typically worked 12.5 more hours per week than the economy-wide average.

People reporting a work-related health problem

(% share of employed or previously employed people aged 15–64 years, 2020)



In 2020, one tenth (10.3 %) of all employed or previously employed people aged 16–64 years in the EU reported that they had a work-related health problem. For people employed or previously employed in agriculture, forestry and fisheries, the share was approximately half as high again, at 15.8 %. Higher

incidences of work-related health problems among the agriculture, forestry and fisheries workforce were reported in 18 of the 23 EU Member States for which data are available; the exceptions were Denmark, the Netherlands, Hungary, Portugal and Romania.

2

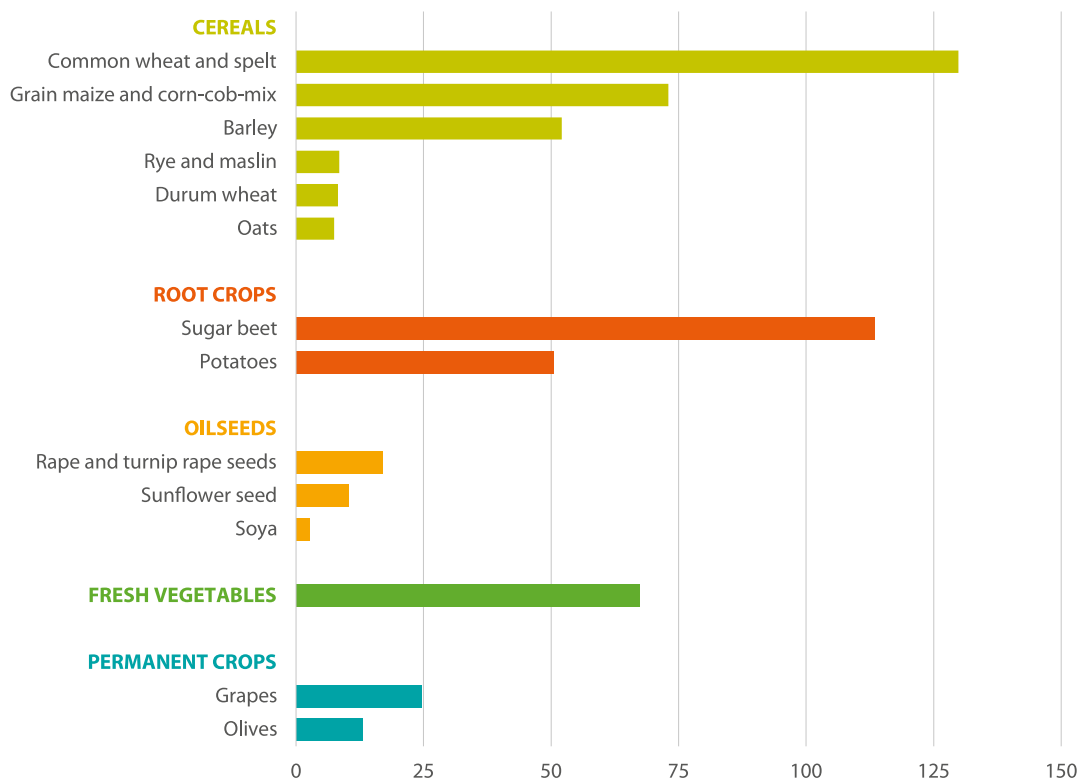
Agricultural products



Crop production

Production of selected crops

(million tonnes, EU, 2021)



The EU's *Farm to Fork Strategy* aims to encourage a more sustainable and resilient form of farming, whereby consumers feel closer to the food that they eat, for example choosing sustainably sourced food. The strategy aims to reward farmers and other operators in the food chain who have undergone this transition to sustainable practices.

Crop production is sensitive to weather conditions throughout the growing season and at harvest, as well as to other factors like soil quality, nutrient availability and pests; they impact on both **yields** (the quantity of crops harvested per hectare of cultivated land) and quality. However, as the EU covers a large area with a wide range of climates the impact of poor conditions on the harvest in one region may be offset by better conditions in another.

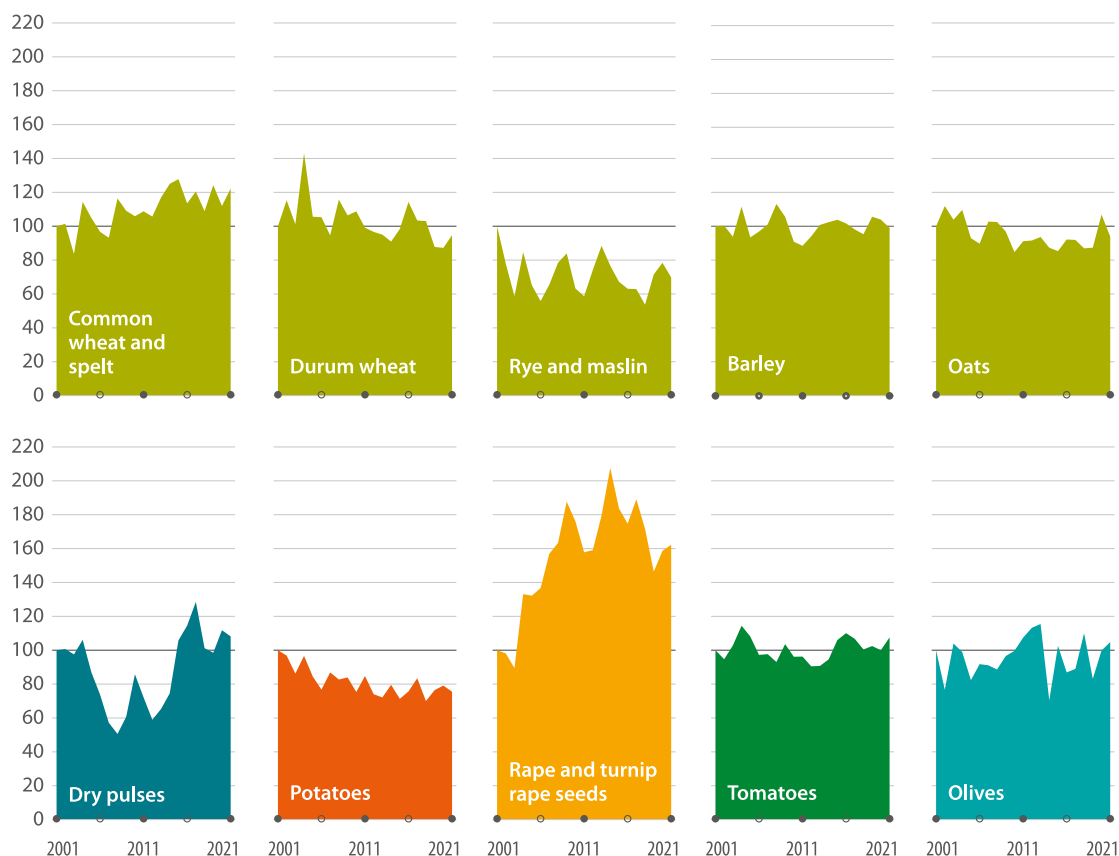
In 2021, some of the principal crops **harvested** in the EU – in quantity terms – included common wheat and spelt (129.9 million tonnes), sugar beet (113.3 million tonnes), grain maize and corn-cob mix (73.0 million tonnes), fresh vegetables (67.2 million tonnes; note this figure excludes the harvested production of potatoes), barley (52.1 million tonnes) and potatoes (50.4 million tonnes).

Note: data are shown for selected crops; the list is not exhaustive. Fresh vegetables include melons and strawberries.

Source: Eurostat (online data code: [apro_cpsh1](#))

Developments of crop production

(2001 = 100 based on tonnes, EU, 2001–2021)



Note: data are shown for selected crops that have a relatively complete time series for the EU. Estimates made for the purpose of this publication.

Source: Eurostat (online data code: [apro_cpsh1](#))

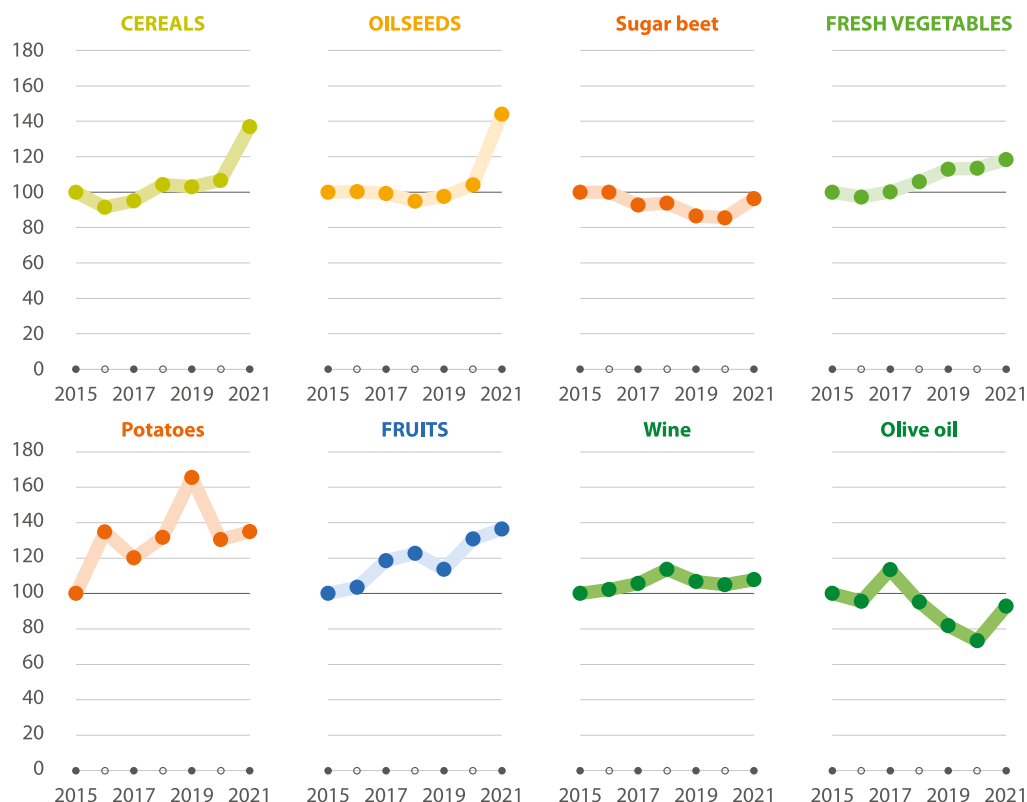
When making decisions on which crops to sow every year, farmers consider agronomic factors (for example, [crop rotations](#) and soil conditions), the availability of labour and machinery, input costs (for example, of seeds and fertilisers) and anticipated returns, and policy incentives or restrictions. These decisions have an impact on the production of specific crops from one year to the next.

This annual decision-making is less relevant for farmers of permanent crops, like olives, apples and grapes. However, there can be strong annual fluctuations in production levels, not only because of weather conditions and disease but also because olive trees and some fruit trees have a biennial bearing: a heavy load is generally followed by a lighter one.

Comparing 2001 with 2021, there was a considerable increase in the EU's harvested production for rape and turnip rape seeds, while production was also notably higher for common wheat and spelt. By contrast, the EU's harvested production of potatoes and of rye and maslin was notably lower.

Developments of output price indices for crop products

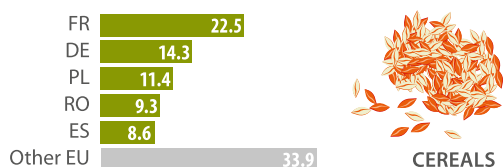
(2015 = 100, EU, 2015–2021)



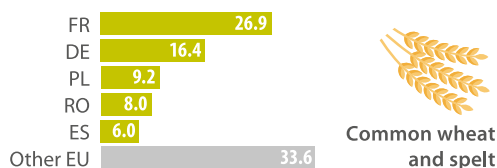
The important role of climatic and other natural conditions on the quantity and quality of harvested production tends to have a knock-on impact on agricultural prices to balance supply and demand. During the whole of the period 2015–2021, the largest **output (or producer) price** fluctuations in the EU (among those crops for which information is shown) were recorded for **oilseeds** and oleaginous fruits, potatoes, cereals, fruits and olive oil, whereas output prices were relatively stable for wine, sugar beet and fresh vegetables.

The volatility for cereals as well as for oilseeds and oleaginous fruits reflects recent large increases in prices. In 2021, the output price of oilseeds and oleaginous fruits in the EU rose by 38.4 %, while the price for cereals increased by 28.4 %. A relatively large increase was also observed for olive oil, up 26.4 % after three consecutive years of falling prices. Among those crops for which information is shown, none recorded lower prices in 2021 than in 2020.

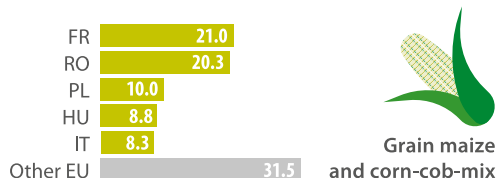
Source: Eurostat (online data code: [apri_pi15_outa](#))



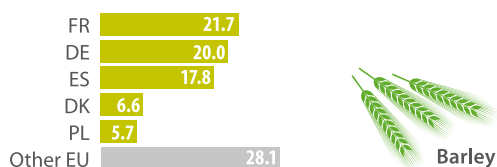
CEREALS



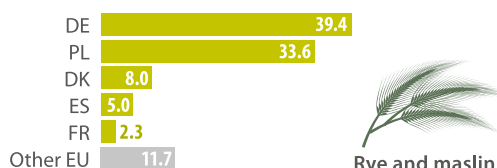
Common wheat and spelt



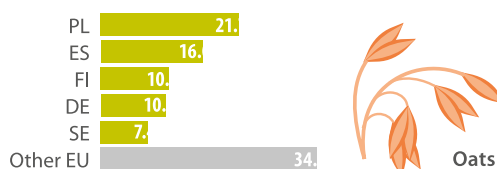
Grain maize and corn-cob-mix



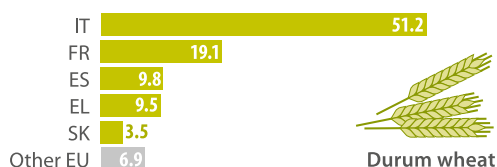
Barley



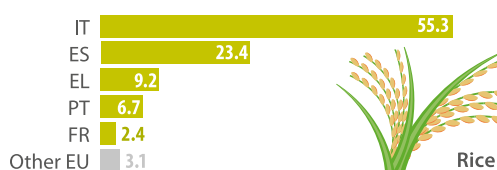
Rye and maslin



Oats



Durum wheat



Rice

Share of EU production of various types of cereal

(% based on tonnes, 2021)

Wheat accounts for close to half of the total quantity of cereals grown across the EU each year. The remainder is principally composed of grain maize and corn-cob mix and of barley, with smaller quantities of other cereals such as rye and oats. Based on a limited set of information for 17 EU Member States in 2020, an overall majority (around 54 %) of the main cereals consumed in the EU were used for animal feed, with the next highest share (around 28 %) for human consumption. Around one tenth of the harvest was for industrial uses (other than for biofuels), around 4 % for seed and around 3 % for biofuels.

In 2021, the harvested area of cereals across the EU was 52.5 million hectares (or 525 thousand km²), on which 297.5 million tonnes of crop was produced. France accounted for more than one fifth (22.5 %) of the EU's cereals production, while Germany (14.3 %) and Poland (11.4 %) were the next largest producers.

A majority of the EU's cereals are grown over the extensive plains of France, Germany, Poland and Romania, where largely temperate weather conditions support higher yields. In 2021, the harvested production of durum wheat was principally concentrated in Italy (where it is used in the manufacture of pasta), while the production of rye and maslin (used in the manufacture of bread, vodka and animal fodder) was concentrated in Germany and Poland. The [Nordic](#) and [Baltic](#) Member States were relatively specialised in the production of oats; these thrive – compared with other cereals – in cooler and wetter conditions. France and Romania were relatively specialised in the production of grain maize and corn-cob-mix, while Italy and Spain were the main producers of rice.

Source: Eurostat (online data code: [apro_cpsh1](#))



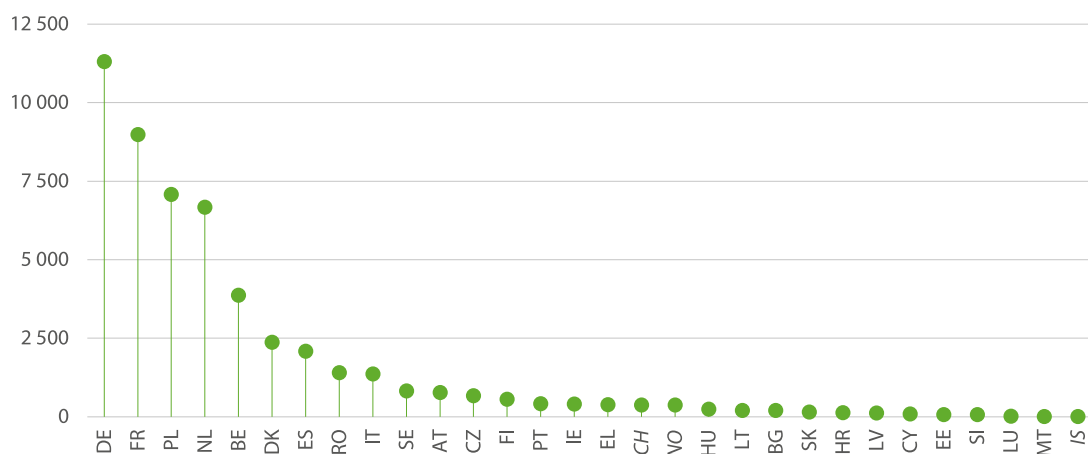
Harvested production of potatoes

(1 000 tonnes, 2021)

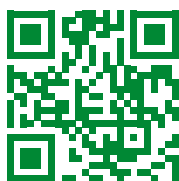
In 2021, the harvested area of potatoes across the EU was 1.4 million hectares, on which 50.4 million tonnes of crop was produced; note that the harvested production of potatoes includes seed potatoes, in other words, those potatoes that are grown to be planted to produce the following year's crop.

Germany (22.4 %), France (17.8 %), Poland (14.0 %) and the Netherlands (13.2 %) together accounted for approximately two thirds of the EU's potato harvest in 2021. The harvested production of potatoes in Germany was 11.3 million tonnes.

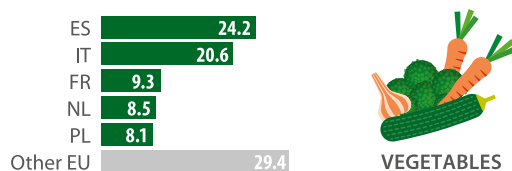
The highest apparent yields – at least 40 tonnes of potatoes per hectare in 2021 – were recorded in a band of EU Member States running from Denmark, through Germany, the Netherlands and Belgium into France, as well as in Ireland.



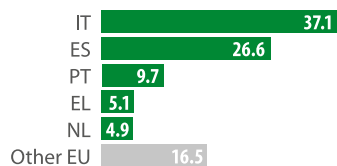
Source: Eurostat (online data code: [apro_cpsh1](#))



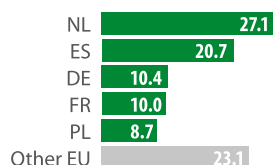
For more and updated information on crop production, please refer to the Statistics Explained article.



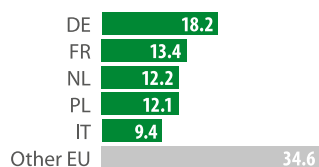
VEGETABLES



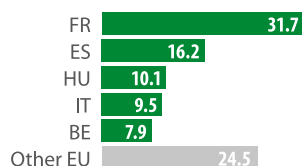
Tomatoes



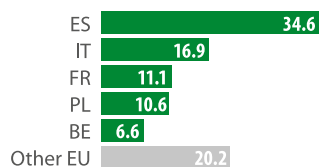
Onions



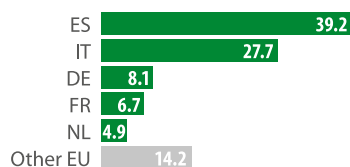
Carrots



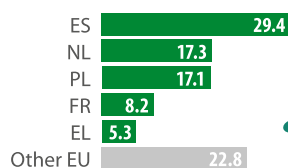
Fresh peas



Cauliflowers and broccoli



Lettuce



Cucumbers

Share of EU production of various types of vegetable

(% based on tonnes, 2021)

In 2021, fresh vegetables were cultivated on 2.0 million hectares of land across the EU, on which 67.2 million tonnes of crop was produced. The three most commonly grown fresh vegetables – in quantity terms – were tomatoes (17.9 million tonnes of harvested production), onions (7.1 million tonnes) and carrots (5.3 million tonnes).

Spain was the leading producer of fresh vegetables (24.2 % of the EU's harvested production in 2021), followed by Italy (20.6 %); none of the remaining EU Member States recorded double-digit shares.

The production of some fresh vegetables is concentrated in a few EU Member States. For example, Italy accounted for more than one third (37.1 %) of the EU's harvested production of tomatoes in 2021, while Spain (26.6 %) had the next highest share. The Netherlands (27.1 % of the EU's harvested production) and Spain (20.7 %) were the principal producers of onions, while Germany (18.2 % of the EU total) had the highest share of the harvested production of carrots.

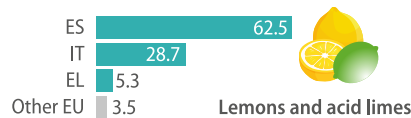
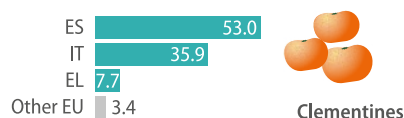
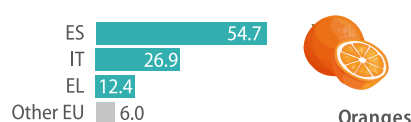
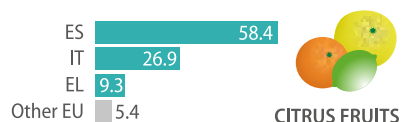
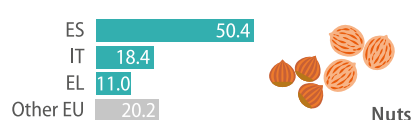
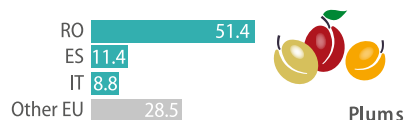
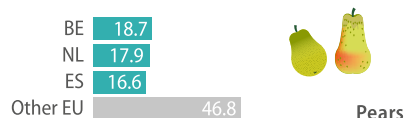
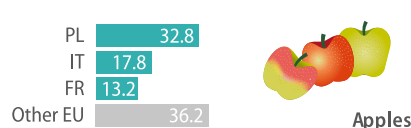
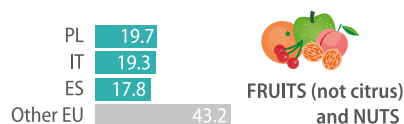
Note: estimates made for the purpose of this publication. EU total (used to calculate the shares) for cauliflowers and broccoli excludes EE. Due to rounding, not all shares sum to 100.0 %.

Source: Eurostat (online data code: [apro_cpsh1](#))

Source: Eurostat (online data code: [apro_cpnh1](#))

Share of EU production of various types of fruit, berries and nuts

(% based on tonnes, 2021)



Note: excluding grapes and strawberries.
Due to rounding, not all shares sum to 100.0 %.

Source: Eurostat (online data code: [apro_cpsh1](#))

The EU produces a wide range of fruit, berries and nuts. A total of 24.9 million tonnes were harvested in 2021 (excluding **citrus fruit** and grapes), of which 14.4 million tonnes were pome fruit (apples and pears), 6.0 million were stone fruit (such as peaches, nectarines, apricots, cherries and plums), 2.6 million tonnes were sub-tropical and tropical fruit (such as figs, kiwis, avocados and bananas), 1.2 million tonnes were nuts and 0.7 million tonnes were berries (other than strawberries). In 2021, Poland (19.7 %), Italy (19.3 %) and Spain (17.8 %) were the main producers of fruit, berries

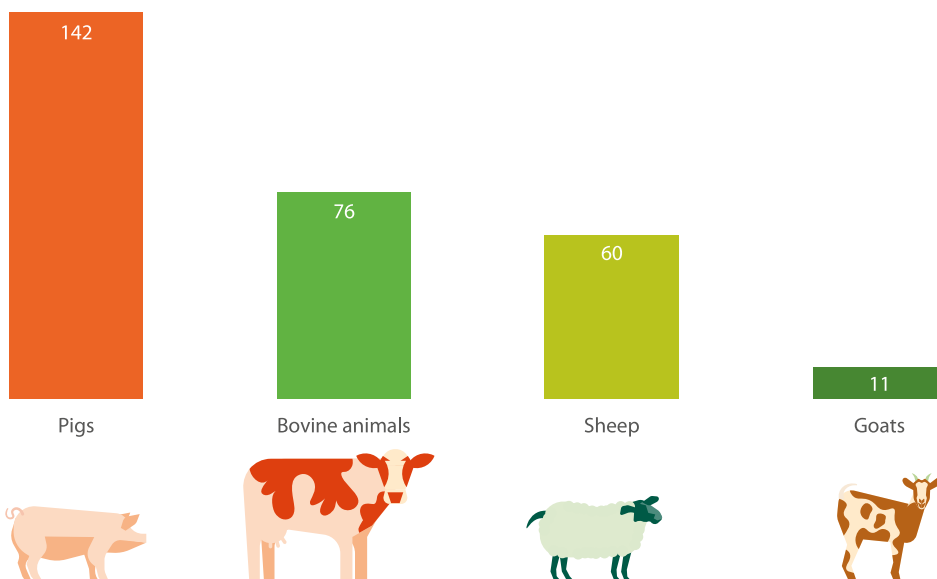
and nuts in the EU. For some specific fruits, other EU Member States were key producers.

In addition, 11.5 million tonnes of citrus fruit (such as oranges, satsumas and lemons) were harvested in 2021. For climatic reasons – abundant sunshine and warmth without sub-zero temperatures – Spain is the leading citrus fruit producer in the EU: fruit orchards are primarily in eastern and southern regions. In 2021, Spain accounted for nearly three fifths (58.4 %) of all citrus fruit production in the EU, including a majority of each major type of citrus fruit.

Livestock population

Livestock populations

(million head, EU, 2021)



The EU has introduced a range of legislation covering the traceability of livestock, in part as a response to various food safety concerns. For most animal species, this traceability concerns a system of identification – usually through ear-tags or tattoos – coupled with a national register that details animals as they are reared, held or handled at each stage of the food chain.

As part of the EU's *Farm to Fork Strategy*, the [European Commission](#) is in the process of drafting a proposal to revise the [Feed Additives Regulation](#) ((EC) No 1831/2003) with the goal of reducing the environmental impact of livestock farming. For example, it will examine rules to lessen dependency on feed materials grown on deforested land and aim to replace these with EU-grown plant proteins and alternative feed.

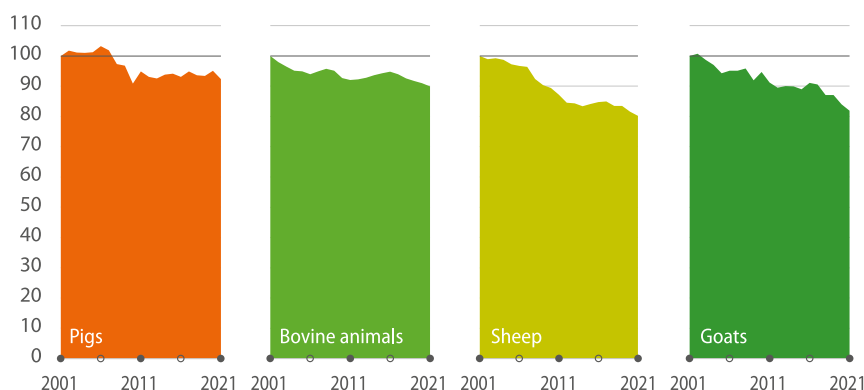
The EU has a sizeable livestock population: at the end of 2021, there were 142 million head of [pigs](#), 76 million head of [bovine animals](#) (such as cattle or buffalo), and an estimated 71 million head of sheep and goats on EU farms.

Note: sheep and goats, estimates made for the purpose of this publication.

Source: Eurostat (online data codes: [apro_mt_lspig](#), [apro_mt_lscatl](#), [apro_mt_lssheep](#) and [apro_mt_lsgoat](#))

Developments of livestock populations

(2001 = 100 based on head of animals, EU, 2001–2021)



Note: sheep and goats, estimates made for the purpose of this publication.

Source: Eurostat
(online data codes: apro_mt_lspig, apro_mt_lscatl, apro_mt_lssheep and apro_mt_lsgoat)

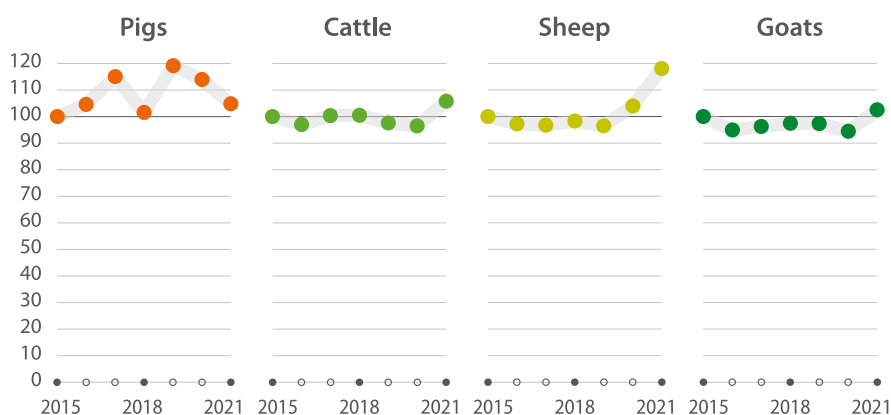
During the last two decades, there has been a decline in livestock populations across the EU. Between 2001 and 2021, the EU's total livestock count for pigs, bovine animals, sheep and goats fell by an estimated 11.5 %, from 326 million to 289 million. The number of head declined for each livestock population during the period under consideration: the largest overall declines (in percentage

terms) were recorded for the number of sheep and goats, while the smallest decrease was in pig numbers.

Looking in more detail at developments between 2020 and 2021, the population of bovine animals in the EU decreased by 1.1 % while there were sharper rates of decline for sheep (down 1.7 %), goats (down 2.6 %) and pigs (down 2.9 %).

Developments of output price indices for animals

(2015 = 100, EU, 2015–2021)



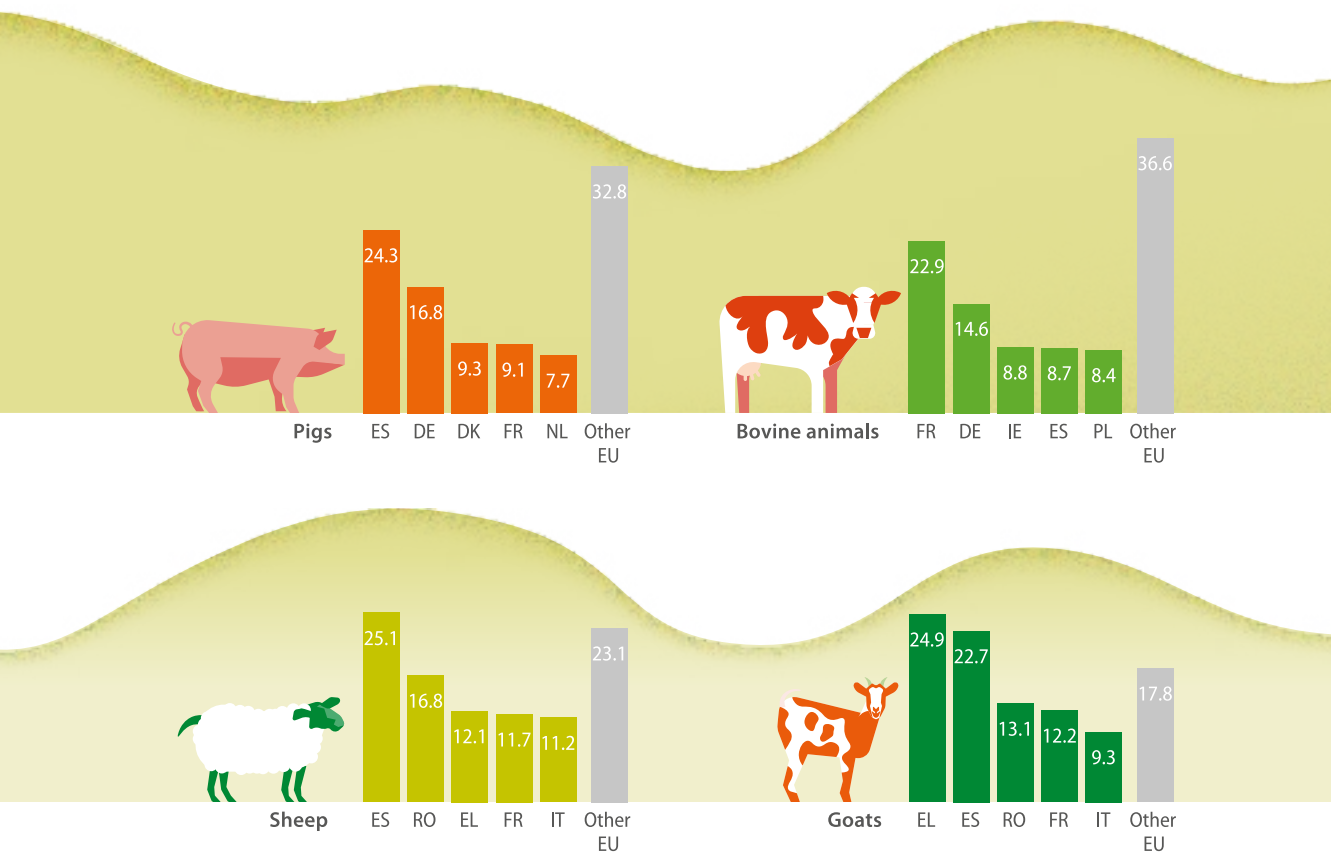
Source: Eurostat
(online data code: apri_pi15_outa)

In contrast to the relative price stability observed for poultry and cattle during the period between 2015 and 2020, their output prices rose strongly in 2021. There was more volatility in price developments for pigs (in contrast to developments for other types of livestock): output prices rose at a relatively rapid pace between

2016 and 2017, fell back in 2018, rebounded in 2019 and fell somewhat in 2020 and more rapidly in 2021. For goats and sheep, the price developments were more moderate in the earlier years studied, but prices increased relatively strongly in 2020 and notably faster in 2021.

Share of EU livestock populations

(% based on head of animals, 2021)



A majority of the EU's livestock are held in just a few of the EU Member States. Spain accounted for around one quarter of the EU's pig (24.3 %), sheep (25.1 %) and goat (22.7 %) populations in 2021, while Greece had a similar share (24.9 %) of the EU's goat population and France had a 22.9 % share of the bovine population.

Some of the EU Member States are relatively specialised in terms of livestock farming. In 2021:

- Denmark had the third highest number of pigs;
- Ireland had the third highest number of bovine animals;
- Romania had the second highest number of sheep and the third highest number of goats;
- alongside the highest number of goats, Greece had the third highest number of sheep.

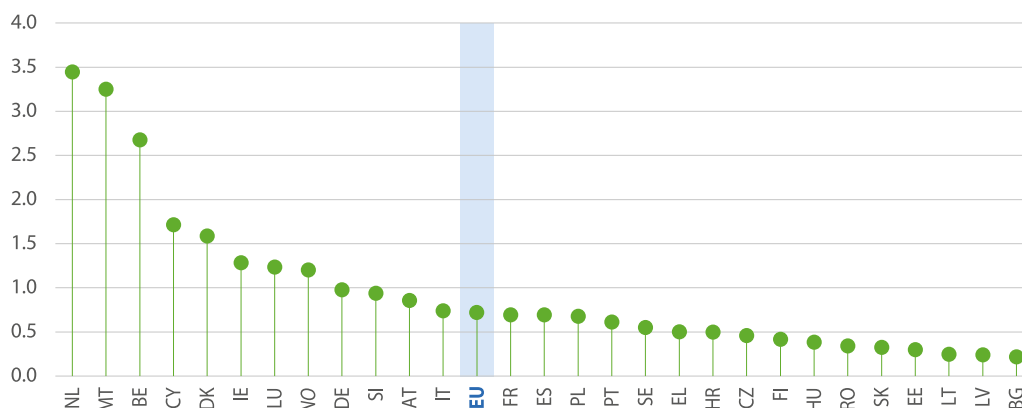
Note: sheep and goats, estimates made for the purpose of this publication.

Source: Eurostat (online data codes: [apro_mt_lspig](#), [apro_mt_lscat1](#), [apro_mt_lssheep](#) and [apro_mt_lsgoat](#))

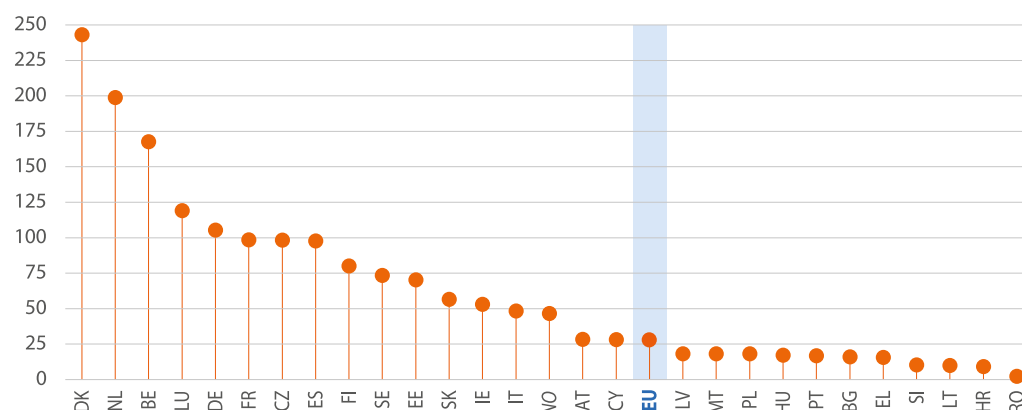
Livestock densities

(2020)

Livestock units per hectare of utilised agricultural area



Livestock units per livestock farm

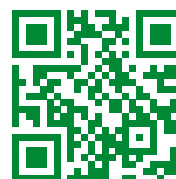


The **livestock density index** is calculated as the stock of animals (measured in **livestock units**) per hectare of utilised agricultural area. Based on this measure, the highest livestock densities in 2020 among EU Member States were recorded in the Netherlands (3.4 livestock units per hectare of utilised agricultural area), Malta (3.3) and Belgium (2.7). By contrast, livestock farming was relatively extensive in the Romania, Slovakia, the Baltic Member States and Bulgaria, with at most 0.3 livestock units per hectare of utilised agricultural area.

A measure of livestock farm size can be defined as the number of livestock units per livestock farm. The highest average sizes among the EU Member States in 2020 were in Denmark (an average of 243 livestock units per holding), the Netherlands (199) and Belgium (168). At the other end of the range, there were at most 10 livestock units per livestock farm in Slovenia, Lithuania, Croatia and Romania (where semi-subsistence livestock farming on relatively small farms tends to predominate).

Note: different scales are used for each part of the figure.

Source: Eurostat (online data codes: [ef_lus_main](#) and [ef_lsk_main](#))

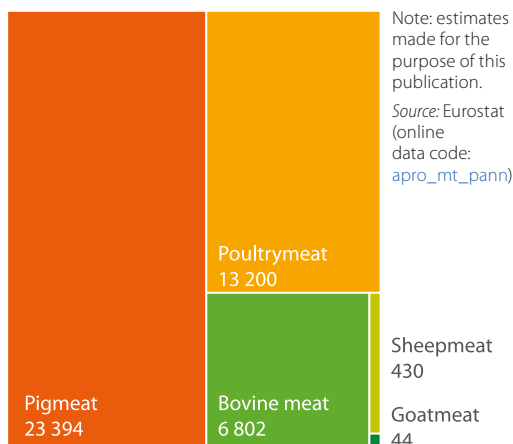


For more and updated information on livestock and meat, please refer to the Statistics Explained article.

Meat production

Meat production

(thousand tonnes, EU, 2021)

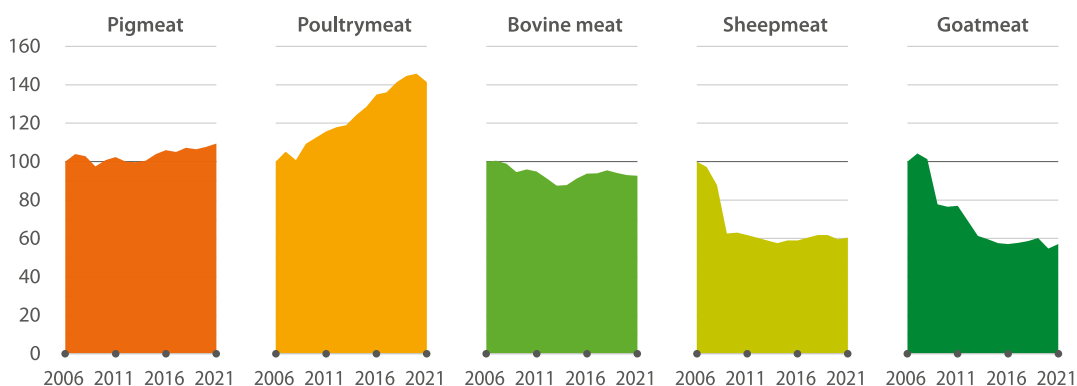


Better animal welfare improves animal health and food quality. Within the context of the EU's *Farm to Fork Strategy*, the European Commission plans to revise legislation concerning the [slaughter of animals](#) so that it is aligned with scientific evidence, broadening its scope, making it easier to enforce, and ultimately ensuring a higher level of animal protection/welfare.

In 2021, 23.4 million tonnes of pigmeat were produced within the EU, a moderate rise on 2020 (1.6 %) to a new peak. An estimated 13.2 million tonnes of poultrymeat were produced, almost twice as much as the production quantity of bovine meat (6.8 million tonnes). The EU produced much smaller quantities of sheepmeat and goatmeat.

Developments of the quantity of meat production

(2006 = 100 based on tonnes, EU, 2006–2021)



Among other influences, consumer attitudes to eating meat have been affected by (scientific) advice regarding healthy diets. During the period from 2006–2021, there was a rapid and relatively uniform increase in the production of poultrymeat, with EU production rising overall by an estimated 41 %. The level of pigmeat production rose by 9.4 %, although most of this growth occurred after 2013; note the growth in pigmeat production was achieved despite a falling number of pigs. By contrast, the production of bovine meat fell 7.4 % between 2006 and 2021, most of which was in the period through to 2014. Sheepmeat production and goatmeat production each fell by approximately 40 % during the periods 2006–2009 and 2006–2014, respectively, after which their production levels were more stable.

Note: estimates made for the purpose of this publication.

Source: Eurostat (online data code: [apro_mt_pann](#))

Share of quantity of EU meat production

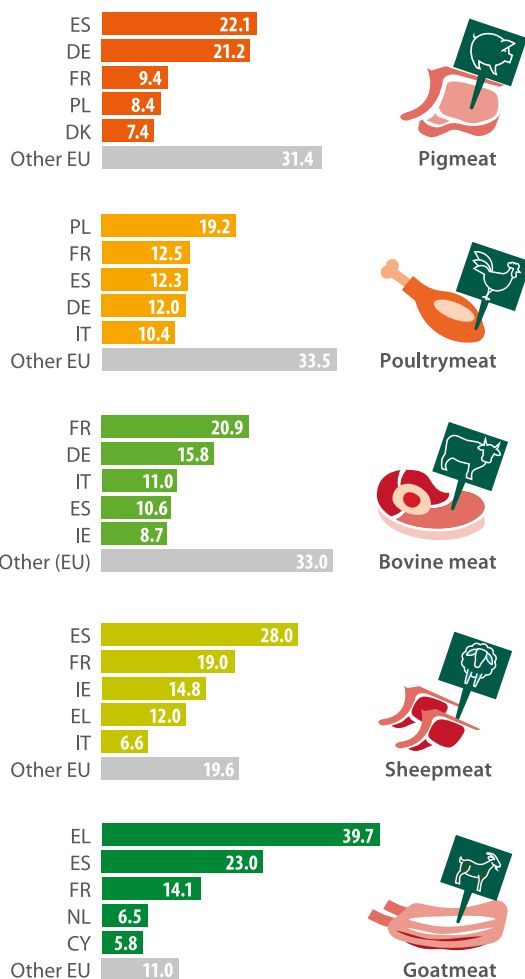
(%, 2021)

In 2021, slightly more than one fifth (22.1 %, or 5.2 million tonnes) of the EU's pigmeat production came from Spain, with a similar contribution made by Germany (21.2 %); each of the remaining EU Member States had single-digit shares of the EU total.

The highest level of poultrymeat production was in Poland (19.2 % of the EU total, or 2.5 million tonnes), while France (12.5 %), Spain (12.3 %), Germany (12.0 %) and Italy (10.4 %) each recorded double-digit shares of EU production.

Slightly more than one fifth of all the EU's bovine meat production was from France (20.9 %, or 1.4 million tonnes), with relatively large shares for Germany (15.8 %), Italy (11.0 %), Spain (10.6 %) and Ireland (8.7 %).

Spain had the highest share of the EU's sheepmeat production (28.0 %, or 120 thousand tonnes), while most of the remaining production in the EU came from France (19.0 %), Ireland (14.8 %) and Greece (12.0 %).



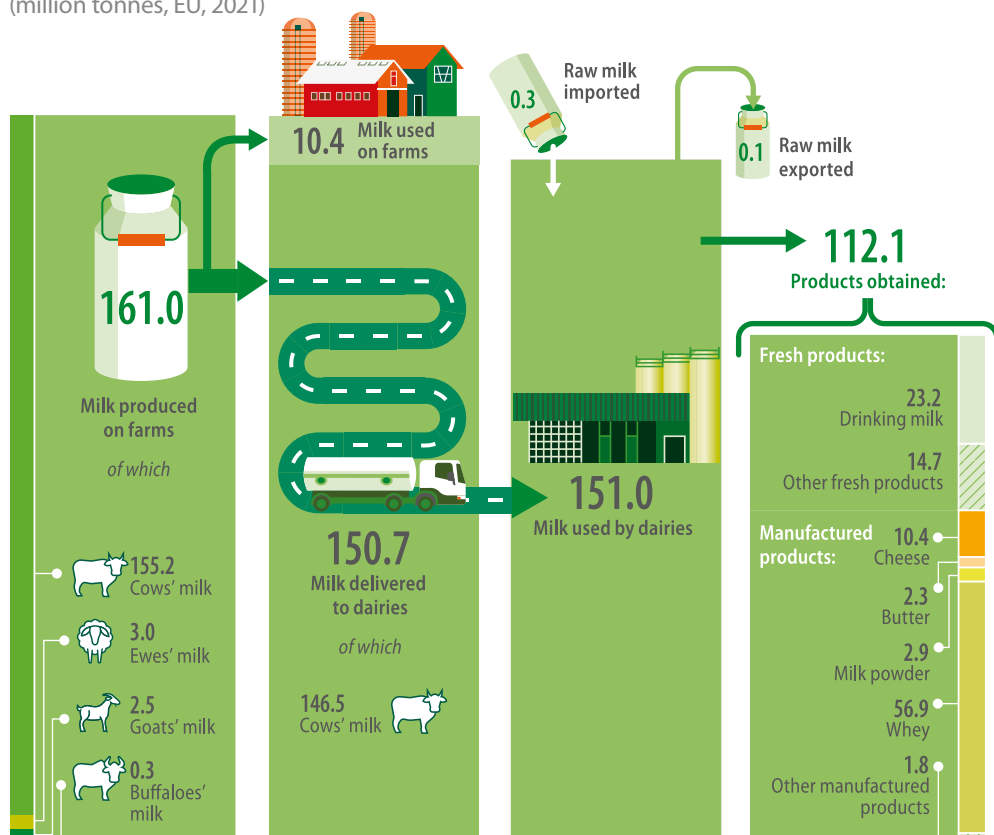
Note: estimates made for the purpose of this publication. Due to rounding, not all shares sum to 100.0 %.

Source: Eurostat (online data code: [apro_mt_pann](#))

Milk production

Production and use of milk

(million tonnes, EU, 2021)



In 2021, the **production** of raw milk on EU farms was an estimated 161.0 million tonnes; this would represent a modest increase of 0.7 million tonnes (or 0.4 %) compared with the previous year. The vast majority of raw milk production in the EU is delivered to dairies; only 10.4 million tonnes were used on farms, being consumed by the farmer's family, sold directly to consumers, used as feed or processed directly. Of the 150.7 million tonnes of milk delivered to dairies, 146.5 million tonnes were cows' milk, the rest being milk from other livestock: ewes (sheep), goats and buffaloes.

Note: estimates made for the purpose of this publication. Milk used on farms: in whole milk equivalent. Butter: includes other yellow fat dairy products; expressed in butter equivalent. Whey: in liquid whey equivalent.

Source: Eurostat (online data codes: [apro_mk_pobta](#) and [apro_mk_farm](#))

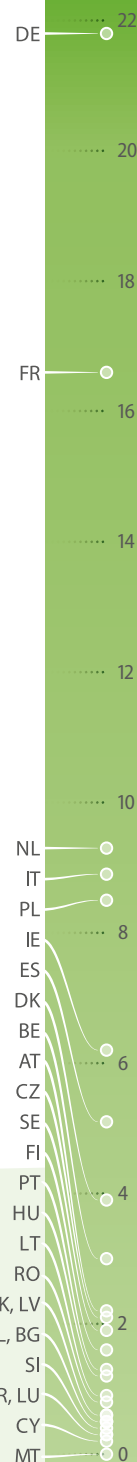
Share of cows' milk collected by EU dairies

(%, 2021)

Traditionally, hygiene rules have required the collection of milk to be frequent, with transport over a short distance between farms and dairies. The development of cooling tanks on farms and of bigger milk tankers have made these characteristics less critical. In 2021, more than one fifth (21.8 %) of the EU's cows' milk was collected for processing by dairies in Germany. Collectively, Germany, France (16.6 %), the Netherlands (9.3 %), Italy (8.9 %) and Poland (8.5 %) accounted for close to two thirds (65.2 %) of the cows' milk collected by EU dairies.

Note: estimates made for the purpose of this publication. LU: 2018.

Source: Eurostat (online data code: [apro_mk_pobta](#))

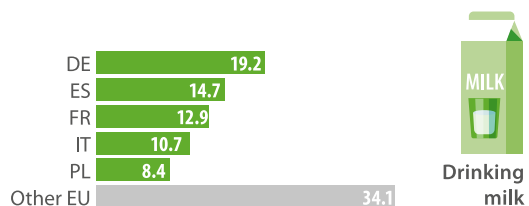


Share of EU dairy products

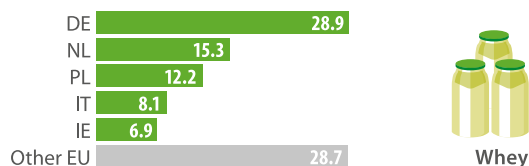
(%, 2021)

Some of the principal [dairy products](#) that are produced in the EU include drinking milk, whey (a by-product in the manufacture of cheese), butter and cheese. Germany had the highest level of production for all four of these dairy products in 2021: 16.5 million tonnes of whey, 4.4 million tonnes of drinking milk, 2.4 million tonnes of cheese and 391 thousand tonnes of butter.

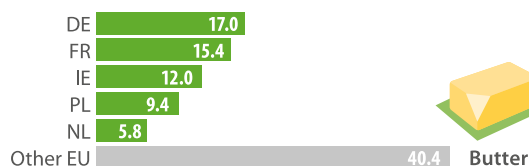
The other main cheese producing Member States were France (1.9 million tonnes, or about 18 % of the EU total), Italy (1.4 million tonnes; 13 %) and the Netherlands (954 thousand tonnes; 9 %). The Netherlands also had the second highest level of production for whey (8.7 million tonnes), while 276 thousand tonnes of butter were produced in Ireland (the third highest value among EU Member States).



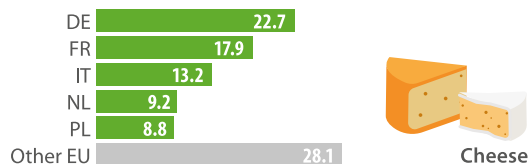
Drinking milk



Whey



Butter



Cheese

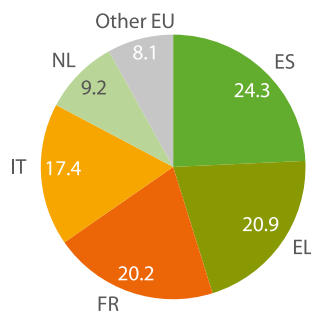
Note: estimates made for the purpose of this publication. Due to rounding, not all shares sum to 100.0 %. NL: butter, 2020.

Source: Eurostat (online data code: [apro_mk_pobta](#))

Share of EU milk from animals other than cows

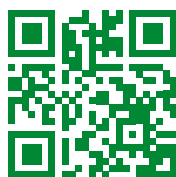
(% of deliveries to dairies, 2021)

There are a few EU Member States where livestock other than cows make an important contribution to overall milk production; this is the case in many arid regions, particularly in the Mediterranean area. In 2021, there were 708 thousand tonnes of ewes' milk delivered to dairies in Greece, with relatively high levels also recorded in Spain (521 thousand tonnes), Italy (450 thousand tonnes) and France (312 thousand tonnes). The principal producers of goats' milk in the EU were France (528 thousand tonnes delivered to dairies), Spain (490 thousand tonnes), the Netherlands (383 thousand tonnes) and Greece (164 thousand tonnes). In Italy, some 233 thousand tonnes of milk delivered to dairies came from buffaloes; this was more than 95 % of the EU total.



Note: estimates made for the purpose of this publication. Due to rounding, the shares do not sum to 100.0 %.

Source: Eurostat (online data code: [apro_mk_pobta](#))



For more information on milk and milk products, please refer to the **Statistics Explained** article.

3

Agricultural output value and economic performance



Gross output and intermediate consumption

Distribution of gross output for the agricultural industry

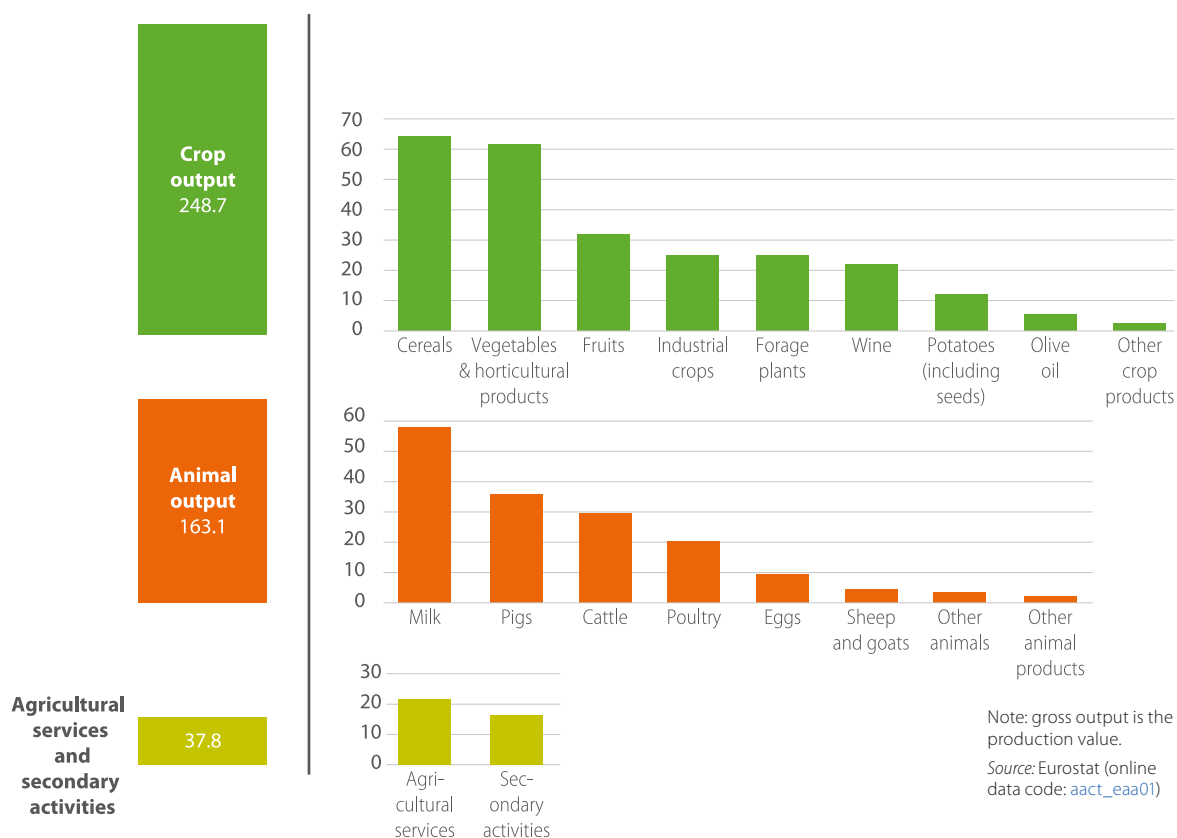
(€ billion, values at basic prices, EU, 2021)

Among other objectives, the EU's *Farm to Fork Strategy* aims to generate fairer economic returns and foster competitiveness of the EU supply sector. The economic performance of the agricultural sector matters directly for farms, farmers and farm workers as well as indirectly for upstream and downstream activities, rural communities, and final consumers of products derived from agricultural output.

The term **agricultural industry** is used to describe all agricultural holdings (farms) involved in agricultural production, groups of producers (co-operatives) that make wine and olive oil, and specialised agricultural contractors. The value of the gross output produced by the EU's agricultural industry was €449.5 billion in 2021.

This includes **crop output** (€248.7 billion; 55.3 % of the total), **animal output** (€163.1 billion; 36.3 %), agricultural services (€21.6 billion; 4.8 %) and some inseparable non-agricultural goods and services (€16.2 billion; 3.6 %).

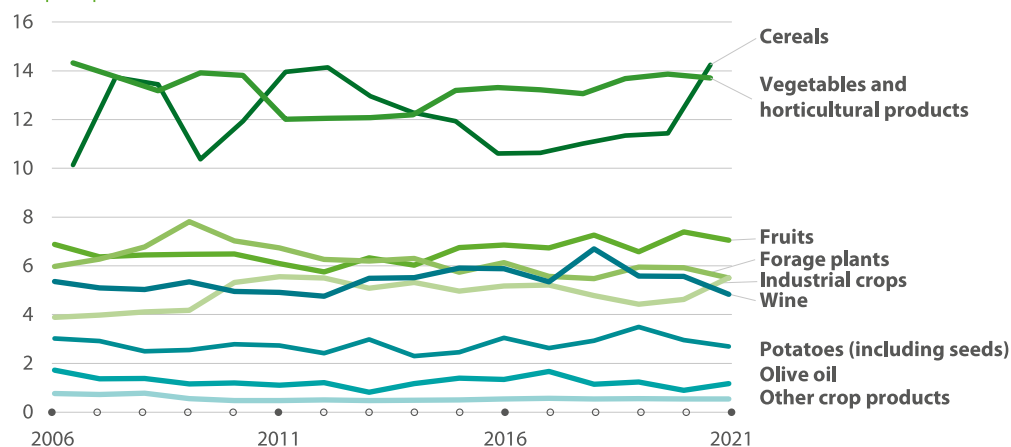
At a more detailed level, the largest categories of the EU's agricultural output in 2021 were cereals (€64.1 billion; 14.3 %), vegetables and horticultural products (€61.7 billion; 13.7 %), milk (€58.0 billion; 12.9 %), pigs (€35.8 billion; 8.0 %) and fruits (€31.7 billion; 7.1 %). A majority of the cereals produced in the EU are used for animal feed, with the remainder for human consumption and use within non-food/feed industries, such as biofuels.



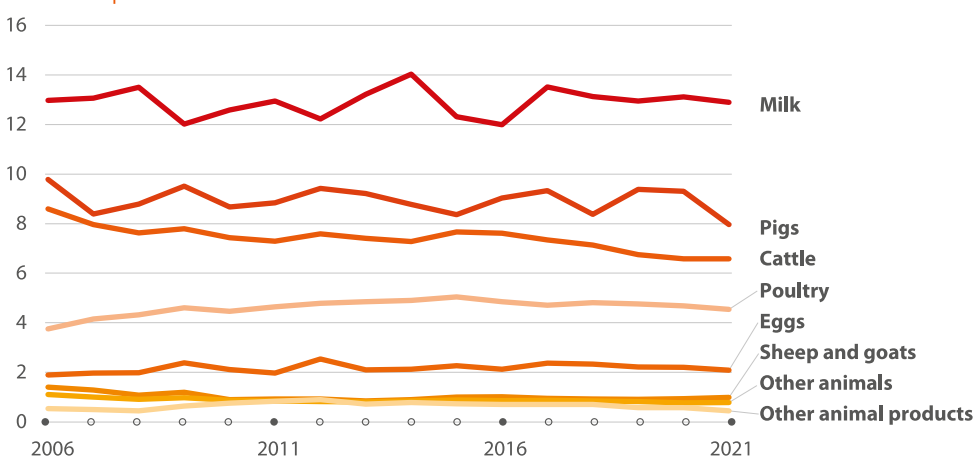
Developments of gross output for the agricultural industry

(% share of the output of the agricultural industry, values at basic prices, EU, 2006–2021)

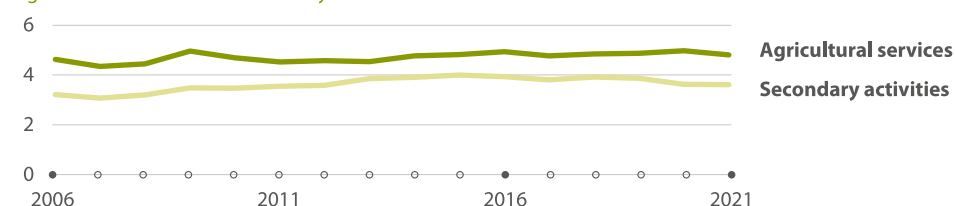
Crop output



Animal output



Agricultural services and secondary activities



The relative share of crops in the gross output of the EU's agricultural industry rose by 2.1 percentage points between 2020 and 2021, while there was a decrease of similar magnitude for animal output (down 1.9 points). The gains recorded for crop output were principally driven by an increase in the gross output of cereals (whose share of the agricultural industry's output was up 2.8 points), along with smaller gains for industrial crops (up 0.9 points) and olive oil (up 0.3 points).

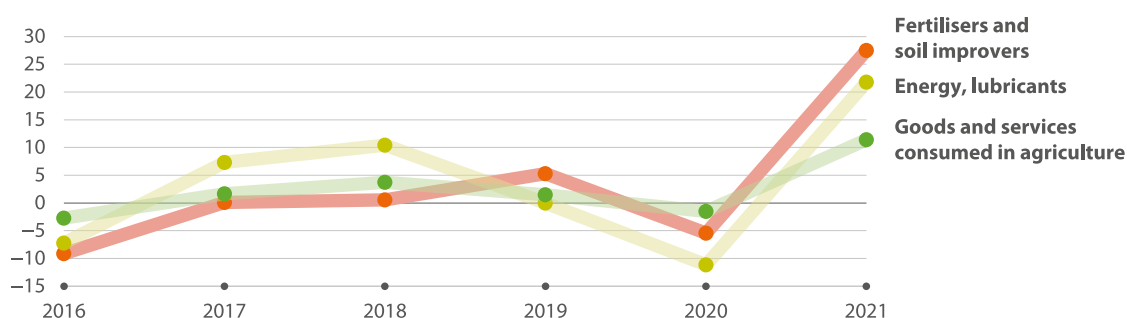
Source: Eurostat (online data code: [aact_eaa01](#))

Annual rate of change of input price indices for the agricultural industry

(%, EU, 2016–2021)

Since the start of Russia's large-scale military invasion of the whole of Ukraine in February 2022, there has been considerable pressure from rising energy prices. These increases have also impacted a number of downstream/related activities; within the context of agriculture, one of the main impacts has been on the price of **fertilisers**. Although data covering this period are not yet available, there was already considerable pressure on prices in 2021.

Input price indices cover the intermediate consumption of goods and services (for example, fertilisers, pesticides, seed or energy) and gross fixed capital formation (for example, machinery and equipment). There was a rapid increase in input prices for the EU's agricultural industry between 2020 and 2021, as the overall price of goods and services rose 11.4 %. More substantial input price developments were recorded for fertilisers and soil improvers (up 27.5 % in 2021) and for energy and lubricants (up 21.8 %).



Note: based on indices compiled with 2015 = 100.

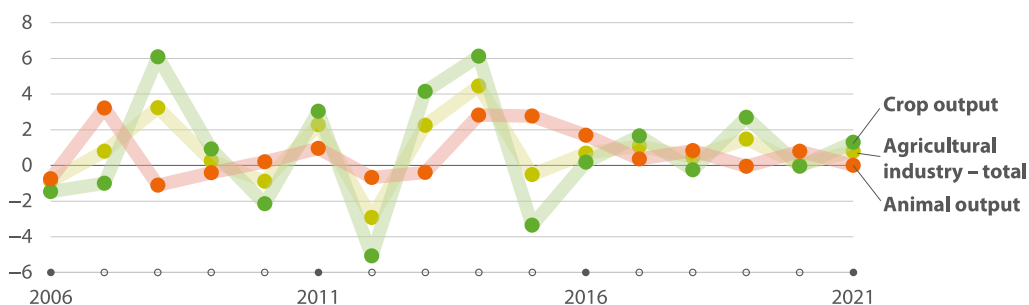
Source: Eurostat (online data code: [apri_pi15_ina](#))

Annual rate of change of volume indices for the agricultural industry

(%, basic prices, EU, 2006–2021)

Changes in the volume indices of output reflect a change in the value of output after removing any price changes (inflation or deflation); this is broadly synonymous with a change in constant prices. With an 8.3 % increase in the value of output and a slightly lower increase (up 7.5 %)

in output prices of agricultural goods and services, the volume index of output for the EU's agricultural industry rose 0.8 % in 2021. This increase reflected a rising volume index for crop output (up 1.3 %), while there was no change in the volume index for animal output (0.0 %).

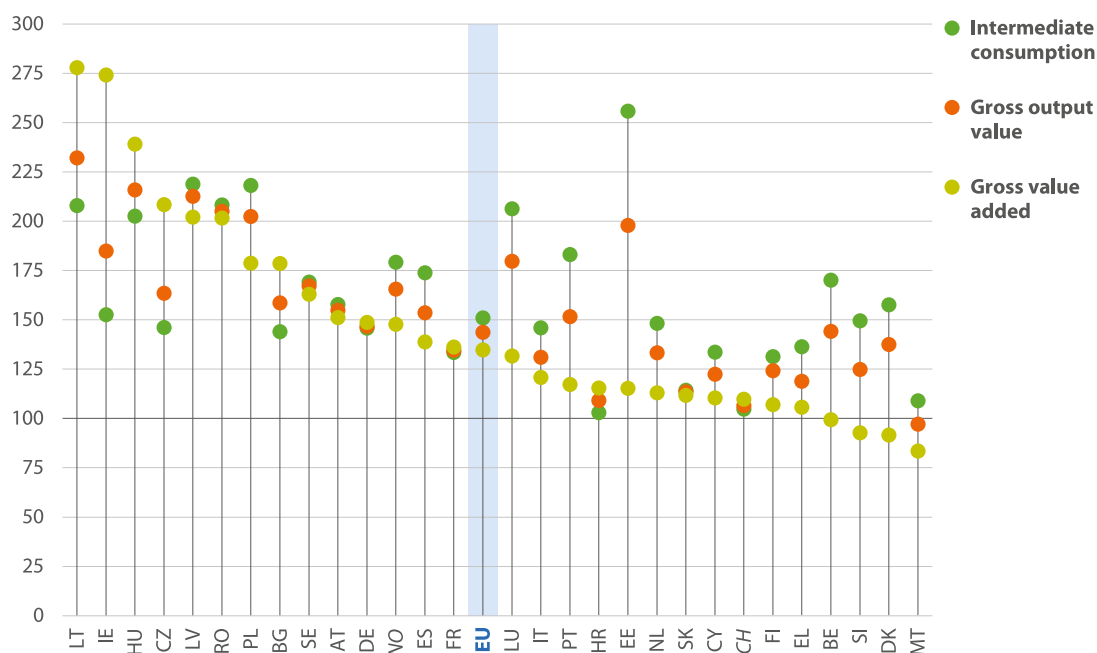


Note: based on indices compiled with 2015 = 100.

Source: Eurostat (online data code: [aact_eaa05](#))

Developments of output and consumption for the agricultural industry

(2006 = 100, values at current basic prices, 2021)



Note: indices originally compiled with 2015 = 100; rescaled to 2006 = 100. Ranked on the change in value added.

Source: Eurostat (online data code: [aact_eaa05](#))

The total output value of the EU's agricultural industry (in basic prices) was €449.5 billion in 2021. Inputs of products that are used up (consumed) in a production process, such as fertilisers, pesticides, seed, animal feed, energy and veterinary services, are referred to as intermediate consumption. The cost of these inputs for the agricultural industry totalled €260.2 billion across the EU. The difference between the output value and the cost of intermediate consumption is the value added at basic prices, in other words, the value that has been added through production (in this case agricultural) processes. In 2021, gross value added for the EU's agricultural industry was €189.4 billion.

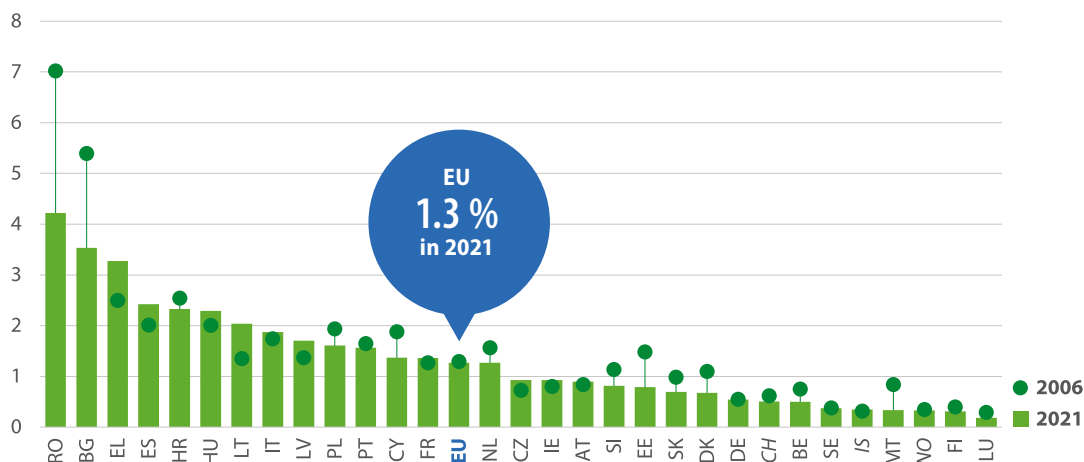
Between 2006 and 2021, gross value added in the EU's agricultural industry increased overall by 34.7 % in current price terms, reflecting a 43.7 % increase in the value of output offset to some extent by a 51.1 % increase in the costs of intermediate consumption.

Six of the EU Member States – Lithuania, Ireland, Hungary, Czechia, Latvia and Romania – recorded value added in their agricultural industries at least doubling in current price terms between 2006 and 2021. In Poland, Bulgaria, Sweden and Austria, value added increased by at least 50 % during the period under consideration. By contrast, value added was lower in 2021 than in 2006 in Belgium, Slovenia, Denmark and Malta. The output of the agricultural industry and the cost of intermediate consumption were both higher in 2021 than in 2006 for each of the EU Member States, except for Malta (where the output of the agricultural industry fell by a modest amount).

Value added and labour productivity

Gross value added from agriculture

(% relative to GDP, 2006 and 2021)



Note: EL, break in series. IS: 2007 instead of 2006.

Source: Eurostat (online data codes: [aact_eaa01](#) and [nama_10_gdp](#))

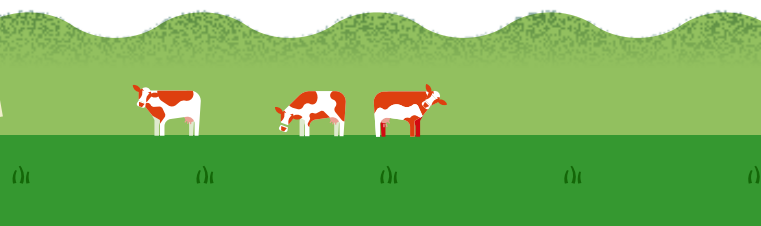
In 2021, value added from the EU's agricultural industry was equivalent to 1.3 % of **gross domestic product (GDP)**; as such, this was the same ratio as recorded in 2006.

The ratio of the value added of the agricultural industry to GDP in 2021 was notably higher in Romania (4.2 %), Bulgaria (3.5 %) and Greece (3.3 %) than in any of the other EU Member States: the next highest ratio was 2.4 % in Spain. In 13 Member States, value added from the agricultural industry was equivalent to less than 1.0 % of GDP; the lowest values were 0.3 % in Malta and Finland, and 0.2 % in Luxembourg.

Between 2006 and 2021, the ratio of the value added of the agricultural industry to GDP increased in 10 of the EU Member States. The largest increases were recorded for Greece (0.8 percentage points) and Lithuania (0.7 points), while Spain, Latvia and Hungary had increases in the range of 0.3–0.4 points. The largest decreases, by far, were recorded in Bulgaria and Romania, down 1.9 and 2.8 points respectively.

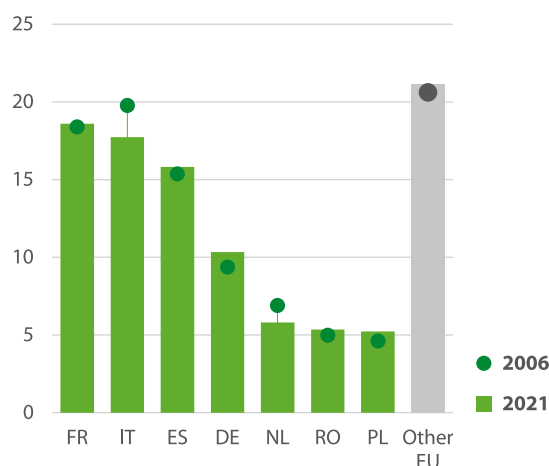
EU gross value added at basic prices in 2006
€140.5 billion

EU gross value added at basic prices in 2021
€189.4 billion



Gross value added for the agricultural industry

(% share of EU total, values at current prices, 2006 and 2021)



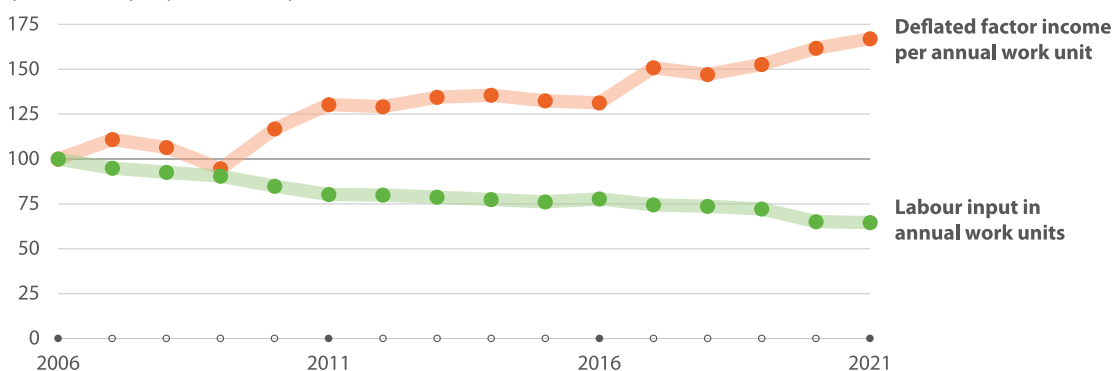
Source: Eurostat (online data code: [aact_eaa01](#))

In 2021, France's agricultural industry had the highest value added among the EU Member States, contributing 18.6 % of the EU's total. Italy had a share of 17.7 %, followed by Spain with 15.8 % and Germany with a 10.3 % share; none of the remaining Member States registered a share in double-digits.

Comparing 2006 with 2021, Italy, the Netherlands and Greece saw their shares of the EU total decrease by the biggest margin (down 2.0, 1.1 and 0.9 percentage points respectively). The largest increases were recorded for Ireland (up 1.1 points), Germany (up 1.0 points) and Poland (up 0.6 points). A small increase in the French share combined with the decrease for the Italian share, moved France above Italy as the largest agricultural economy (in value added terms) among the EU Member States.

Agricultural labour input and income

(2006 = 100, EU, 2006–2021)



Note: indices originally compiled with 2015 = 100; rescaled to 2006 = 100.

Source: Eurostat (online data codes: [aact_eaa06](#) and [aact_ali02](#))

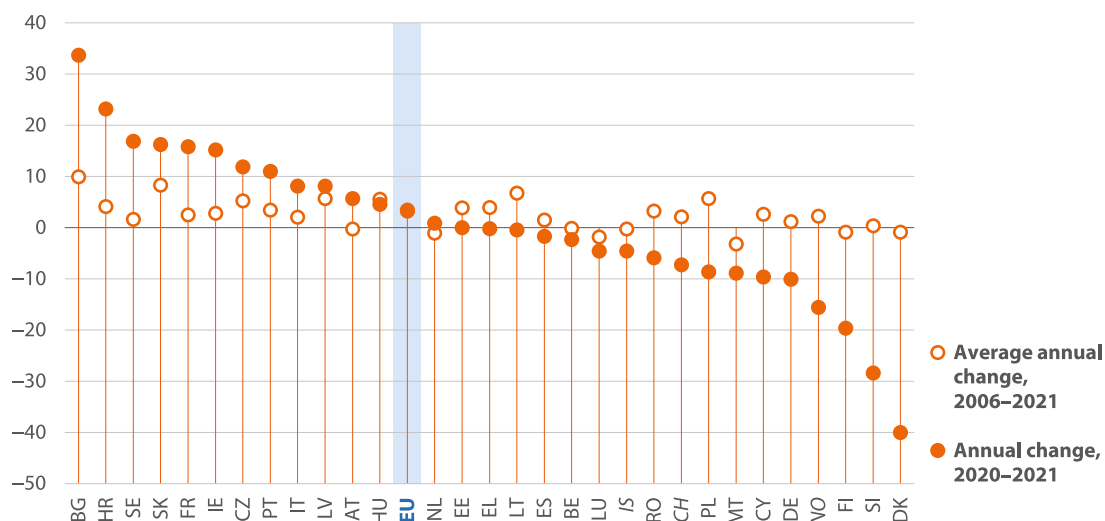
The economic performance of the agricultural industry can also be measured in terms of net value added at factor cost, so-called factor income. It is the remuneration for all the factors of production, such as labour and capital. Factor income can be presented as a ratio to employment and can then be considered as a partial labour productivity measure. To do so, care has to be taken of part-time, seasonal and unpaid (often family) labour input. The amount of work actually carried out in agriculture is described using a unit called

the **annual work unit**: this unit is equivalent to the amount of work done by a person working full-time for a whole year. The **factor income per annual work unit** shows the net value added by the equivalent of each full-time worker (deflated and expressed as an index).

Agricultural labour input in the EU fell 35.5 % between 2006 and 2021, equivalent to an annual average decline of 2.9 %. Real factor income per annual work unit was 66.9 % higher in 2021 than it was in 2006, equivalent to an annual average increase of 3.5 %.

Real developments in agricultural factor income per annual work unit

(%, 2006–2021 and 2020–2021)

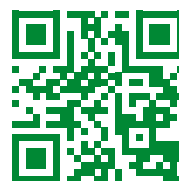


Note: IS, 2009–2021 instead of 2006–2021.

Source: Eurostat (online data code: [aact_eaa06](#))

The EU Member States were evenly split in terms of whether they recorded an increase or a decrease in the index of agricultural factor income in 2021 compared with 2020: 13 Member States moved in each direction and there was no change in Estonia. The sharpest decreases were in Denmark (down 40.0 %), Slovenia (down 28.4 %) and Finland (down 19.6 %). The real increase in factor income per annual work unit for the EU as a whole (up 3.3 %) reflected, among other changes, relatively high increases in two Member States with large agricultural industries: there was an increase of 15.8 % in France and an increase of 8.1 % in Italy; the highest increases in 2021 were recorded in Bulgaria (up 33.7 %) and Croatia (up 23.2 %).

Looking at a longer time perspective – comparing 2021 with 2006 – there were seven EU Member States that reported a real fall in agricultural factor income per annual work unit. The biggest falls were recorded in Malta and Luxembourg (down on average by 3.2 % and 1.8 % per year); elsewhere the decreases in the other five Member States ranged from just under zero to -1.1 % per year. Among the larger economies, increases were often below the EU average of 3.5 % per year, as was the case for example in Germany (up 1.2 %), Spain (1.5 %), Italy (2.1 %) and France (2.5 %). The main exception was Poland whose index increased on average by 5.7 % per year. This was the fourth highest increase of all, smaller only than the average increases recorded for Bulgaria, Slovakia and Lithuania.



For more information on the performance of the agricultural sector, please refer to the Statistics Explained article.

4

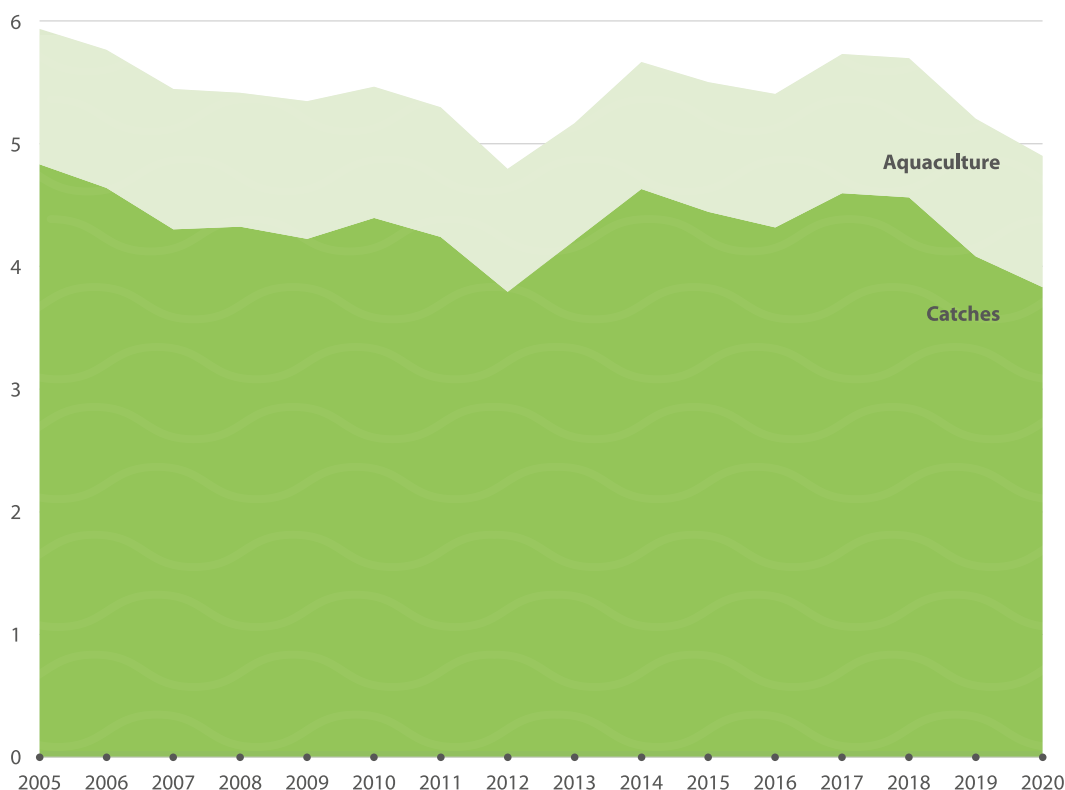
Fishing and aquaculture



Key figures for the EU

Total production of fishery products

(million tonnes, EU, 2005–2020)



Fish are a renewable and mobile natural resource. Within the EU, fish stocks are managed collectively under the [Common Fisheries Policy](#). Within the broader context of the *Farm to Fork Strategy*, the European Commission aims to bring fish stocks to sustainable levels by reducing wasteful discarding, enhancing traceability and strengthening fisheries management, among other relevant actions.

Note: estimates made for the purpose of this publication.

Source: Eurostat (online data codes: [fish_ca_main](#), [fish_aq_q](#) and [fish_aq2a](#)) and the European Market Observatory for Fisheries and Aquaculture (EUMOFA)

The EU's total production of fishery products was estimated to be 4.9 million tonnes of [live weight equivalent](#) in 2020, which was 5.8 % lower than its level in 2019 and 17.4 % lower than in 2005. Developments in the production of fishery products since 2005 largely reflected a relatively stable [output from aquaculture](#) – mainly fish farming – accompanied by somewhat more volatility in the quantity of [fish caught](#) at sea (around four fifths of total production most years). The fish catch was notably lower in 2012 and 2020, falling below 4.0 million tonnes in these years, while it exceeded 4.5 million tonnes in 2005 and 2006 as well as three more recent years – 2014, 2017 and 2018.

Fleet capacity

Size of the fishing fleet

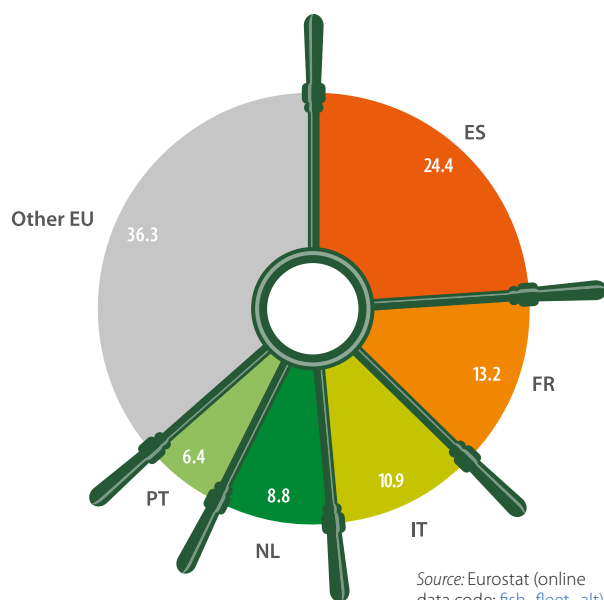
(EU, 2021)



The EU's **fishing fleet** numbered around 74 600 active vessels in 2021, with a gross tonnage of 1.3 million tonnes and a total engine power of 5.3 million kilowatts. The vast majority of boats within the EU's fishing fleet are no more than 10 metres long.

The EU fleet declined steadily over the last three decades, in terms of both tonnage (a measure of

the capacity for holding fish) and engine power (an indicator of the power available for fishing gear). The EU fishing fleet had approximately 8 350 fewer vessels in 2021 than in 2011, down 11.1 %, with a combined capacity that was 12.6 % smaller and a total engine power that was 9.5 % smaller; note that this comparison excludes data for Croatia (for which 2011 data are not available).



Share of Member States in the EU's fishing fleet

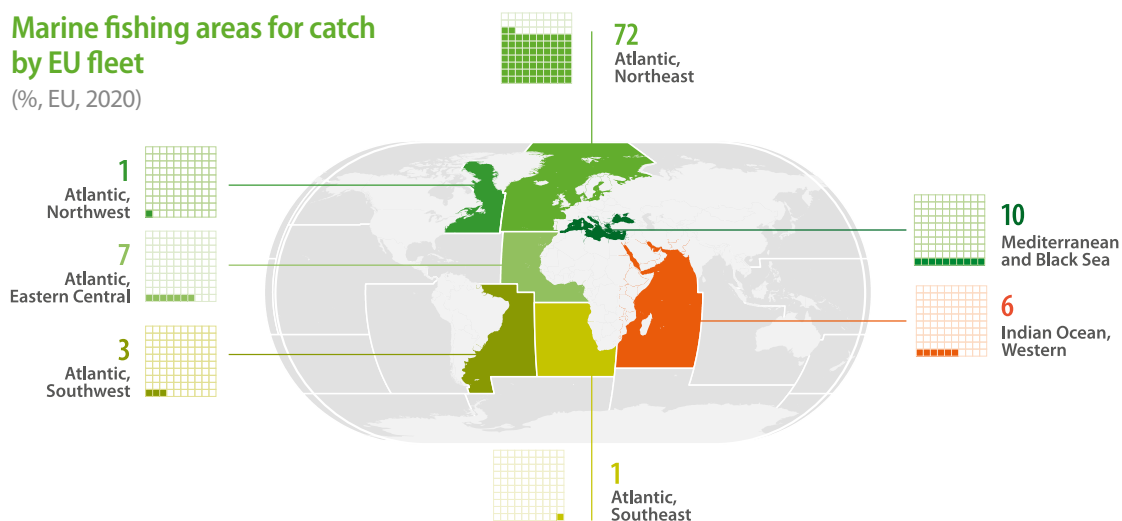
(% based on gross tonnage, 2021)

When measured by gross tonnage, Spain had, by far, the largest fleet among EU Member States (24.4 % of the EU total in 2021), followed by France (13.2 %) and Italy (10.9 %). However, when measured by engine power, France had the largest fleet (18.1 % of the EU total), while the highest number of vessels was in Greece (19.5 % of the EU total).

Production

Marine fishing areas for catch by EU fleet

(%, EU, 2020)



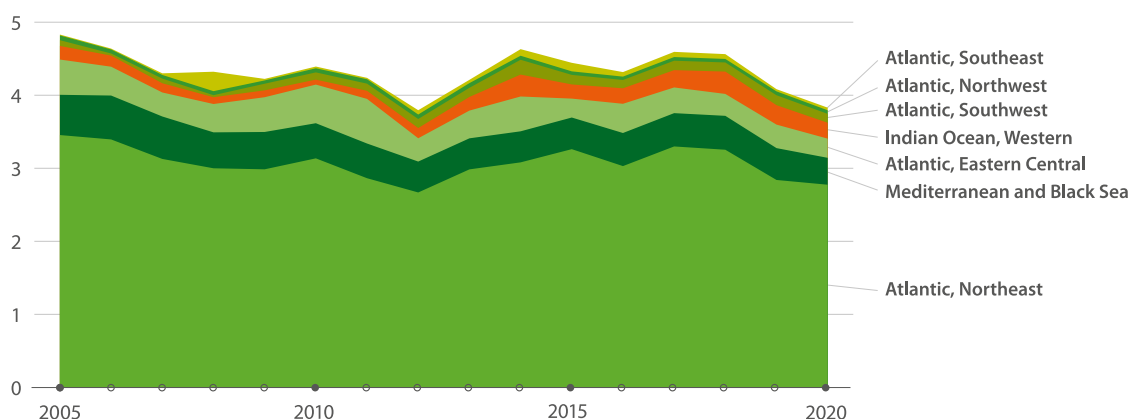
Although the EU's fishing fleet operates worldwide, official statistics on EU fishing activities only cover seven major marine fishing areas, as shown in the map. These areas are defined by the [Food and Agriculture Organization of the United Nations](#). Based on scientific advice, annual quotas are set for most commercial fish species in each fishing area, detailing the total allowable catch.

Note: estimates made for the purpose of this publication.

Source: Eurostat
(online data code: [fish_ca_main](#))

Developments of catch

(million tonnes, EU, 2005–2020)



The vast majority of the EU's catch is taken in the Atlantic, Northeast: in 2020, this area accounted for 72 % of the EU's total catch across the seven major fishing areas. Around one tenth of the EU's total catch was taken in the Mediterranean and Black Sea, while the next highest shares were recorded for the Atlantic, Eastern Central area (7 %) and the Indian Ocean, Western area (6 %).

Note: estimates made for the purpose of this publication.

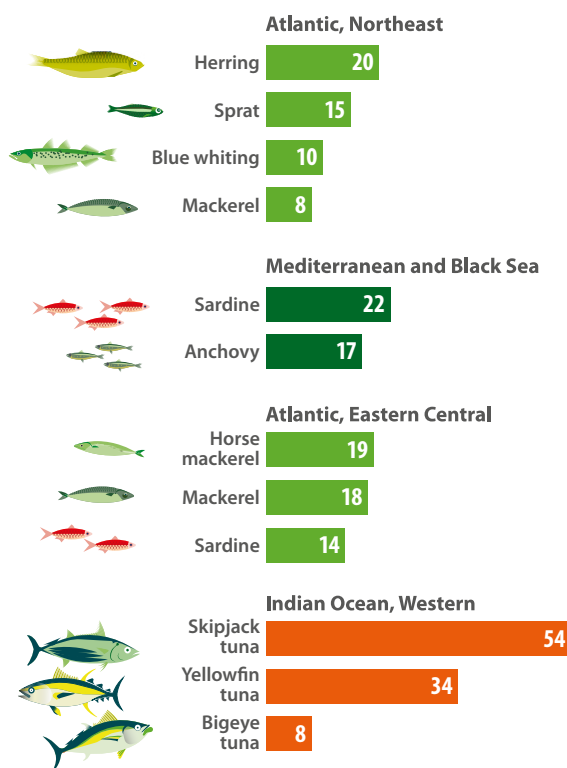
Source: Eurostat
(online data code: [fish_ca_main](#))

Share of main species in catch

(% of total live weight caught in each marine fishing area, EU, 2020)

The EU's fishing fleet catches a wide variety of fish species. This reflects, among other factors, the characteristics of fishing grounds, different types of fishing techniques and gear, quotas, and patterns of consumer demand.

In 2020, the main species that were caught in the Atlantic, Northeast area included herring (20 % of the live weight caught in this area), sprat (15 %), blue whiting (10 %) and mackerel (8 %). The two main species caught in the Mediterranean and Black Sea were sardine (22 %, mainly European pilchard) and anchovy (17 %). In the Atlantic, Eastern Central area, the main species that were caught included horse mackerel (19 %), mackerel (18 %) and sardine (14 %). The fish caught by the EU's fleet in the Indian Ocean, Western area were almost exclusively tuna, in particular skipjack (54 %), yellowfin (34 %) and bigeye (8 %).

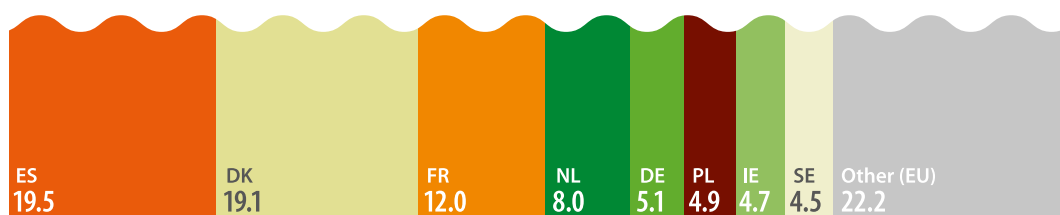


Note: estimates made for the purpose of this publication.

Source: Eurostat (online data code: fish_ca_main)

Share of Member States in EU catch

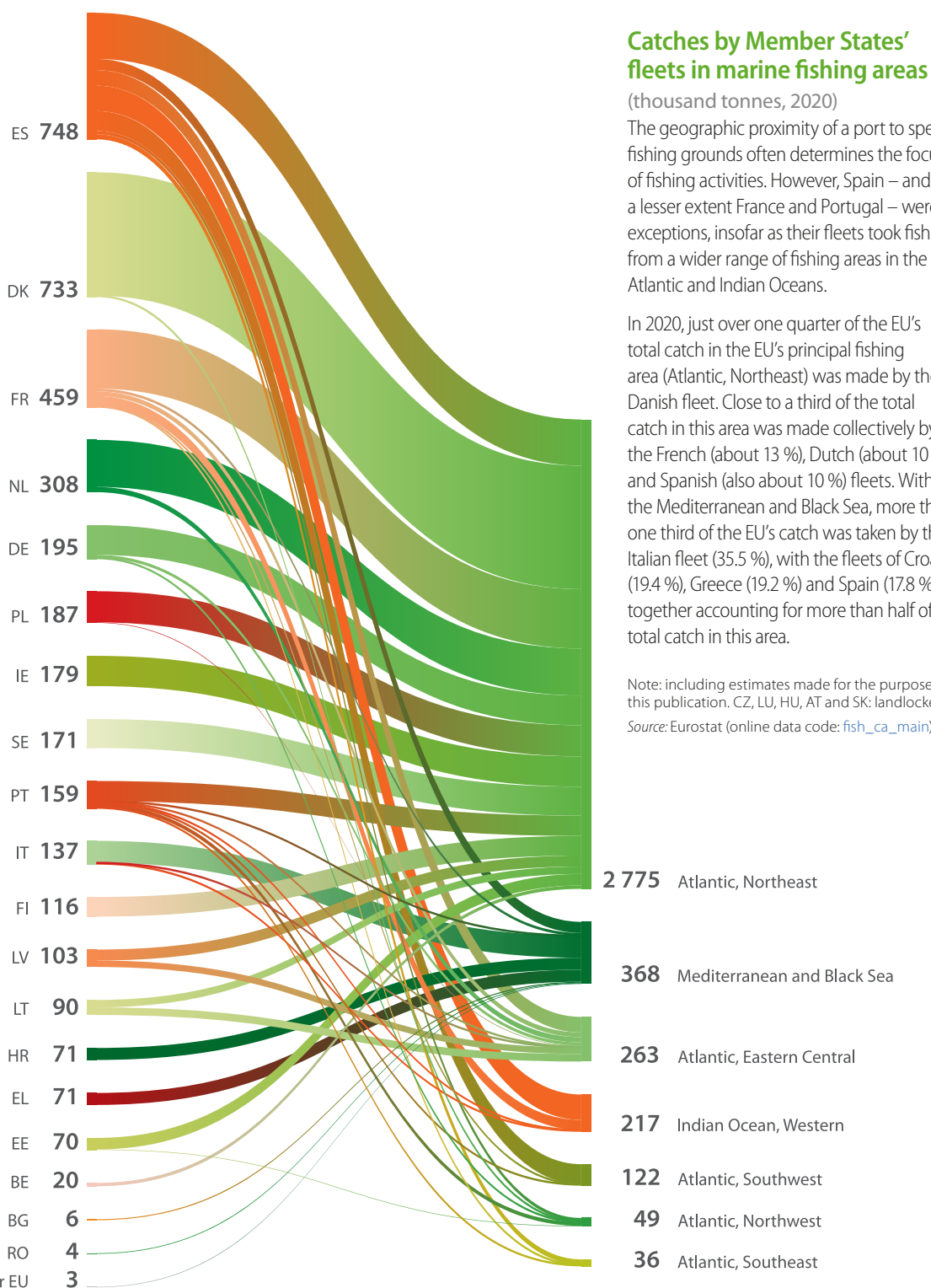
(%, 2020)



Spain, with 748 thousand tonnes of live weight, had the largest fish catch among EU Member States in 2020 (about 20 % of the total), followed by Denmark (about 19 %) and France (about 12 %). Iceland and Norway had a combined catch of 3.23 million tonnes of fish in 2020; this was equivalent to more than four fifths of the total quantity of fish caught by the EU fleet.

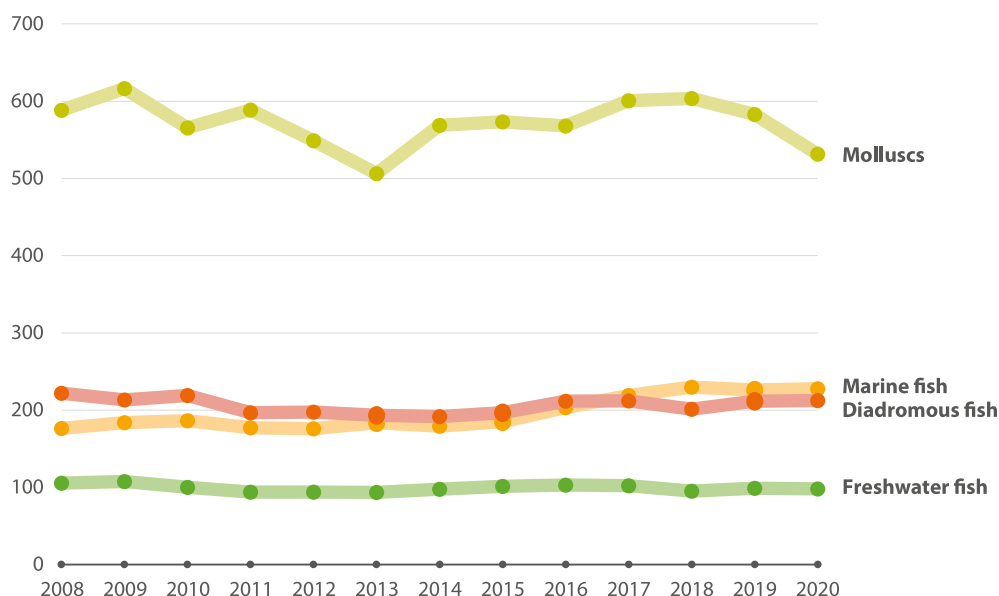
Note: estimates made for the purpose of this publication.

Source: Eurostat (online data code: fish_ca_main)



Developments of aquaculture production

(thousand tonnes, EU, 2008–2020)



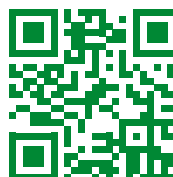
Aquaculture is the production of fish and other aquatic organisms like molluscs and crustaceans under controlled conditions, both inland and in marine areas.

The EU's aquaculture production for all fishery products was estimated at 1.07 million tonnes of live weight equivalent in 2020. Output fluctuated between 0.96 and 1.14 million tonnes during the period from 2008 to 2020: the low point of production was in 2013, but this was followed by four consecutive annual increases years to reach a peak in 2017. There was a modest decline (down 0.3 %) in 2018, which accelerated in 2019 (down 1.1 %) and again in 2020 (down 4.5 %).

Molluscs (for example mussels, oysters or clams) accounted for just under half (49.7 %) of the EU's total aquaculture production in 2020, while marine fish accounted for just over one fifth (21.3 %). Diadromous fish – species that migrate between seawater and freshwater – had the next highest share of EU aquaculture production (19.9 %), followed by freshwater fish (9.1 %); the farming of crustaceans was negligible in EU waters.

Note: estimates made for the purpose of this publication. Crustaceans: not significant.

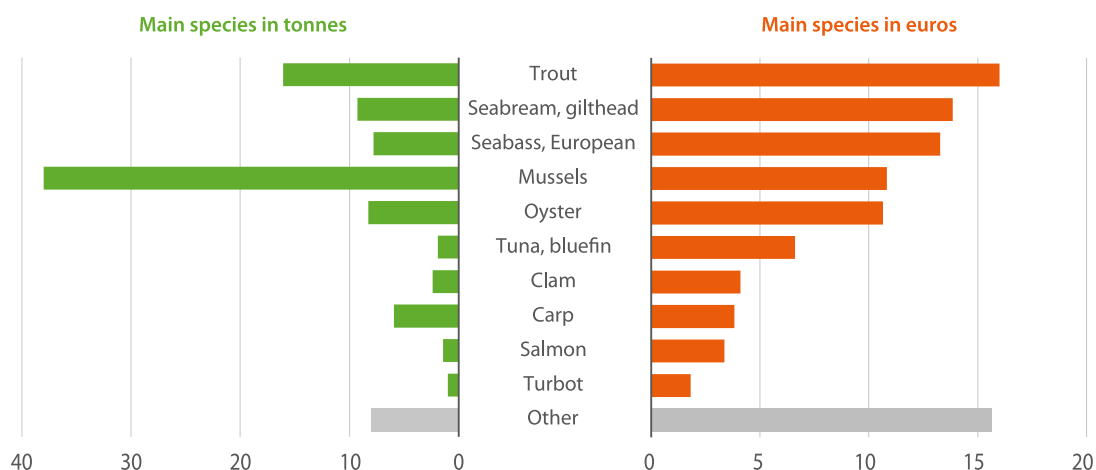
Source: Eurostat (online data code: [fish_aq2a](#)) and the [European Market Observatory for Fisheries and Aquaculture \(EUMOFA\)](#)



For more information on fisheries statistics, please refer to the [Statistics Explained](#) article.

Main species of aquaculture production

(%, EU, 2020)



The EU produced 407 000 tonnes of farmed mussels in 2020. This equated to almost two fifths (38.0 %) of the EU's total aquaculture output, considerably higher than the shares recorded for the next largest species: trout (16.1 %), gilthead seabream (9.3 %), oysters (8.3 %) and European seabass (7.8 %).

The production of trout was estimated at €580 million in 2020, which was more than any other species farmed and equivalent to 16.0 % of the EU's aquaculture production value. Different species fetch different prices, and this explains why, for example, the relative share of mussels in value terms was considerably lower, at 10.8 % of the EU total, than in quantity terms. By contrast, the relatively high price of bluefin tuna resulted in a share in value terms (6.6 % of the EU total) that was more than 3.5 times as high as in quantity terms (1.9 % of the EU total).

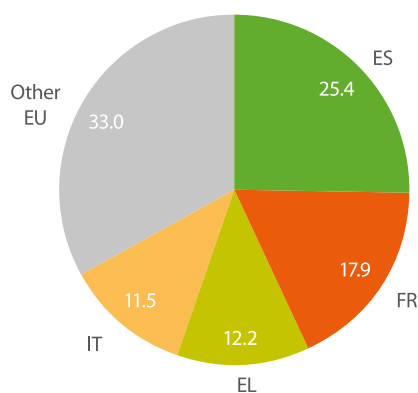
Note: estimates made for the purpose of this publication. Different scales are used for the two parts of the figure.

Source: Eurostat (online data code: [fish_aq2a](#))

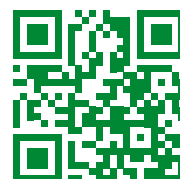
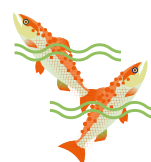
Share of Member States in EU aquaculture production

(% based on tonnes, 2020)

Aquaculture plays an important role in most EU Member States that border the Mediterranean and Black Sea and is relatively concentrated. In 2020, Spain (25.4 %), France (17.9 %), Greece (12.2 %) and Italy (11.5 %) together accounted, in quantity terms, for two thirds of the EU's aquaculture output. The quantity of aquaculture production in Norway (1.49 million tonnes in 2020) exceeded that for the whole of the EU (1.07 million tonnes) and was almost exclusively composed of farmed salmon.



Source: Eurostat (online data code: [fish_aq2a](#))



For more information on aquaculture statistics, please refer to the **Statistics Explained** article.

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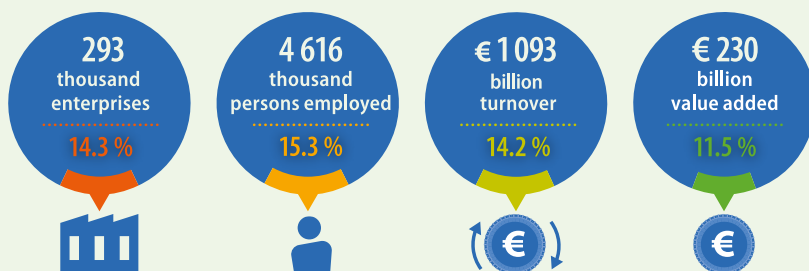
Processing of food and beverages



Key figures for the EU

Size of F&B processing

(EU, 2019)



Note: F&B covers food and beverages. Turnover: 2018.

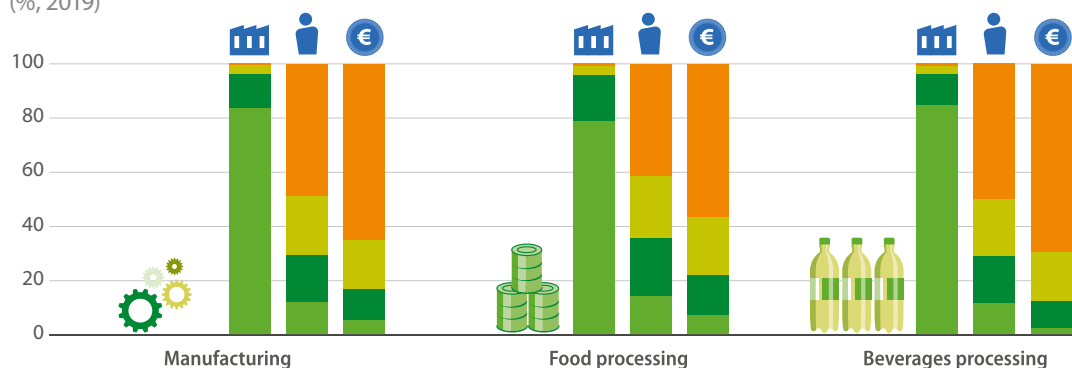
Source: Eurostat (online data code: sbs_na_ind_r2)

The food chain is much wider than primary agricultural production; it also covers food and drink preparation, distribution and service. Within the context of the EU's *Farm to Fork Strategy*, food and beverage (F&B) processors are encouraged to increase the availability and affordability of healthy, sustainable food, by changing the types and nutritional composition of the food they produce, their choice of suppliers, or their production methods.

In 2019, there were 293 thousand F&B processing enterprises in the EU, equivalent to 14.3 % of all manufacturing enterprises. Some 4.6 million people were employed in F&B processing (15.3 % of the total number of persons employed in manufacturing). The value of the enterprises' turnover was €1 093 billion (2018 data), with €230 billion of added value in 2019. As such, the value added of F&B processors was around 30 % higher than that of agriculture (€176 billion, at producer prices).

Key size class indicators

(%, 2019)



- Number of enterprises
- Number of persons employed
- Value added
- Large
- Medium-sized
- Small
- Micro

Most F&B processors in the EU serve local or national markets. By contrast, there are a few very large F&B processors characterised by global brands with considerable market reach.

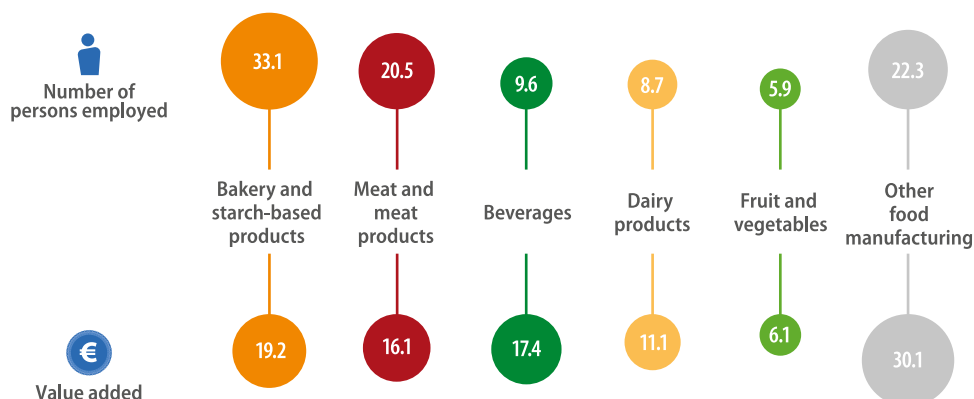
In 2019, the vast majority (95.7 %) of the EU's F&B processors were micro or small enterprises that employed fewer than 50 persons. By contrast, large enterprises – employing 250 or more persons – accounted for 56.7 % of the total value added in food processing, and for an even higher share (69.5 %) of the added value in beverage processing.

Note: includes estimates made for the purpose of this publication.

Source: Eurostat (online data code: sbs_sc_ind_r2)

Structure of F&B processing

(%, EU, 2019)



Around one third (33.1 %) of the EU's F&B processing workforce in 2019 was employed in the manufacture of bakery and starch-based products (for example bread, cakes, biscuits, pasta and noodles). The next highest share was recorded for the manufacture of meat and meat products (20.5 %).

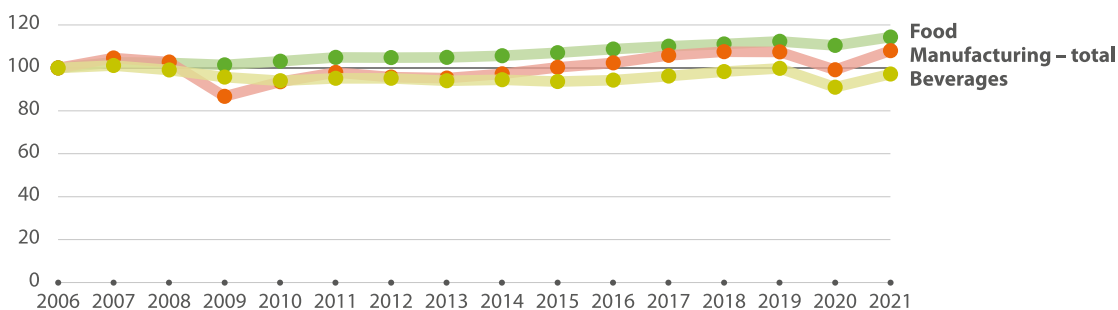
Around one fifth (19.2 %) of the value added by EU F&B processors was generated within the manufacture of bakery and starch-based products, closely followed by the manufacture of beverages (17.4 %; a much higher share than for employment) and the manufacture of meat and meat products (16.1 %).

Note: ranked on the share for the number of persons employed. Includes estimates made for the purpose of this publication.

Source: Eurostat (online data code: [sbs_na_ind_r2](#))

Volume index of production

(2006 = 100, EU, 2006–2021)



'Real-terms' changes (where price developments have been removed) in the output of EU food manufacturing had a much more uniform development between 2006 and 2021 than that for manufacturing as a whole or for beverage manufacturing. A downturn in economic activity often has a greater impact on purchases of non-essential items (such as alcoholic beverages), whereas demand for essentials – such as staple food products – is more likely to be maintained. The considerable decline (-8.8 %) in the [production index](#) of beverage manufacturing in 2020 reflects a fall in demand linked, at least in part, to the closure of downstream F&B serving businesses during the initial stages of the COVID-19 pandemic; there was a (partial) rebound in 2021, output rising 6.7 %. The level of output for food manufacturing was higher in 2021 than it had been prior to the COVID-19 crisis.

Note: index originally compiled with 2015 = 100; rescaled to 2006 = 100.

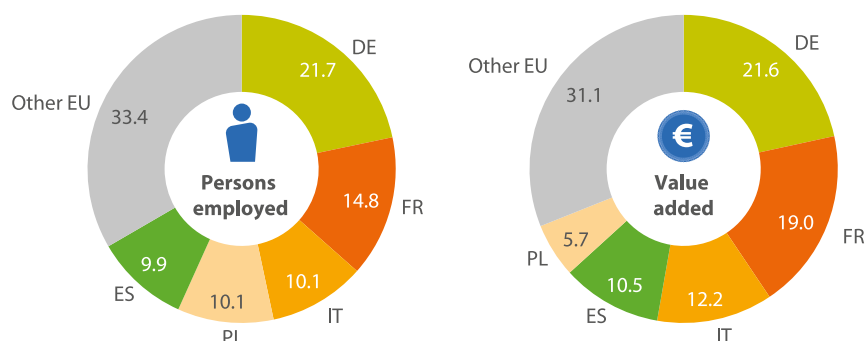
Source: Eurostat (online data code: [sts_inpr_a](#))



Employment and value added in the EU Member States

Share of EU F&B processing

(%, 2019)



Note: includes estimates made for the purpose of this publication. Due to rounding, the shares for value added do not sum to 100.0 %.

Source: Eurostat (online data code: [sbs_na_ind_r2](#))

Of the 4.6 million persons employed in the EU by F&B processors in 2019, Germany had the highest share (21.7 %), followed by France (14.8 %). Italy and Poland were the only other EU Member States to record double-digit shares (both 10.1 %).

F&B processing enterprises in the EU added €230 billion of value in 2019: as for persons employed, Germany once again had the highest share of the EU total, accounting for slightly more than one fifth (21.6 %). France had the second highest share (19.0 %) – which was considerably higher than its share of persons employed – followed by Italy (12.2 %) and Spain (10.5 %). Note that while Poland had a double-digit share of the EU workforce, its share of value added was much lower, at 5.7 %.

While F&B processing employed 15.3 % of the EU's manufacturing workforce in 2019 and accounted for an 11.5 % share of manufacturing value added, several EU Member States recorded much higher

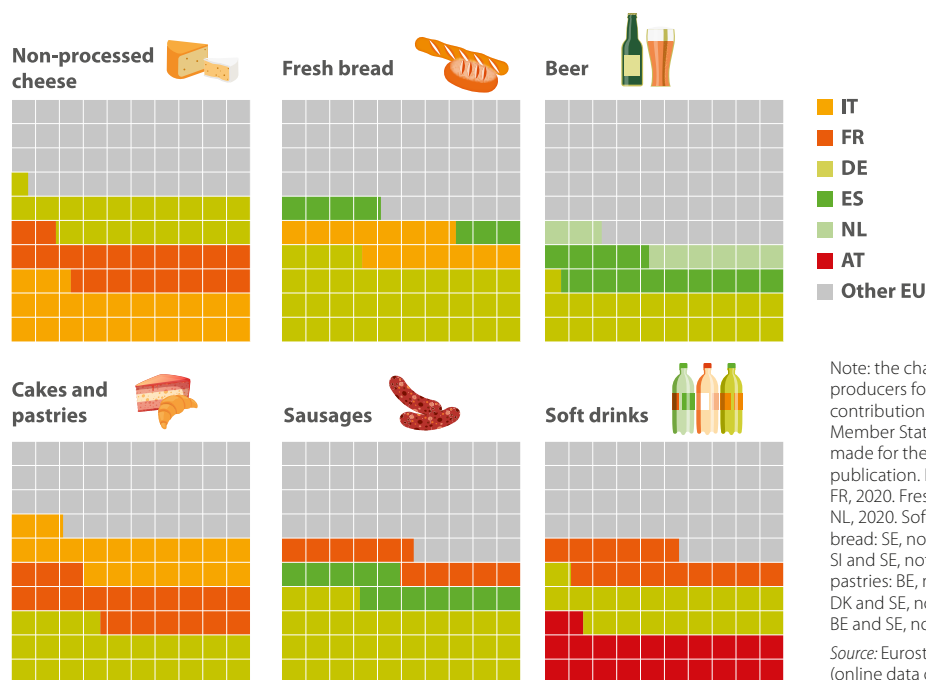
shares of their manufacturing activity concentrated within F&B processing. This was most notably the case in Cyprus and Greece, where more than one third of the manufacturing workforce was employed in F&B processing (39.9 % and 37.9 % respectively). F&B processing also accounted for more than one fifth of the manufacturing workforce in Ireland, Spain, France, Croatia and Belgium. At the other end of the scale, F&B processing provided work to less than 1 in 10 people across the manufacturing workforces of Sweden, Czechia, Slovakia and Slovenia.

In 2019, the contribution of F&B processors to manufacturing employment was, in each of the EU Member States, consistently higher than their contribution to manufacturing value added. In other words, F&B processors were characterised by lower levels of [labour productivity](#) than the manufacturing average. This can be explained by a number of factors including relatively low average wages and salaries and/or high seasonal and part-time employment.

Manufactured F&B products

Principal producers of selected manufactured F&B products

(% based on production value, 2021)



F&B processors manufacture a vast array of products that range from staple food products to luxury, sometimes high value, items. Based on the Prodcom list, non-processed cheese – including for example, Brie, Edam, Feta or Gorgonzola – was the manufactured F&B product with the highest value (€33.5 billion) of EU production in 2021. This product is of particular importance for dairy farmers. A majority of the non-processed cheese produced in the EU was manufactured by enterprises from Italy (€7.5 billion), France (€6.5 billion; 2020 data) and Germany (€6.3 billion).

The second and third highest values of production were recorded for fresh bread and beer, with EU output

valued at €32.0 billion and €26.5 billion respectively in 2021. These products are of importance for cereal producers, in particular, those growing wheat and rye for bread and barley for beer. Germany was the principal producer in the EU for both products (with considerably higher shares than any other EU Member State): it accounted for around one third (33.4 %) of the EU's fresh bread and for approximately one fifth (20.7 %) of its beer.

There were three other product groups where the value of EU production in 2021 was above €20 billion: cakes and pastries (€22.4 billion), sausages (€21.0 billion) and soft drinks (also €21.0 billion).



Largest manufactured F&B products

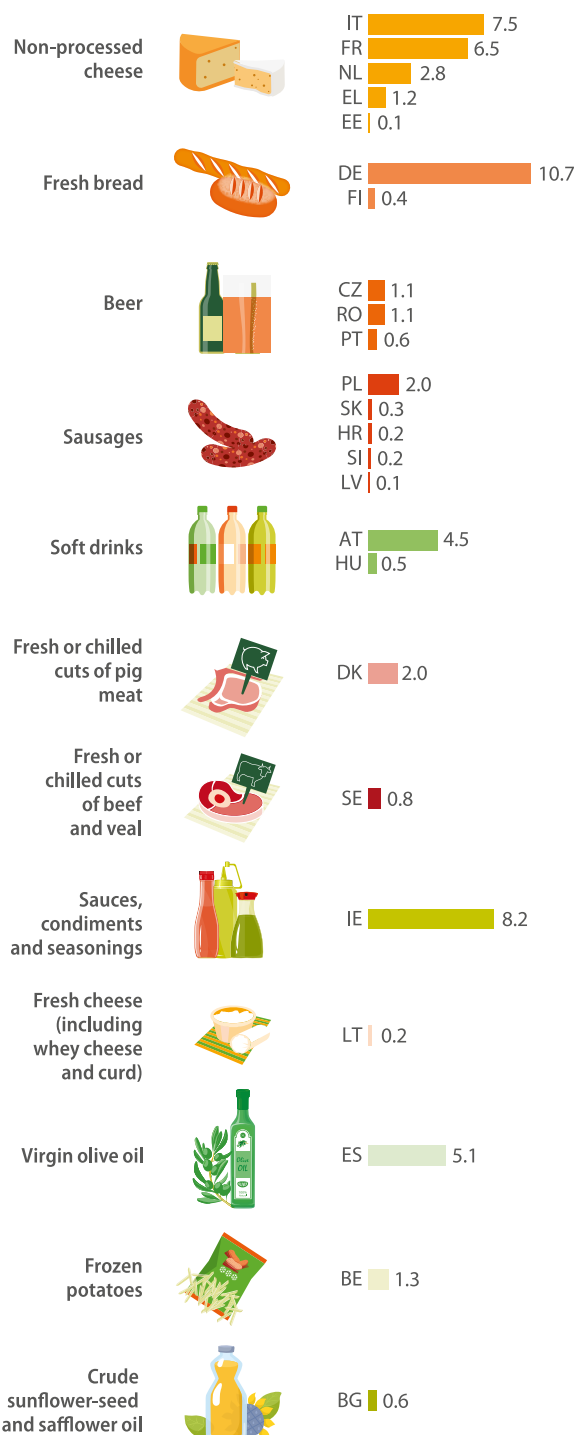
(€ billion, 2021)

Across the EU Member States (no data for Cyprus, Luxembourg or Malta), the highest level of output for manufactured F&B products was spread across 12 different product categories in 2021. In value terms, non-processed cheese was the leading F&B product in Italy, France (2020 data), the Netherlands (2020 data), Greece and Estonia, while sausages had the highest value of production in Poland, Slovakia, Croatia, Slovenia and Latvia (2020 data). In Czechia, Romania (2020 data) and Portugal, beer had the highest level of production among F&B products. There were two Member States, Germany and Finland, where fresh bread was the leading F&B product, while Austria (2020 data) and Hungary both reported their highest level of output for soft drinks.

Aside from the high levels of production for fresh bread in Germany and for non-processed cheese in Italy and France (already noted above), the value of production for leading F&B products was also particularly high for sauces, condiments and seasonings in Ireland (€8.2 billion), virgin olive oil in Spain (€5.1 billion) and soft drinks in Austria (€4.5 billion; 2020 data).

Note: based on products in the Prodcom list (2020 data were used if 2021 data were not available). Sauces, condiments and seasonings: exclude soya sauce, tomato ketchup, tomato sauces and mustard preparations. BE, FR, LV, NL, AT, RO and SE: 2020 for their largest manufactured product. CY, LU and MT: not available.

Source: Eurostat (online data code: [DS-056120](#))



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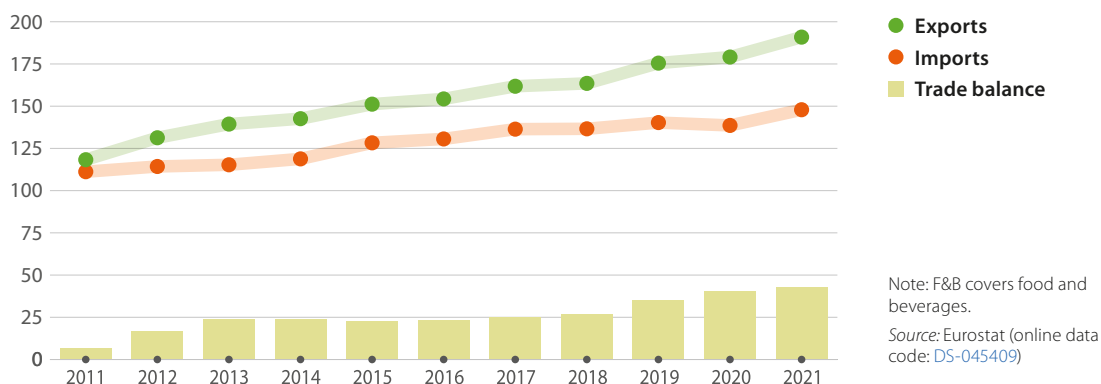
Trade in agricultural, fishery, food and beverage products



Trade and trade balance

Extra-EU trade developments for agricultural, fisheries and F&B products

(€ billion, EU, 2011–2021)



The EU aims to ensure there is a sustainability chapter in its international trade agreements. In doing so, it seeks to develop bilateral commitments, for example in areas such as animal welfare, food safety, cooperation and aid for developing countries, or fair access to markets for trade.

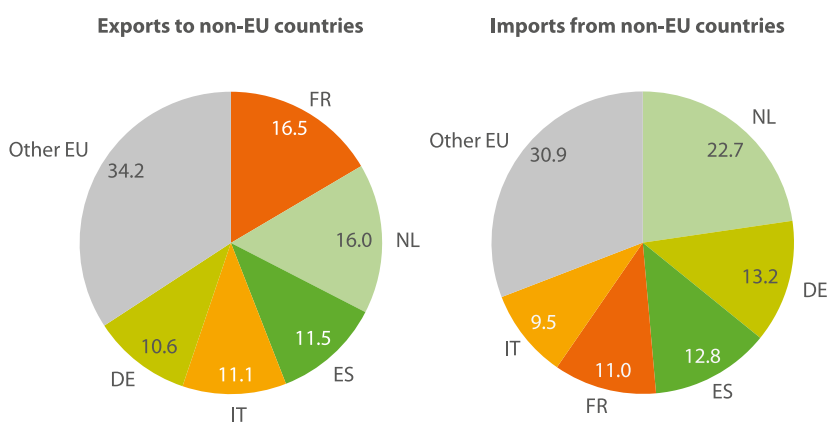
In 2021, the EU [exported](#) to non-member countries (also referred to as [extra-EU trade](#)) agricultural and

fisheries products as well as food and beverage (F&B) products valued collectively at €191 billion. This was €43 billion higher than the value of extra-EU [imports](#) of such products, with the EU's [trade surplus](#) widening for the sixth consecutive year. Agricultural, fisheries and F&B products accounted for 8.8 % of all exported goods that left the EU in 2021 and for 7.0 % of all goods imported into the EU.

Share of extra-EU trade in agricultural, fisheries and F&B products

(% based on value, 2021)

In 2021, France had the highest share (16.5 %) of the EU's exports of agricultural, fisheries and F&B products to non-member countries, some €31.5 billion in value terms. This was closely followed by the Netherlands, which accounted for 16.0 % of the EU's exports and for almost one quarter (22.7 %) of the EU's imports of these products, some €33.5 billion in value terms. The relative position of the Netherlands reflects, in part, its favourable location as a logistics hub including the EU's largest sea freight port (Rotterdam), with goods imported from and exported to the rest of the world.

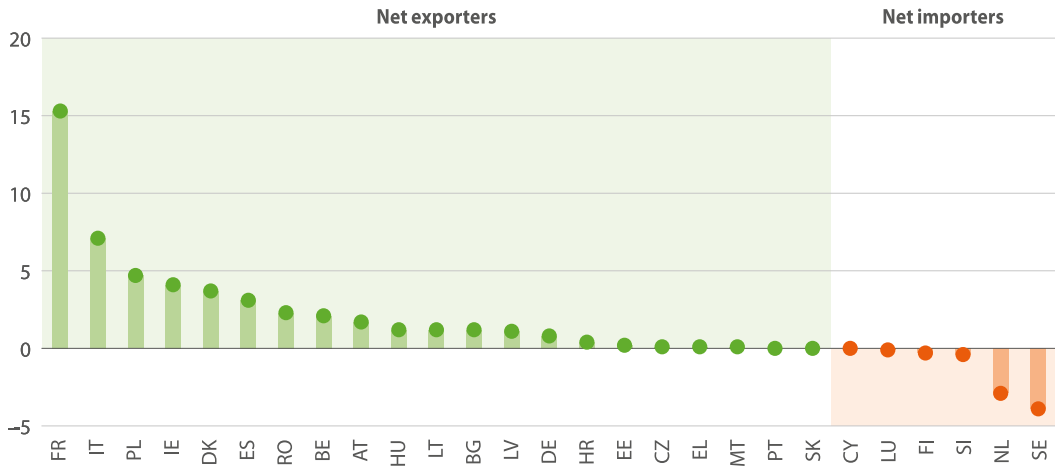


Note: due to rounding, the shares do not sum to 100.0 %.

Source: Eurostat (online data code: [DS-045409](#))

Extra-EU trade balance for agricultural, fisheries and F&B products

(€ billion, 2021)

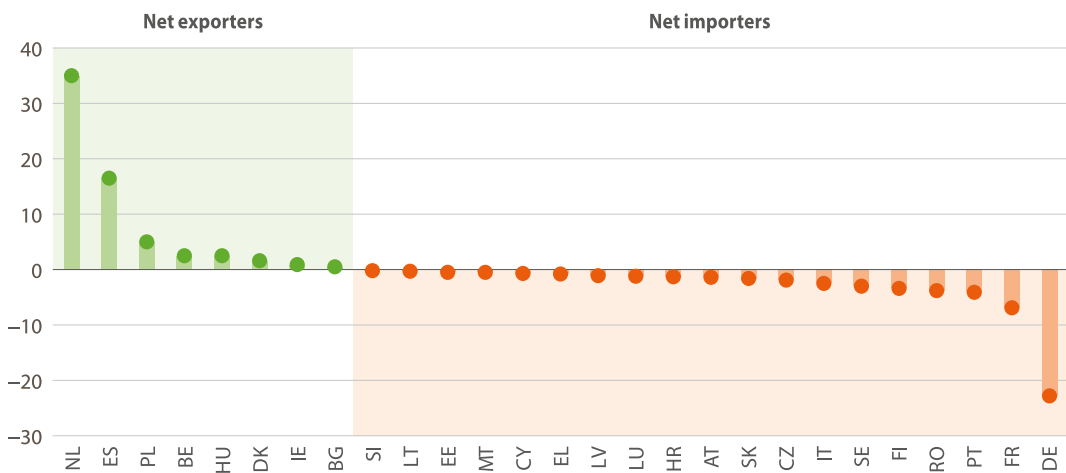


Most EU Member States recorded a trade surplus for agricultural, fisheries and F&B products with non-member countries (in other words, they were net exporters); the highest extra-EU trade surpluses in 2021 were recorded by France (€15.3 billion), Italy (€7.1 billion) and Poland (€4.7 billion). Sweden had the largest trade deficit in these products in 2021 (€3.9 billion).

Source: Eurostat (online data code: [DS-045409](#))

Intra-EU trade balance for agricultural, fisheries and F&B products

(€ billion, 2021)



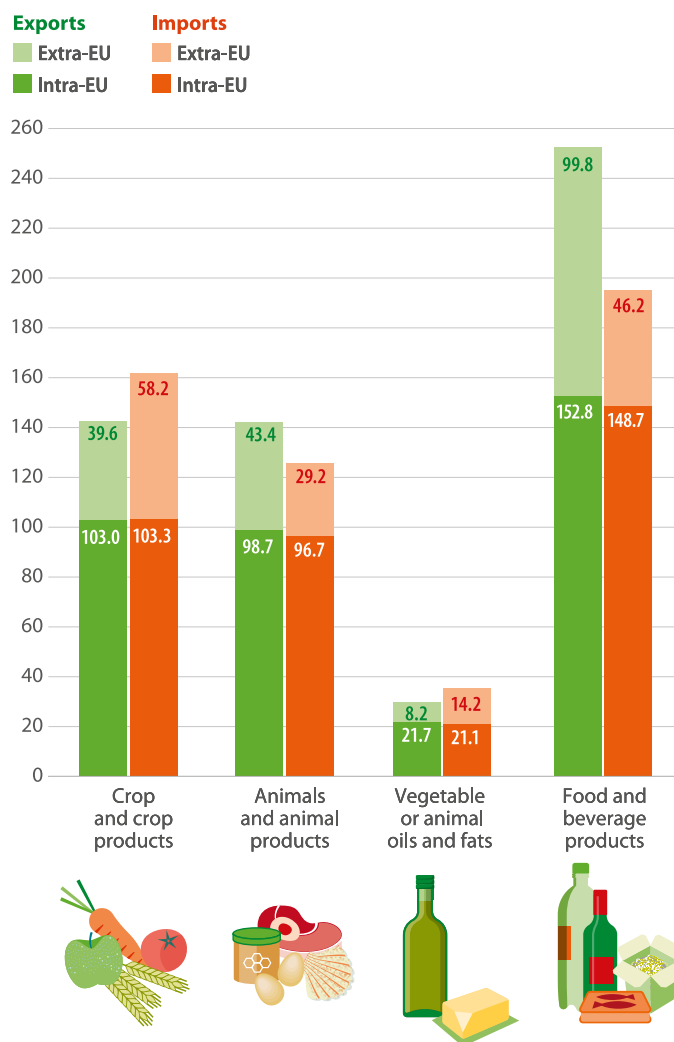
In 2021, more than two thirds (68.8 %) of the EU's total trade in agricultural, fisheries and F&B products was between EU Member States (also referred to as *intra-EU trade*) reflecting, in part, the perishable nature of some products. The largest intra-EU trade surpluses in 2021 for agricultural, fisheries and F&B products were recorded by the Netherlands (€35.0 billion) and Spain (€16.5 billion); the large surplus for the Netherlands reflects the fact that goods imported from all over the world are re-exported to other EU Member States. By contrast, France (€6.9 billion) and in particular Germany (€22.8 billion) recorded the biggest intra-EU trade deficits for agricultural, fisheries and F&B products.

Source: Eurostat (online data code: [DS-045409](#))

Traded products

Intra- and extra-EU trade in agricultural, fisheries and F&B products

(€ billion, EU, 2021)



The EU generally imports raw, unprocessed agricultural and fishery products, while its principal exports are processed F&B products. For example, a number of crops and crop products, including varieties of fruit and nuts or coffee beans, can only be grown in certain climates outside the EU. This helps explain why the EU imported crops and crop products from non-member countries in 2021 that were valued at €58.2 billion, some €18.7 billion more than its exports of these products. The EU also recorded a trade deficit for vegetable or animal oils and fats (€6.1 billion).

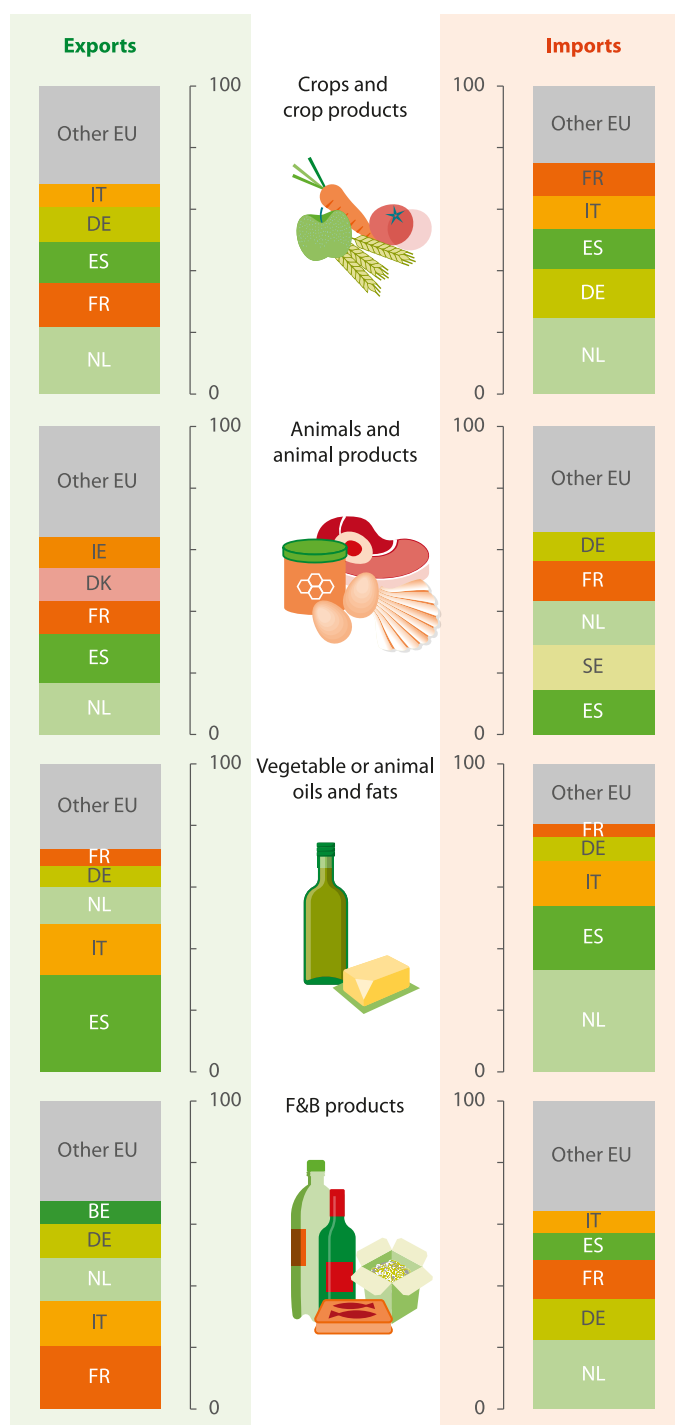
By contrast, the EU exported (processed) F&B products to non-member countries in 2021 that were valued at €99.8 billion, which was more than twice as high as the value of its imports (€46.2 billion) of these products. The EU also recorded a trade surplus for animals and animal products (€14.2 billion).

Note: due to quasi-transit trade, the addition of intra-EU trade and extra-EU trade may lead to double counting. An example of this would be goods imported from China via the Netherlands, where they are cleared by customs for free circulation, before being dispatched to Germany. This would lead to the same goods being counted as imports by both the Netherlands and Germany. More precisely, they would appear in the Netherlands' extra-EU imports from China and intra-EU exports to Germany and in Germany's intra-EU imports from the Netherlands.

Source: Eurostat (online data code: [DS-045409](#))

Share of EU Member States within extra-EU trade

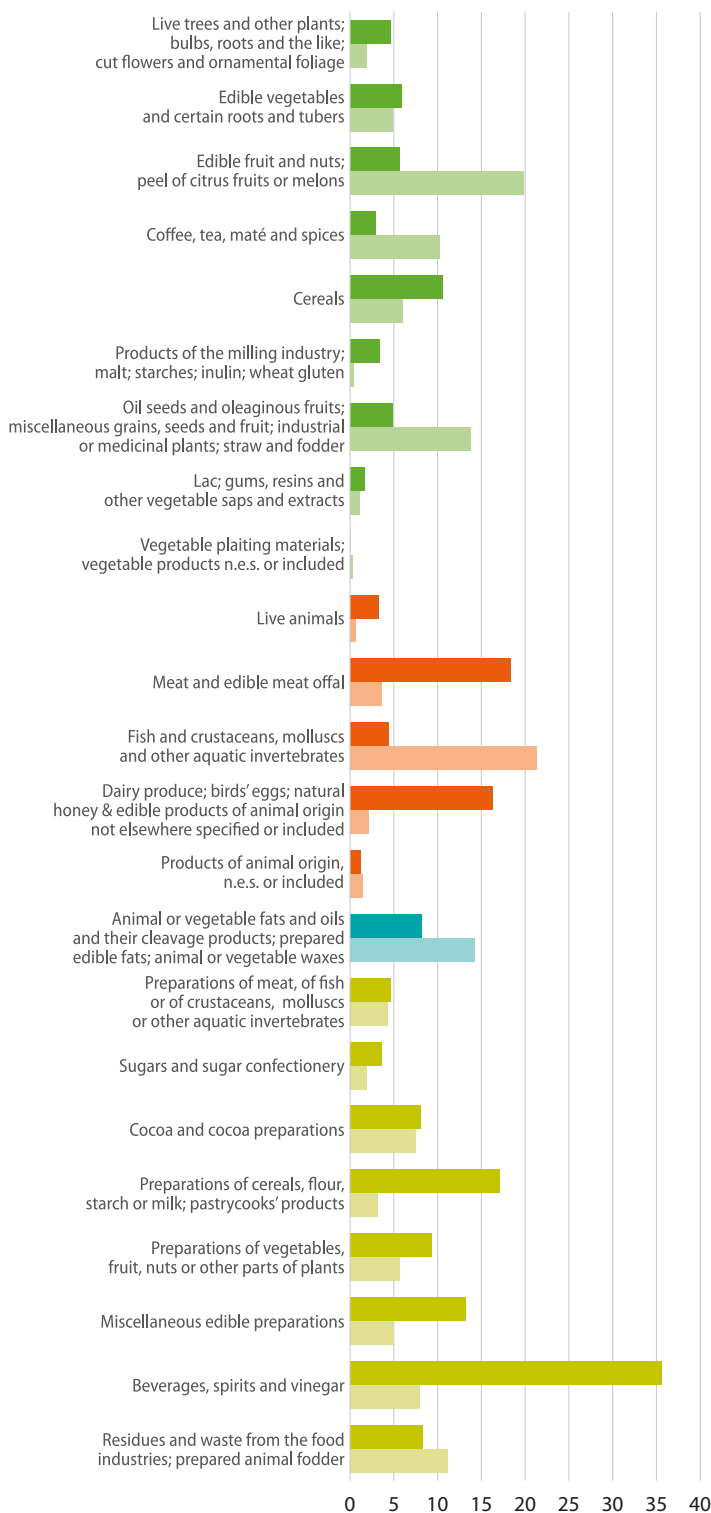
(% based on value, 2021)



The Netherlands' role as a logistical hub for trade was evident for all four main product groups within agricultural, fisheries and F&B products: in 2021, the Netherlands recorded the highest share of extra-EU exports for crops and crop products (21.6 % of the EU total) and for animals and animal products (16.7 %), while Spain had the highest share of exports for vegetable or animal oils and fats (31.5 %), and France the highest share of exports for F&B products (20.7 %).

The Netherlands also recorded the highest share of extra-EU imports for vegetable or animal oils and fats (33.2 % of the EU total in 2021), crops and crop products (24.7 %) and F&B products (22.3 %). Spain (14.7 %) and Sweden (14.5 %) had slightly higher shares of extra-EU imports for animals and animal products than the Netherlands (14.2 %).

Source: Eurostat (online data code: DS-045409)



Extra-EU trade in agricultural, fisheries and F&B products

(€ billion, EU, 2021)

Crop and crop products

Exports

Imports

Animals and animal products

Exports

Imports

Vegetable or animal oils and fats

Exports

Imports

F&B products

Exports

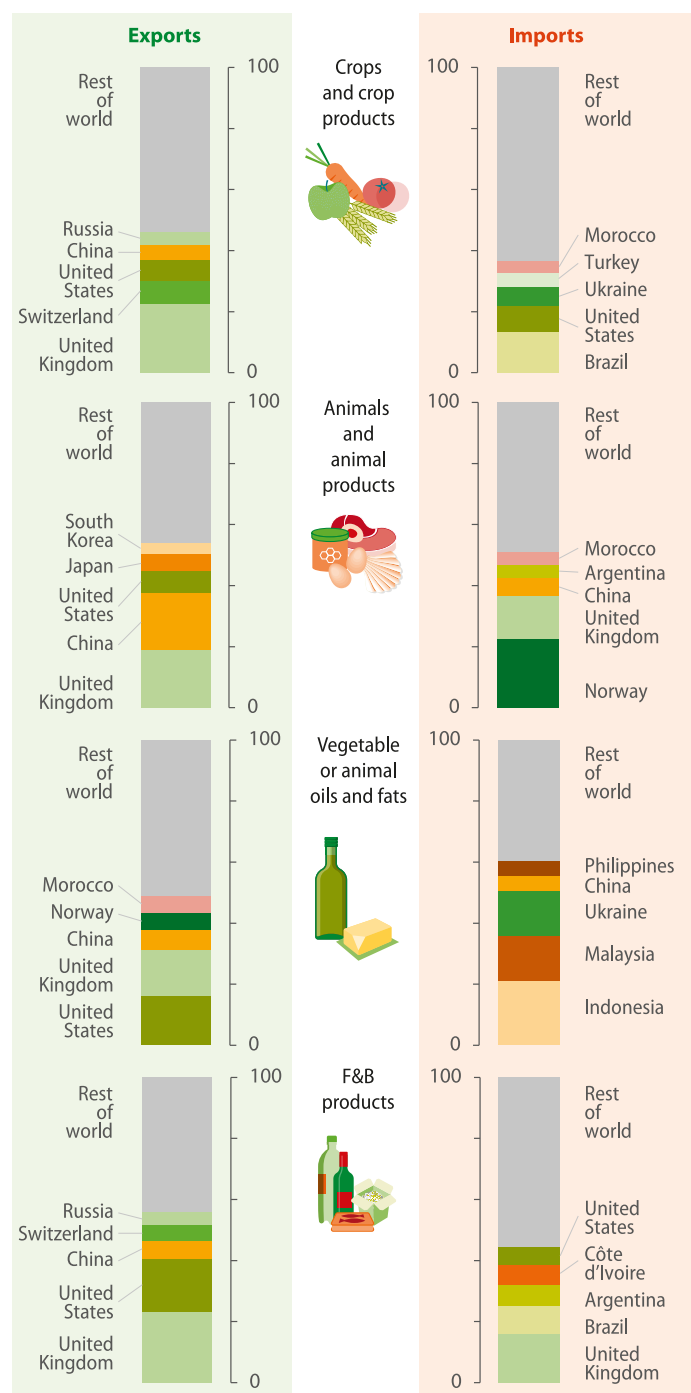
Imports

A more detailed view of extra-EU trade in 2021 shows the EU's principal exports included beverages, spirits and vinegar (€35.6 billion), meat and edible meat offal (€18.3 billion) and preparations of cereals, flour, starch or milk (€17.1 billion). The EU's principal imports included fish, crustaceans and aquatic invertebrates (€21.3 billion) and edible fruit and nuts (€19.8 billion).

The EU ran a sizeable trade deficit in 2021 for several crop and crop products, including: edible fruit and nuts (€14.1 billion), oilseeds and oleaginous fruits (€9.0 billion) and coffee, tea, mate and spices (€7.3 billion). For animals and animal products, the EU's largest trade surpluses were recorded for meat and edible meat offal (€14.6 billion) and dairy produce (including cheese, milk and yoghurts), birds' eggs and natural honey (€14.2 billion), while the EU had a trade deficit of €17.0 billion for fish, crustaceans and aquatic invertebrates (the biggest deficit among any of the product categories covered). Among F&B products, the EU's largest trade surpluses were recorded for beverages, spirits and vinegar (€27.7 billion; the biggest surplus among any of the product categories covered) and preparations of cereals, flour, starch or milk (€14.1 billion).

Source: Eurostat (online data code: [DS-045409](#))

Trade partners

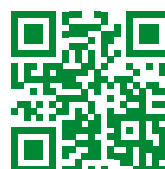


Extra-EU trade partners for agricultural, fisheries and F&B products

(%, EU, 2021)

EU exports of agricultural, fisheries and F&B products to the United Kingdom were valued at €41.7 billion in 2021. This represented slightly more than one fifth (21.9 %) of the EU's total exports of these products, with the next highest shares recorded by the United States (12.7 %) and China (8.6 %). The United Kingdom was the EU's main export destination for F&B products (23.4 % of all EU exports within this product group), crops and crop products (22.6 %), and animals and animal products (19.0 %; replacing China that had the highest share in 2020), while the United States was the principal destination for vegetable or animal oils and fats (16.4 %).

EU imports of agricultural, fisheries and F&B products originating from the United Kingdom were valued at €13.1 billion in 2021; as such, the EU's trade surplus with the United Kingdom for these products was €28.7 billion. The United Kingdom accounted for 8.8 % of the EU's total imports of agricultural, fisheries and F&B products, with Brazil (8.7 %) and the United States (6.2 %) recording the next highest shares. Norway was the main origin for EU imports of animals and animal products (22.6 % of all EU imports within this product group, principally fish), while Indonesia was the main origin for vegetable or animal oils and fats (21.1 %, principally palm oil), the United Kingdom for F&B products (15.9 %), and Brazil for crop and crop products (13.3 %).



For more information on the extra-EU trade in agricultural goods, please refer to the Statistics Explained article.

Source: Eurostat (online data code: DS-045409)

Extra-EU imports of agricultural, fisheries and F&B products

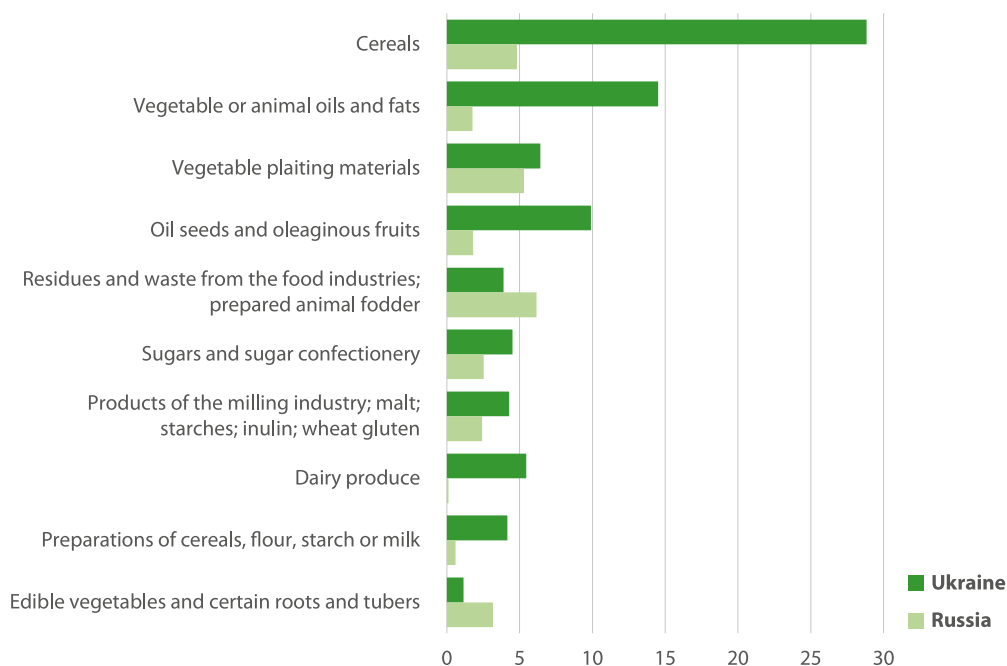
(% share originating from Ukraine/Russia, EU, 2021)

Since the start of Russia's large-scale military invasion of the whole of Ukraine in February 2022, there have been concerns over a global food crisis. These were primarily linked to product shortages as some foodstuffs and intermediate agricultural products may no longer be grown/produced in Ukraine (as a result of the war) and a blockade of Black Sea ports hindered Ukraine from exporting agricultural goods (primarily wheat). In July 2022 an agreement was reached to allow ships to transport agricultural goods from Ukrainian ports.

In 2021, Ukraine was a particularly important origin of EU imports of vegetable or animal oils and fats

(14.5 % of all EU imports within this product group) and imports of crops and crop products (6.0 % of the EU's imports). Russia was among the principal export destinations for the EU's F&B products (4.5 % of all EU exports within this product group) and for crops and crop products (4.4 % of the EU's exports).

Looking in more detail, around one third of the EU's imports of cereals in 2021 originated from Ukraine (28.8 %) and Russia (4.8 %) combined. Ukraine also accounted for a relatively high share of the EU's imports of oil seeds and oleaginous fruits (9.9 %).



Note: the chart shows the top 10 agricultural, fisheries and F&B products, ranked on the share of EU imports originating from Russia and Ukraine collectively.

Source: Eurostat (online data code: [DS-045409](#))

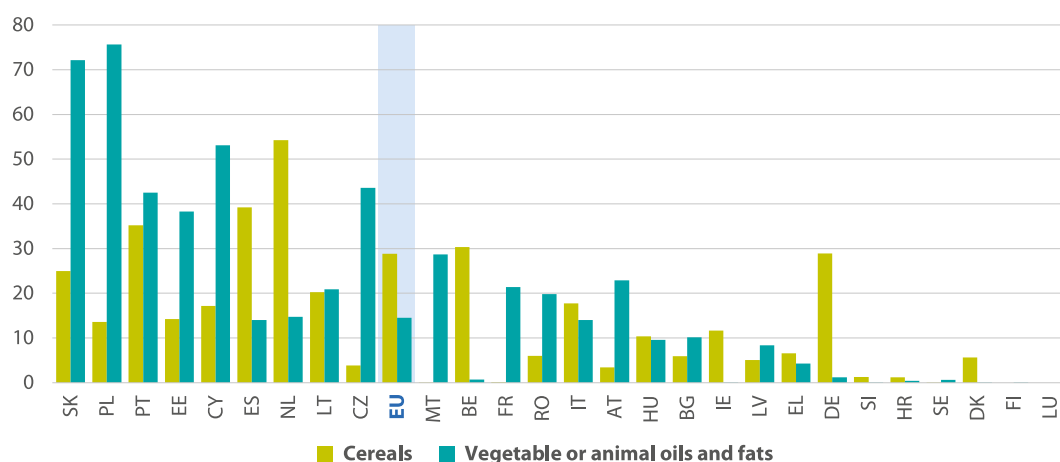
Extra-EU imports of cereals and vegetable or animal oils and fats

(% share originating from Ukraine, 2021)

There are considerable differences between individual EU Member States concerning their exposure to the impact of the Russian military aggression against Ukraine. Regarding food and beverages, several EU Member States report a very high proportion of their imports of cereals and vegetable or animal oils and fats originating from Ukraine. For example, around three quarters of all extra-EU imports of vegetable or animal oils and fats in Poland and Slovakia originated from Ukraine (75.7 % and 72.1 % respectively in 2021), while this share was more than half in Cyprus, and greater than 40 % in Czechia and Portugal. In the Netherlands,

more than half (54.3 %) of all extra-EU imports of cereals originated from Ukraine in 2021, while 30–40 % of all extra-EU imports of cereals in Spain, Portugal and Belgium originated from Ukraine.

In 2021, imports of vegetable or animal oils and fats originating in Ukraine were valued at €696 million in the Netherlands, €417 million in Spain and €371 million in Poland. Among the EU Member States, the value of cereals imported from Ukraine was highest in the Netherlands (€548 million), closely followed by Spain (€538 million), with Italy a distant third (€211 million).



Note: the chart is ranked on the average share of each Member State's imports of cereals and vegetable or animal oils and fats originating from Ukraine.

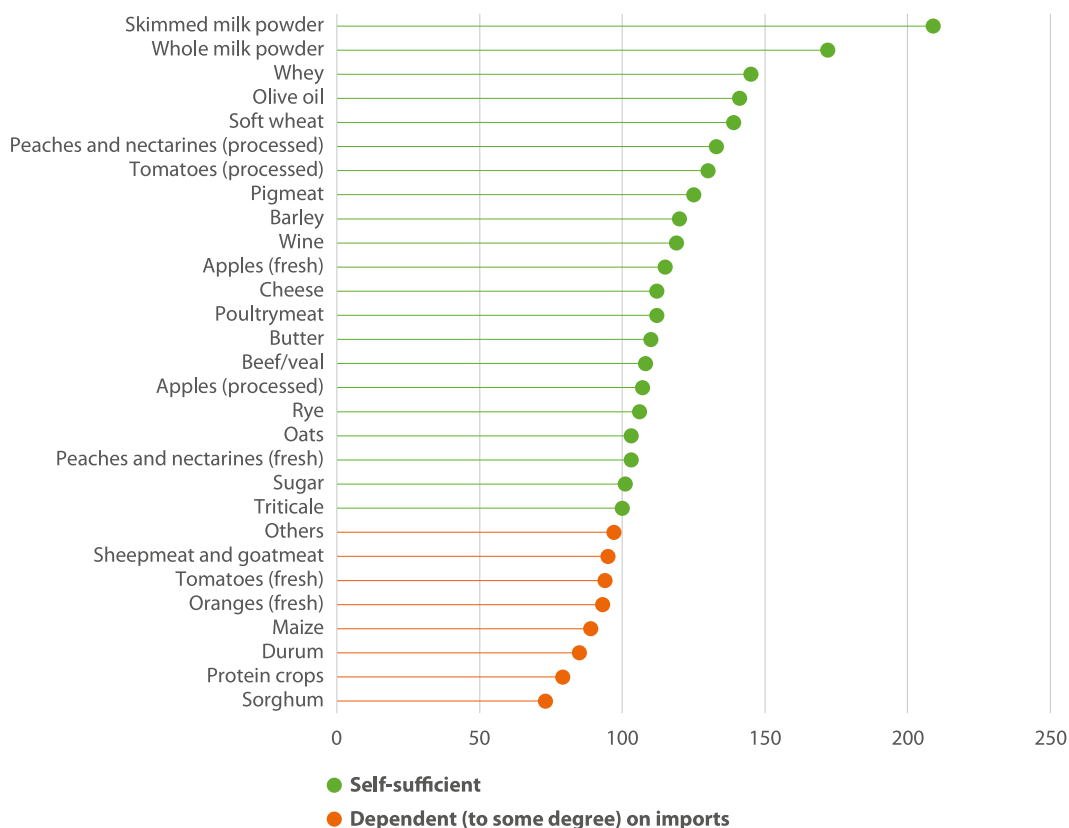
Source: Eurostat (online data code: [DS-045409](#))

Self-sufficiency in agricultural commodities

(%, EU, 2021)

The EU remains largely self-sufficient for most agricultural commodities, in particular dairy products, olive oil and most meats. For example, the EU's production of skimmed milk power in 2021 was more than twice as high as its level of consumption. By contrast, the EU is dependent (to some degree) on imports of protein crops and sorghum to meet demand for these products within the internal market.

Reduced levels of imports for maize, wheat, rapeseed and sunflower oil from Ukraine have had an impact on the price of these commodities, while their supply to the EU's F&B processing industry has fallen. In some cases, for example sunflower oil, there are no real alternatives to replace imports that have traditionally originated from Ukraine (either by switching to an alternative origin of imports or by using a substitute product).



Note: the self-sufficiency rate is the ratio between domestic agricultural production and consumption, expressed as a percentage. Data for arable crops, olive oil and wine refer to marketing years.

Source: Short-term outlook report – EU-27 statistical annex, Directorate-General for Agriculture and Rural Development, European Commission

7

Transport



The data in this chapter concern goods transported on roads in the EU by heavy goods vehicles registered in the EU Member States or EFTA countries. Therefore, the figures do not take into account products transported by vehicles registered in other countries nor by vehicles below a certain threshold ⁽³⁾.

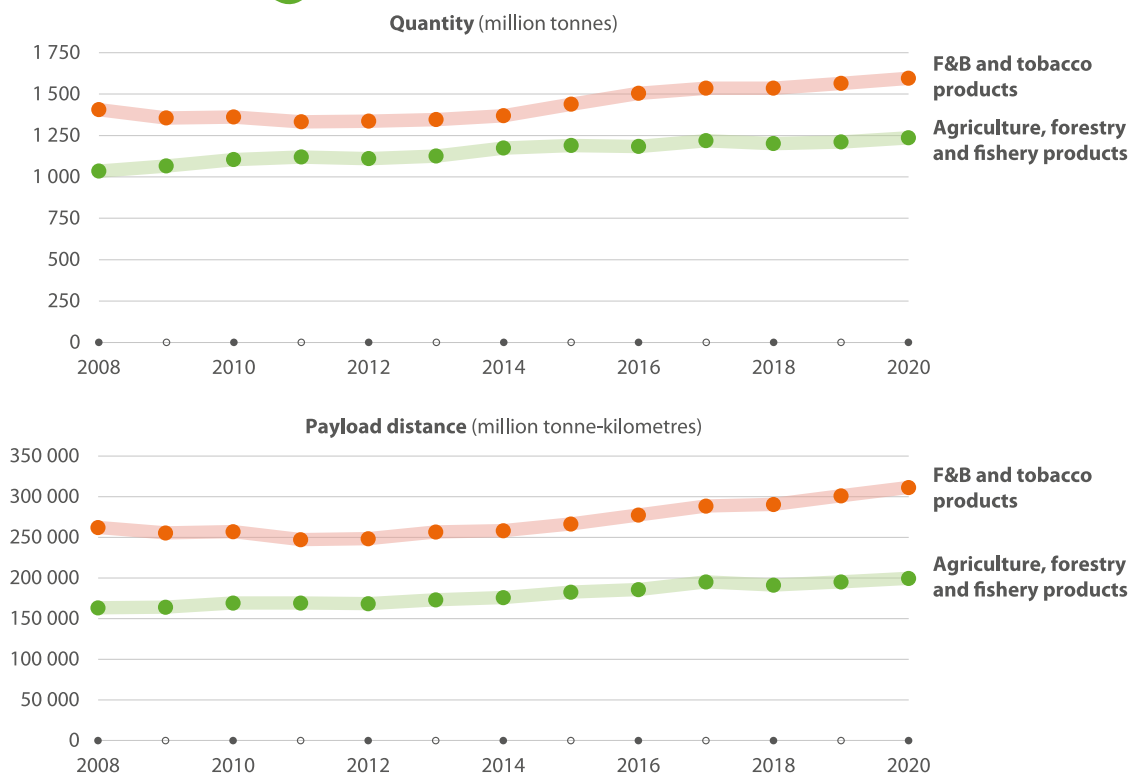


Road transport developments

(EU, 2008–2020)

About 1.2 billion tonnes of agriculture, forestry and fishery products were transported by vehicles registered in the EU in 2020, along with 1.6 billion tonnes of food, beverages and tobacco products (hereafter referred to as F&B and tobacco products). These figures cover the transport of goods produced in the EU as well as imports from outside the EU.

Between 2008 and 2020, the quantity of agriculture, forestry and fishery products transported by road by heavy goods vehicles registered in the EU increased on average by 1.5 % per year; for F&B and tobacco products, the average increase was 1.1 % per year. When taking account not only of the quantity transported but also the distance these products were transported in tonne-kilometres (the **payload distance**), the average annual increases were 1.7 % for agriculture, forestry and fishery products and 1.5 % for F&B and tobacco products. The somewhat larger increases for the payload distance than the simple weight indicate that the average distance over which these products were transported increased during the period under consideration.



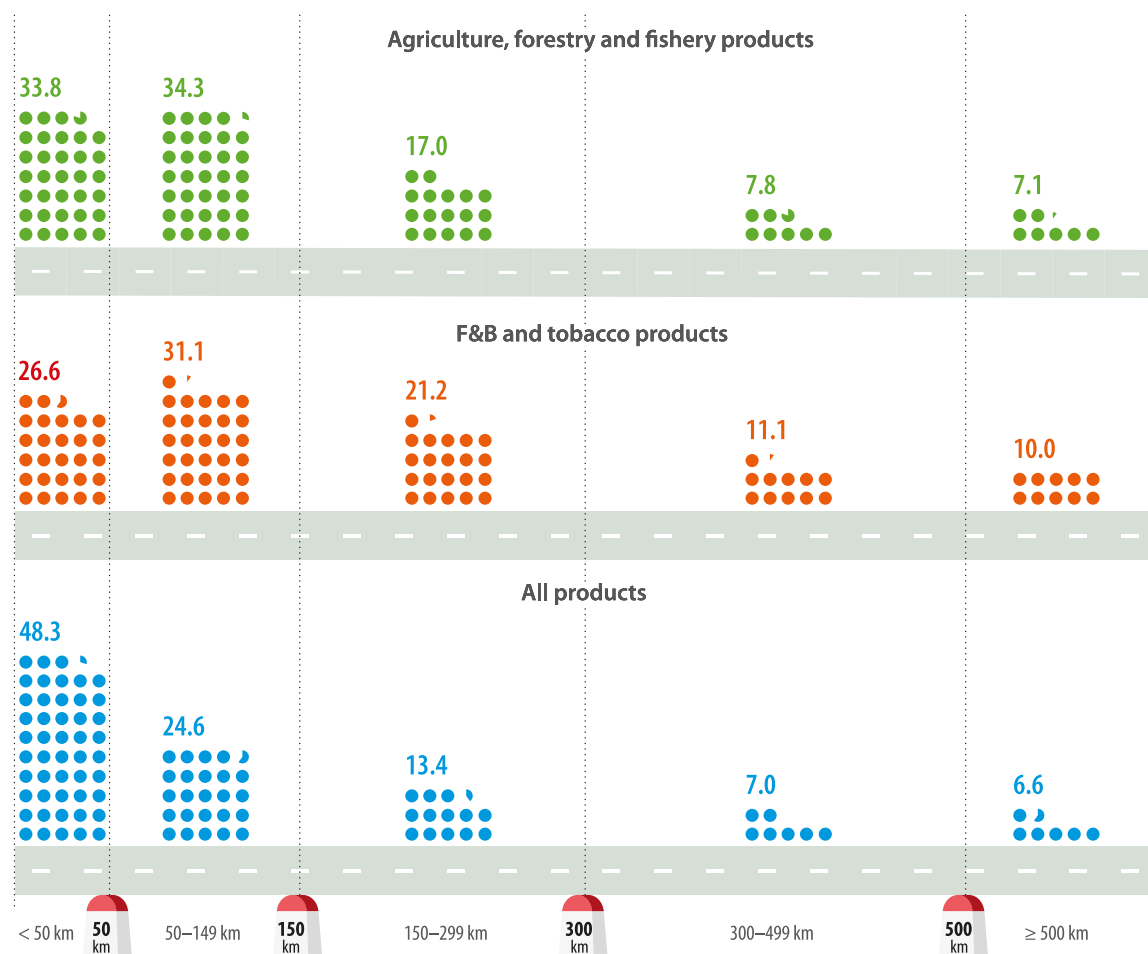
⁽³⁾ Article 1 of Regulation (EU) No 70/2012 of the European Parliament and of the Council (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012R0070&from=EN>) says 'Each Member State may exclude from the scope of this Regulation goods road transport vehicles whose load capacity or maximum permissible weight is lower than a certain limit. This limit may not exceed a load capacity of 3.5 tonnes or maximum permissible weight of 6 tonnes in the case of single motor vehicles.'

Note: goods transported by heavy goods vehicles registered in EU Member States. F&B: food and beverages.

Source: Eurostat (online data code: [road_go_ta_tg](#))

Distance of road transport for agriculture, forestry, fishery, F&B and tobacco products

(% based on tonnes, 2020)



Within the context of the EU's *Farm to Fork Strategy*, the European Commission aims to support measures to reduce this dependence on long-haul transportation through the creation of shorter supply chains that enhance the resilience of regional and local food systems. The Commission also plans to revise legislation on animal welfare during 2023: future policy options include issues such as animal transport, the phasing-out of cages, slaughter and farm level welfare, and animal welfare labelling.

In 2020, the vast majority of agriculture, forestry and fishery products (85.1 %) and F&B and tobacco products (78.9 %) transported by road in the EU were carried over distances of less than 300 km. Nevertheless, compared with all products (48.3 %), relatively small shares of agriculture, forestry and fishery products (33.8 %) and F&B and tobacco products (26.6 %), were carried over distances of less than 50 km. Indeed, the shares of agriculture, forestry and fishery products and F&B and tobacco products that were transported by road were higher than the corresponding shares for all products for each of the distance classes covering 50 km or more.

Note: goods transported by heavy goods vehicles registered in EU Member States. F&B: food and beverages. Due to rounding, not all shares sum to 100.0 %.

Source: Eurostat
(online data code: [road_go_ta_dctg](#))

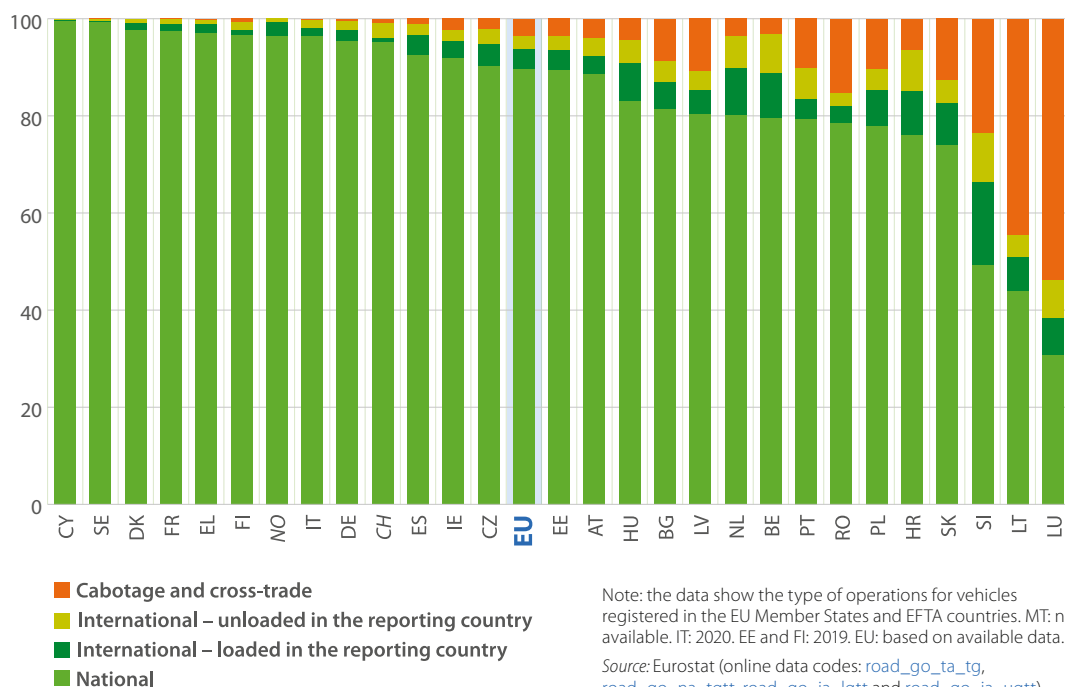
Type of road transport for agriculture, forestry, fishery and F&B and tobacco products

(% based on tonnes, 2021)

In 2021, the vast majority (89.6 %) of the road freight transport of agriculture, forestry, fishery, F&B and tobacco products by vehicles registered in the EU was national transport, in other words it was carried out within individual EU Member States by vehicles registered in that same Member State. The other types of transport that are shown concern a) loading and unloading of products transported across borders (internationally) for the country where a vehicle is registered and b) cabotage (transport within a country other than the vehicle registration country) and cross-trade (transport between a place of loading and a place of unloading in two different countries, neither of which is the country of vehicle registration). On average, the loading of goods for international transport accounted for 4.1 % of the total quantity of agriculture, forestry, fishery, F&B and tobacco products

transported by vehicles registered in the EU, while unloading after international transport accounted for 2.8 %. Other transport – cross-trade and cabotage – accounted for the remaining 3.5 % of the total.

National transport dominated road freight transport of agriculture, forestry, fishery, F&B and tobacco products in 2021 in all EU Member States. Only for vehicles registered in a few of the smaller Member States, like Luxembourg, Lithuania and Slovenia, was the share of national transport below 70 %; the combined share for cabotage and cross-trade was particularly high in these three Member States, alongside relatively high shares of international loading and unloading. In some of the EU Member States with large maritime freight ports, such as Belgium and the Netherlands, international transport recorded a relatively high share of road transport for these goods.



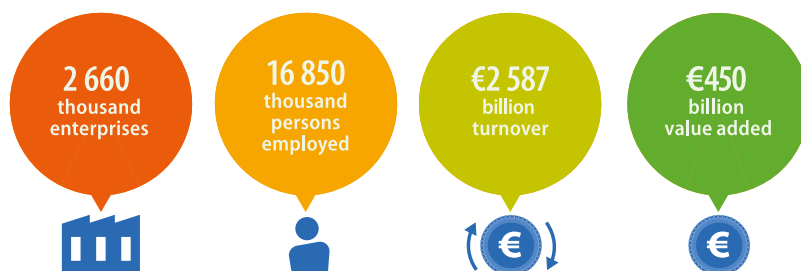
Wholesale, retail and services provision of food and beverages



Key figures for the EU

Size of wholesaling, retailing and serving of F&B

(EU, 2019)



Note: F&B covers food and beverages; for wholesaling and retailing, it also covers tobacco. These trade and service activities include NACE codes: 46.17, 46.3, 47.11, 47.2, 47.81 and 56. Includes estimates made for the purpose of this publication.

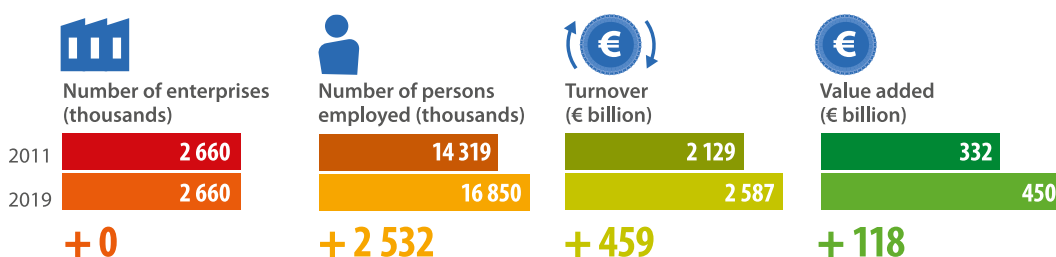
Source: Eurostat
(online data codes: [sbs_na_dt_r2](#) and [sbs_na_la_se_r2](#))

Enterprises trading or serving food and beverages (F&B) include F&B wholesalers and retailers (who also trade tobacco) as well as F&B serving businesses such as restaurants, bars, cafés and caterers. As part of the EU's *Farm to Fork Strategy*, the European Commission will seek commitments from these businesses on a range of health and sustainability issues, for example: reformulating food products in line with guidelines for healthy diets (see Chapter 9 for information about obesity and people who are underweight); reducing their environmental footprint; or reducing packaging.

There were 2.7 million F&B trade and serving enterprises in the EU in 2019: 265 thousand were wholesalers, 869 thousand were retailers and 1.5 million were F&B serving enterprises. Together they employed a total of 16.9 million persons, generating €2.6 trillion of turnover and adding €450 billion of value.

Wholesaling, retailing and serving of F&B

(EU, 2011 and 2019)



In 2019, the number of enterprises in F&B trade and serving in the EU was the same as in 2011. However, on average, these enterprises grew in size; they employed an extra 2.5 million persons during the period under consideration, increased their turnover by €459 billion and their value added by €118 billion. The number of persons employed in F&B trade and serving increased overall by 17.7 % between 2011 and 2019, with more rapid growth for turnover (up 21.6 %) and especially value added (up 35.6 %).

Note: includes estimates made for the purpose of this publication. Different scales are used for each indicator.

Source: Eurostat (online data codes: [sbs_na_dt_r2](#) and [sbs_na_la_se_r2](#))

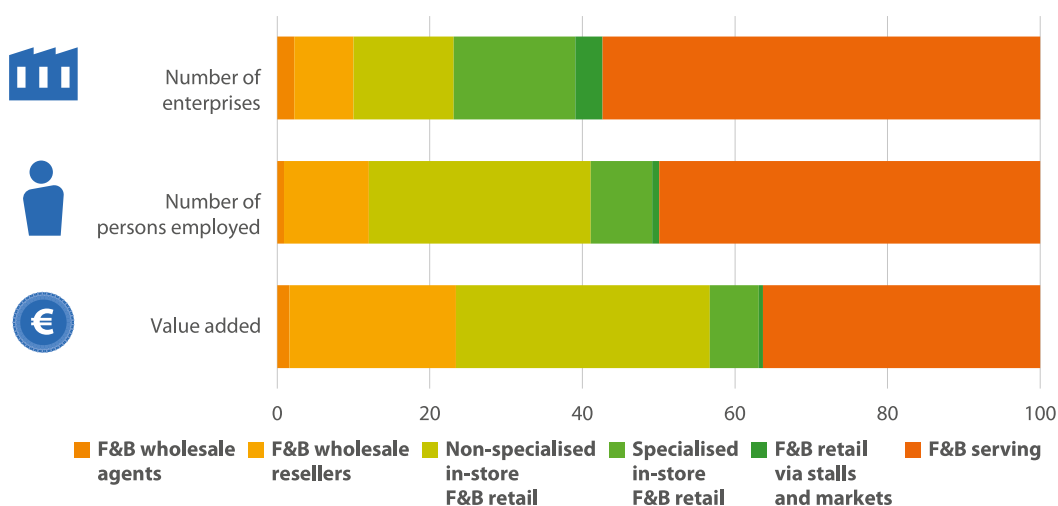
Structure of wholesaling, retailing and serving of F&B

(%, EU, 2019)

As is common for wholesaling in general, most F&B wholesalers in the EU in 2019 were resellers, buying and selling products. Wholesale resellers accounted for the vast majority of the workforce employed by F&B wholesalers as well as its value added; F&B wholesale agents (trading on commissions) had much lower shares.

The most common type of F&B retailer was specialised in-store retailers, such as greengrocers, butchers, fishmongers, bakers and tobacconists. These specialists outnumbered enterprises that were non-specialised in-store retailers with F&B predominating, such as general grocers and supermarkets. However, in terms of value added and employment, non-specialised in-store F&B retailers were considerably larger than their specialised competitors.

Whereas the majority (57.4 %) of all F&B trade and serving enterprises in the EU in 2019 were in the F&B serving activity, this activity's contributions to employment and value added were lower, 49.9 % and 36.3 % respectively.

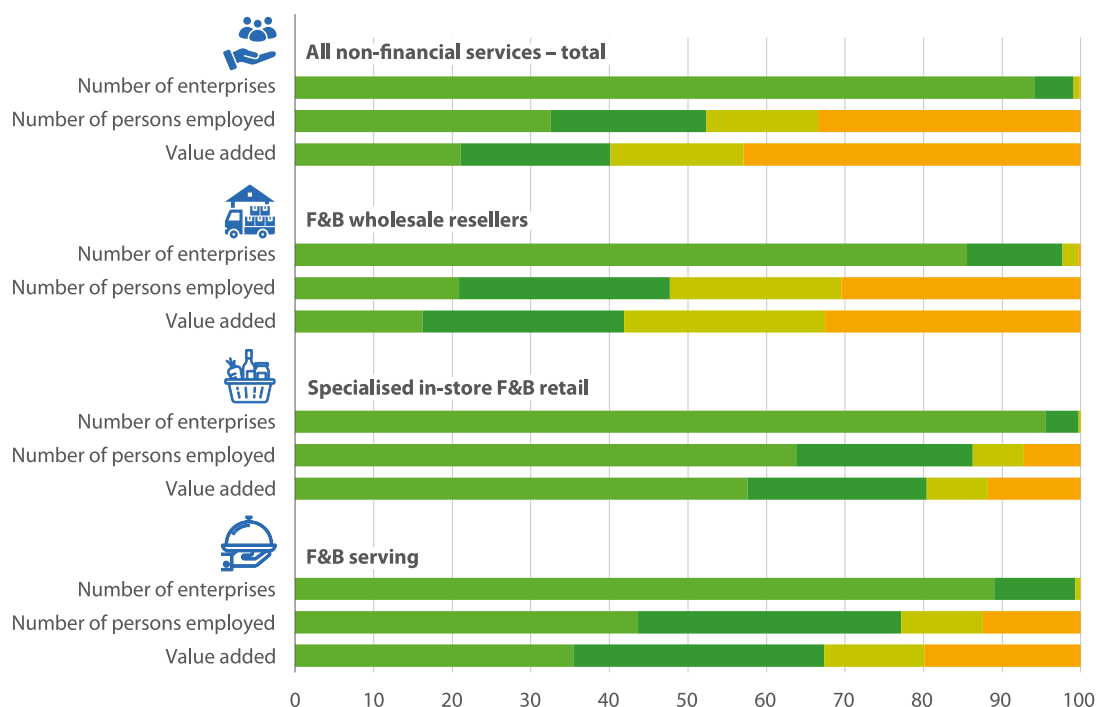


Note: F&B serving covers all forms of serving activities, including (among others): restaurants, mobile food outlets, caterers, bars and cafes.

Source: Eurostat (online data codes: [sbs_na_dt_r2](#) and [sbs_na_1a_se_r2](#))

Key size class indicators for wholesaling, specialised retailing and serving of F&B

(%, 2019)



■ Micro
■ Small
■ Medium-sized
■ Large

Note: includes estimates made for the purpose of this publication.

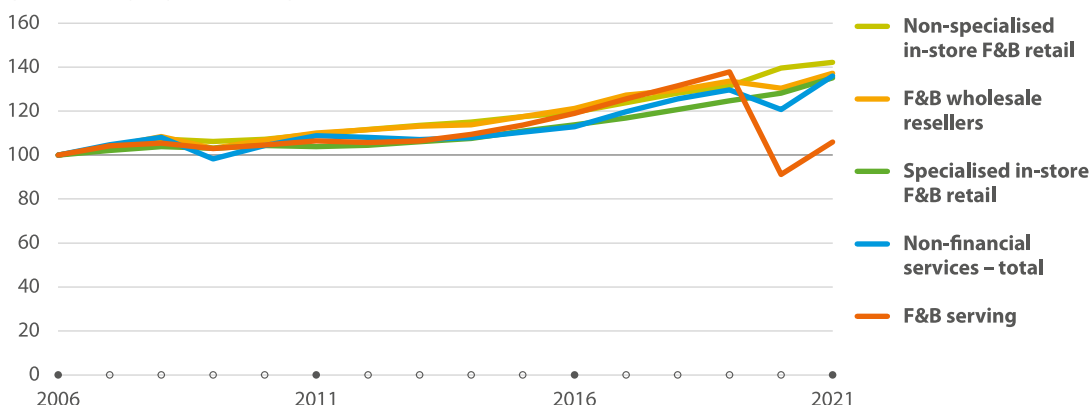
Source: Eurostat (online data codes: sbs_sc_dt_r2 and sbs_sc_1b_se_r2)

Enterprises can be classified according to their size in terms of employment: micro enterprises have less than 10 persons employed, small enterprises have 10–49 persons employed, medium-sized enterprises have 50–249 persons employed, and large enterprises have 250 or more persons employed. As is true for many [non-financial services](#), the count of F&B trade and serving enterprises was dominated by micro enterprises. Among F&B trade and serving activities, wholesale resellers recorded the lowest share of micro enterprises (85.5 %) and the highest share for each of the three larger size classes.

Micro enterprises also contributed a smaller share of employment and value added among wholesale resellers than was the case for the other two F&B activities shown. By contrast, micro enterprises contributed almost two thirds of total employment and more than half of value added among specialised in-store F&B retailers. The combined shares of micro and small enterprises accounted for just over three quarters of total employment and just over two thirds of total value added among F&B serving enterprises, considerably higher than the averages for all non-financial services.

Turnover index for wholesaling, retailing and serving of F&B

(2006 = 100, EU, 2006–2021)



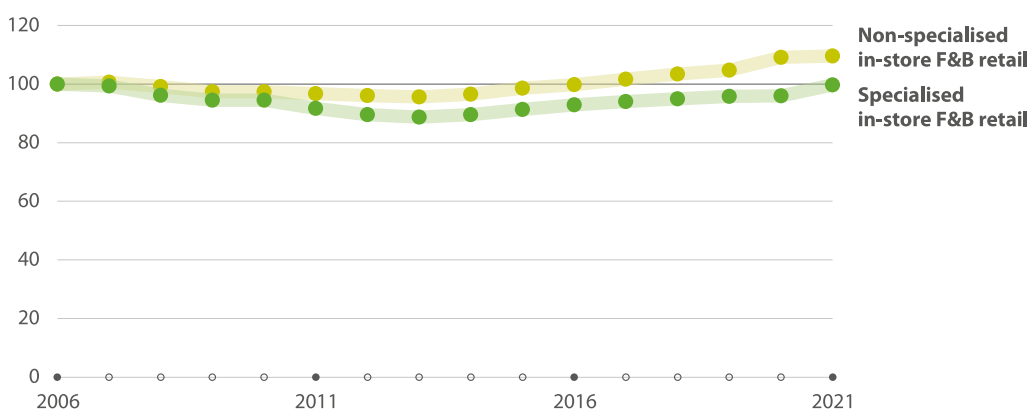
Note: index originally compiled with 2015 = 100; rescaled to 2006 = 100.

Source: Eurostat (online data codes: [sts_trtu_a](#) and [sts_setu_a](#))

In current price terms, the **turnover** of enterprises in the EU serving F&B increased almost two fifths between 2006 and 2019, an average annual increase of 2.5 %. Turnover in this activity was particularly hard hit in 2020 by the COVID-19 crisis: governments of many EU Member States closed F&B outlets or imposed restrictions on this activity for large parts of the year; turnover fell 33.9 % in 2020, partially rebounding in 2021 (up 16.2 %). F&B wholesalers also experienced a fall in their turnover in 2020 (down 2.5 %), which was more than recovered in 2021 through a 5.2 % increase. By contrast, specialised and non-specialised F&B in-store retailers experienced increases in turnover in both 2020 and 2021, in part because people were eating more often at home.

Volume index of sales for retailing of F&B

(2006 = 100, EU, 2006–2021)



Note: index originally compiled with 2015 = 100; rescaled to 2006 = 100.

Source: Eurostat (online data code: [sts_trtu_a](#))

For retail trade, a **volume index of sales** is available: compared with a value index, the change in prices of the retailed products has been removed. After this adjustment, sales from specialised in-store F&B retailing in the EU were lower in 2020 than they had been in 2006, whereas sales from non-specialised in-store F&B retailing were higher. The pattern of developments was reversed in 2021, with sales from specialised in-store F&B retailing rising 3.9 %, at a considerably faster pace than sales from non-specialised in-store F&B retailing (up 0.5 %).

Turnover, value added and employment in the EU Member States

Share of EU wholesaling, retailing and serving of F&B

(%, 2019)



Number of persons employed



Turnover



Value added



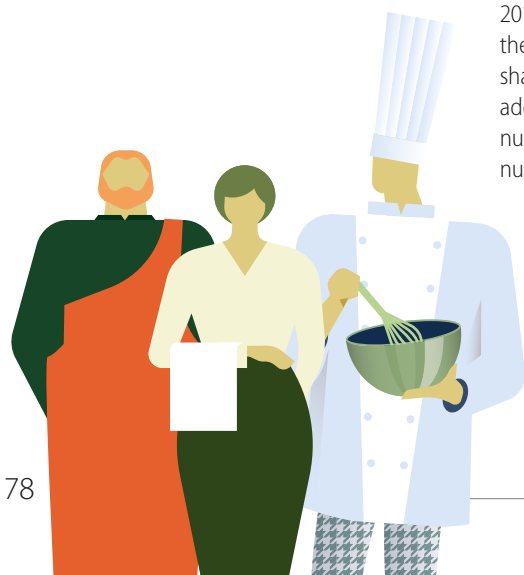
Note: includes estimates made for the purpose of this publication. NL: turnover and value added shares are underestimates as wholesale agents and retail via stalls and markets are excluded. Due to rounding, not all shares sum to 100.0 %.

Source: Eurostat (online data codes: sbs_na_dt_r2 and sbs_na_la_se_r2)

The relative size of each EU Member State within the EU's F&B trade and serving activities reflects a number of factors. While the size of the population clearly influences the overall level of sales, so do cultural factors related to the consumption of F&B products as well as differences in price levels.

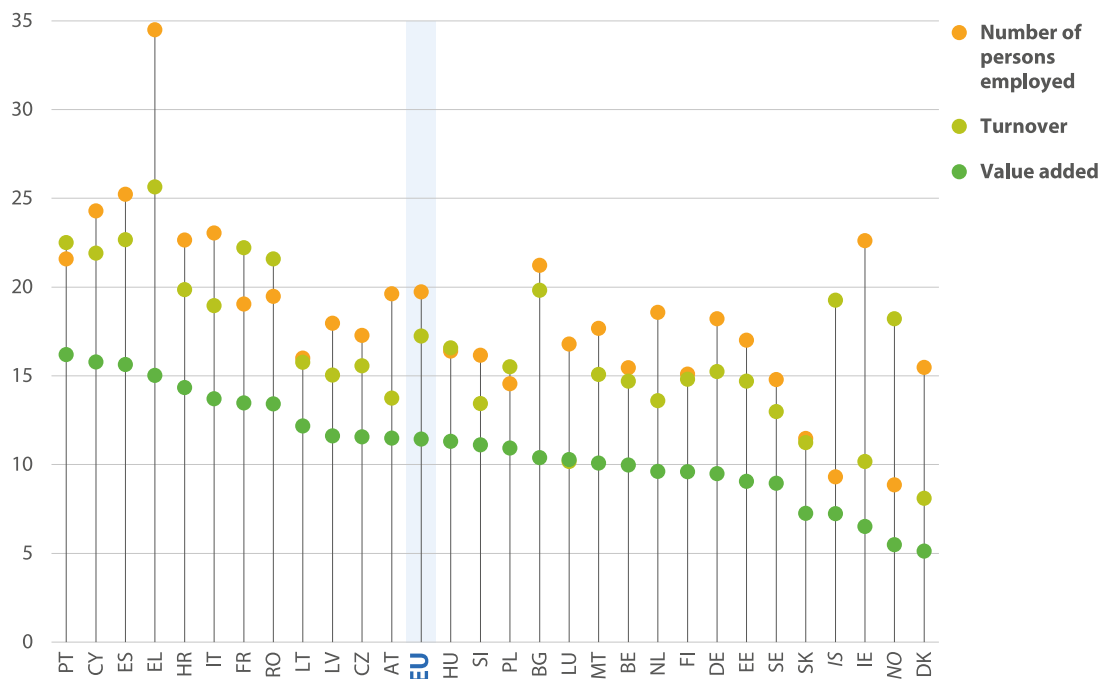
Germany had the highest share of the EU's number of persons employed, turnover and value added for F&B trade and serving in 2019; it accounted for slightly more than one fifth (21.0–21.6 %) of the EU total for all three indicators. France had the second highest share of the EU's F&B trade and serving in terms of sales and value added. By contrast, France had the fourth highest share for the number of persons employed (principally due to a relatively low number of persons employed in F&B serving).

Like Germany, greater contributions to the EU's value added than to its turnover were also observed for Italy, Spain and the Netherlands in 2019; this was not the case in France. Spain and Italy accounted for relatively high shares of the total number of persons employed in EU F&B trade and serving (14.0 % and 13.3 % respectively).



Share of wholesaling, retailing and serving of F&B within non-financial services

(%, 2019)



Note: ranked on value added. CZ, DK, EE, LU, MT and NL: underestimates (due to one or more missing activities).

Source: Eurostat (online data codes: [sbs_na_sca_r2](#), [sbs_na_dt_r2](#) and [sbs_na_la_se_r2](#))

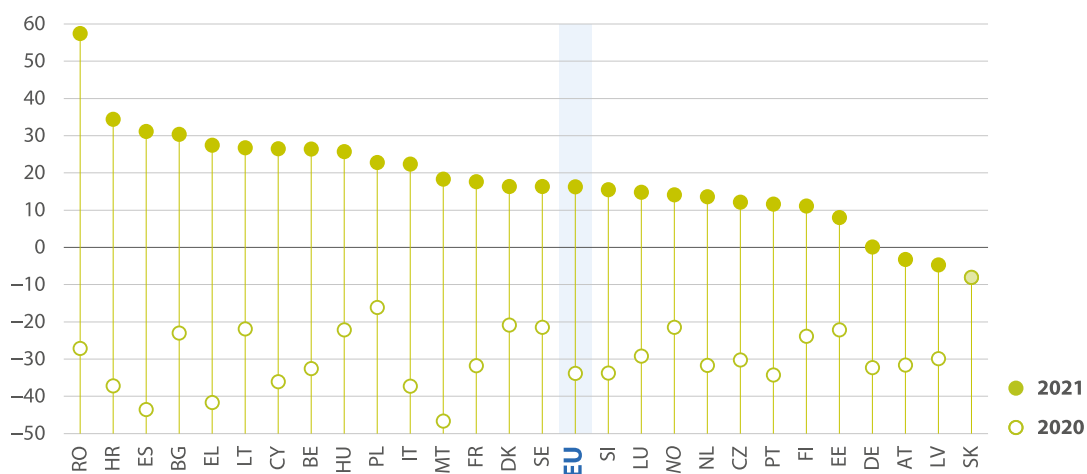
F&B trade and serving contributed almost one fifth (19.7 %) of the total number of persons employed within the EU's non-financial services sector in 2019, as well as 17.2 % of its turnover and 11.4 % of its value added; these shares indicate that labour productivity was relatively low. Note however that some of these F&B activities have a high proportion of part-time or seasonal workers and that employment figures are based on a simple headcount.

F&B trade and serving made relatively large contributions to non-financial services in many (generally southern) EU Member States that are known for being tourist destinations. In some Member States, the high share of these activities may reflect other non-financial services being less developed, rather than a particularly high level of F&B trade and serving activities.

In 2019, F&B trade and serving activities accounted for more than one fifth of the total number of persons employed in non-financial services sector in Greece, Spain, Cyprus, Italy, Croatia, Ireland, Portugal and Bulgaria; these were the only EU Member States to register shares above the EU average. The highest employment share was recorded in Greece (34.5 %), followed at some distance by Spain (25.2 %). Greece also recorded the highest share for turnover, as F&B trade and serving activities accounted for 25.6 % of all sales in non-financial services. For value added, the highest share of F&B trade and serving within non-financial services was recorded in Portugal (16.2 %), while Cyprus, Spain and Greece also had shares of at least 15.0 %.

Annual change in turnover index for serving of F&B

(%, 2020 and 2021)



Note: IE, not available.

Source: Eurostat (online data codes: sts_setu_a)

As noted above, the COVID-19 pandemic and related restrictions particularly affected F&B serving activities (restaurants, bars and cafés). There was a considerable contraction in activity from March 2020 onwards when many of the EU Member States put in place restrictions concerning socialising indoors. Sales across the EU fell 33.9 % in 2020 (compared with the year before), while there was a partial recovery in 2021 (growth of 16.2 %). The downturn in activity in 2020 was particularly pronounced in southern Member States: Greece, Spain and Malta reported turnover falling in the range of 41.7–46.7 %, while the only other Member States to record a contraction in sales that was larger than the EU average were Italy, Croatia, Cyprus and Portugal.

Sales for F&B serving activities rose in most of the EU Member States in 2021 (as many restrictions linked to the pandemic were gradually eased). The highest sales growth was recorded in Romania (up 57.4 %), followed by Croatia, Spain and Bulgaria (where growth was within the range of 30.3–34.4 %). At the other end of the range, turnover was more or less unchanged in Germany and continued to fall in Austria, Latvia and Slovakia.

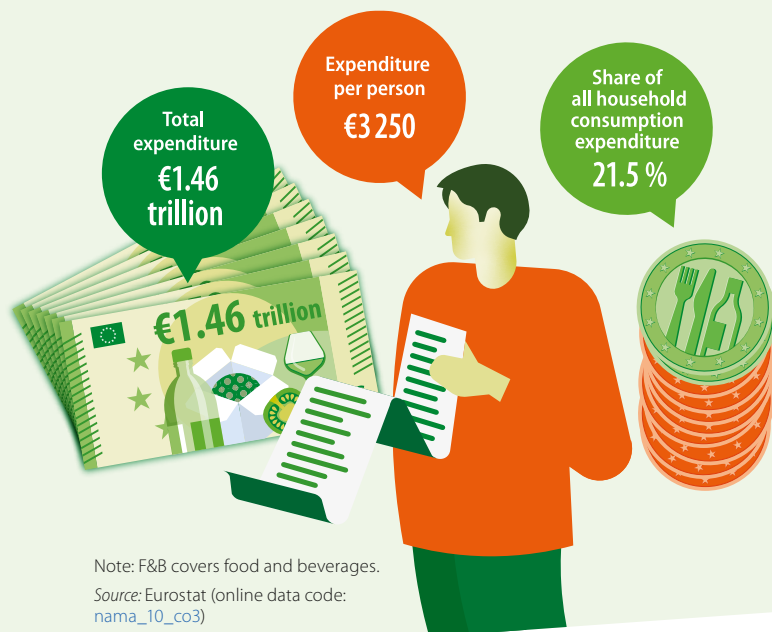
There were marked differences between EU Member States in terms of how their F&B serving activities recovered from the impact of the COVID-19 crisis. Of the 26 Member States for which data are available (no information for Ireland), there were only three that had a higher level of turnover in 2021 than had been the case prior to the pandemic in 2019; Bulgaria, Poland and Romania. By contrast, there were four Member States where turnover remained at least 30 % lower than it had been in 2019: Germany, Latvia, Austria and Malta.

9

Human consumption of food and beverages



Consumption



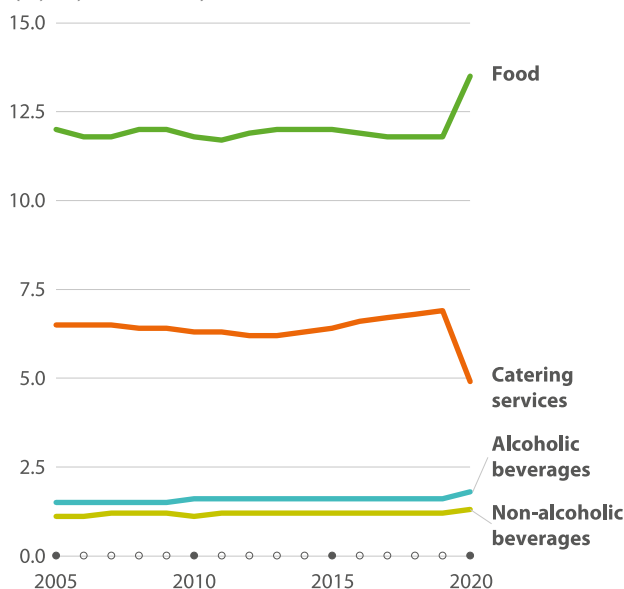
Annual household consumption expenditure on F&B and catering services

(EU, 2020)

Food and beverages (F&B) are recurrent **expenditure** items for all households. There is a wide variety of these products available to EU citizens, whether on a retail basis or provided as a service (referred to as catering in this chapter). Purchases often reflect local, regional and national cuisine and may play a role in cultural identity.

Share of total household consumption expenditure

(%, EU, 2005–2020)



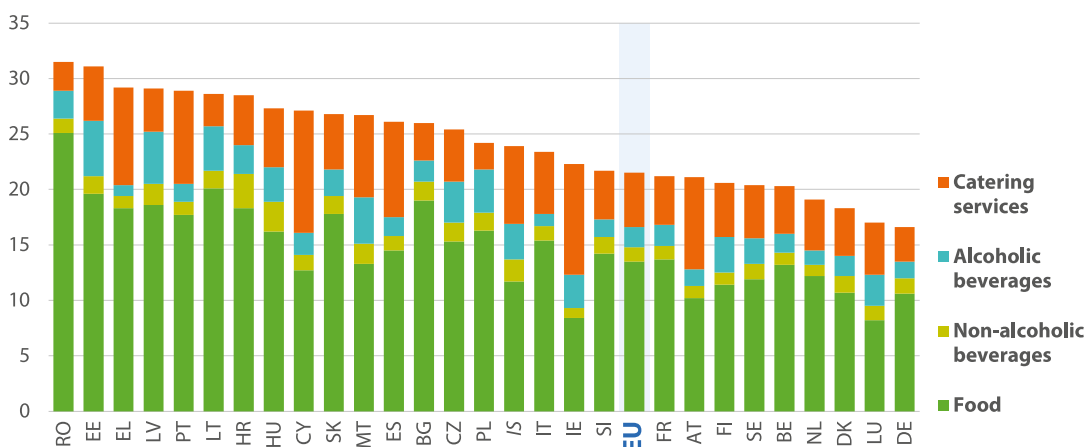
Source: Eurostat (online data code: nama_10_co3)

In the EU, final consumption expenditure of households on F&B and catering services was valued at €1.46 trillion in 2020, equivalent to €3 250 per person. These latest figures marked a 7.6 % fall in household expenditure compared with 2019.

Expenditure on F&B and catering services accounted for 21.5 % of EU household consumption expenditure in 2020: 13.5 % was on food, 4.9 % on catering services, 1.8 % on alcoholic beverages and 1.3 % on non-alcoholic beverages. Although the share of F&B and catering services in total household consumption remained almost unchanged between 2019 and 2020, there was a major shift in the composition of expenditure which can largely be linked to the COVID-19 pandemic: spending on catering services was substituted by expenditure on food and beverages. Cyprus was alone insofar as its relative share of catering services in total household consumption expenditure rose in 2020. By contrast, the biggest contractions were recorded in Greece, Spain and Malta, as the share of catering services in total household consumption fell 4.4–5.6 percentage points.

Share of total household consumption expenditure

(%, 2020)



Note: MT, tobacco and narcotics included in alcoholic beverages.

Source: Eurostat (online data code: [nama_10_co3](#))

There is considerable variation between the EU Member States as concerns the proportion of household expenditure used for F&B and catering services. The lowest shares in 2020 were in Germany (16.6 %) and Luxembourg (17.0 %) and the highest were in Estonia (31.1 %) and Romania (31.5 %).

In all but one of the EU Member States, food was the largest item of F&B and catering services expenditure. In 2020, the only exception was Ireland, where more was spent on catering services. Catering services were generally the second largest expenditure item (despite the impact of the COVID-19 crisis), although in the Baltic Member States and Poland expenditure on alcoholic beverages was higher. Greece, Italy and Croatia were the only Member States where more was spent on non-alcoholic than on alcoholic beverages.

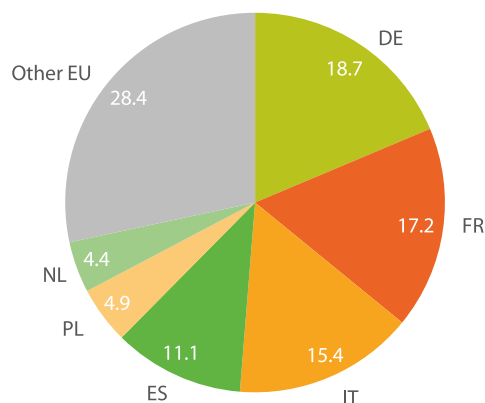
Share of EU household consumption expenditure on F&B and catering services

(%, 2020)

In 2020, Germany had an 18.7 % share of the EU's total household consumption expenditure on F&B and catering services. This was the highest share in the EU and comparable with Germany's share of the EU population (18.6 % in 2020). France, Italy and Spain all recorded higher shares of the EU's household consumption expenditure on these items than their shares of the EU population.

Note: MT, tobacco and narcotics included in alcoholic beverages. Due to rounding, the shares do not sum to 100.0 %.

Source: Eurostat (online data code: [nama_10_co3](#))

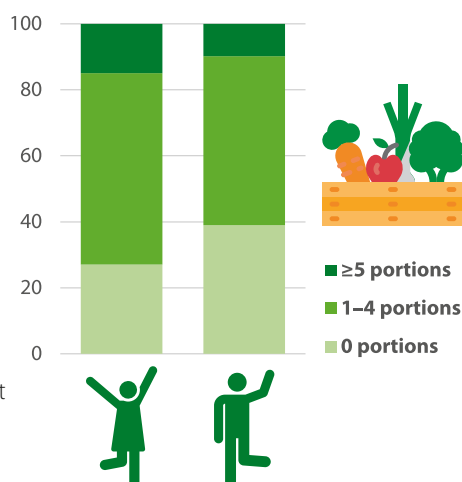


Daily consumption of fruit and vegetables

(%, EU, persons aged 15 years and over, 2019)

Fruit and vegetables are considered important elements of a healthy, balanced diet; among other benefits they provide vitamins, minerals and fibre. Studies have shown that a high intake of fruit and vegetables ('five a day') is associated with a lower risk of chronic disease, such as certain cancers or cardiovascular disease.

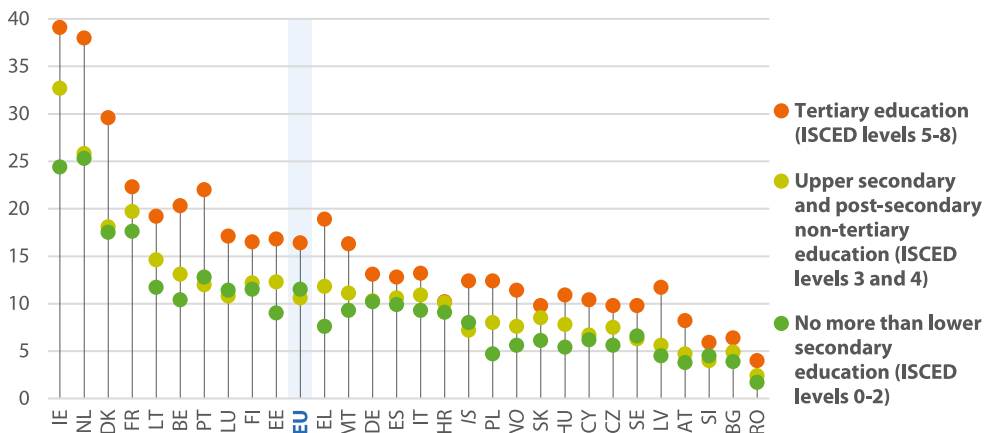
Across the EU, just 9.8 % of all males (aged 15 years and over) ate a daily average of at least five portions of fruit and vegetables in 2019; the share for females (of the same age) was notably higher, at 14.9 %. A majority of males and females consumed a daily average of 1–4 portions of fruit and vegetables, while almost two fifths of all males and slightly more than one quarter of all females did not eat fruit or vegetables regularly. Greece was the only EU Member State where a higher share of males (compared with females) ate a daily average of at least five portions of fruit and vegetables.



Source: Eurostat (online data code: [hlth_ehis_fv3e](#))

Share of the population aged 15 years and over consuming at least five portions of fruit and vegetables each day, by educational attainment

(%, 2019)



In 2019, around one sixth (16.4 %) of all people in the EU (aged 15 years and over) with a tertiary level of educational attainment ate a daily average of at least five portions of fruit and vegetables in 2019. Lower shares were recorded among those no more than lower secondary education (11.5 %) and those with an upper secondary or post-secondary non-tertiary education (10.6 %). The pattern of more highly educated people being more likely than the average (for the whole population) to eat a daily average of at least five portions of fruit and vegetables was observed in each of the EU Member States; the gap to the average was particularly large in the Netherlands, Portugal, Denmark, Greece and Ireland.

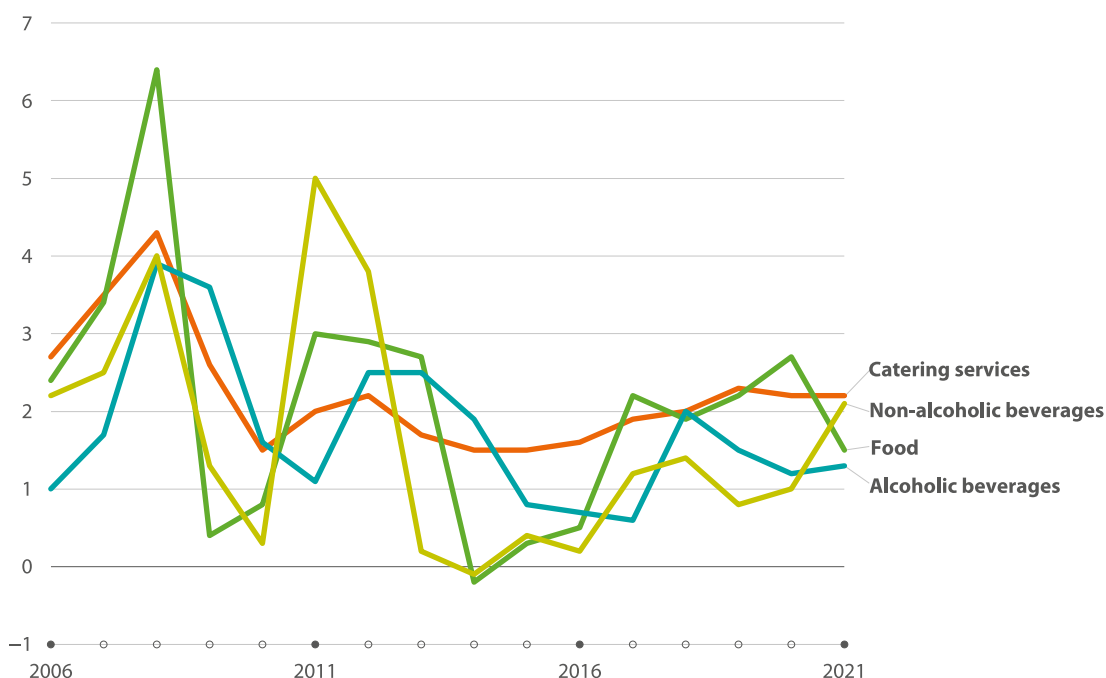
Note: ranked on the share for the whole population aged 15 years and over.

Source: Eurostat (online data code: [hlth_ehis_fv3e](#))

Consumer prices

Annual rate of change of consumer prices

(%, EU, 2006–2021)



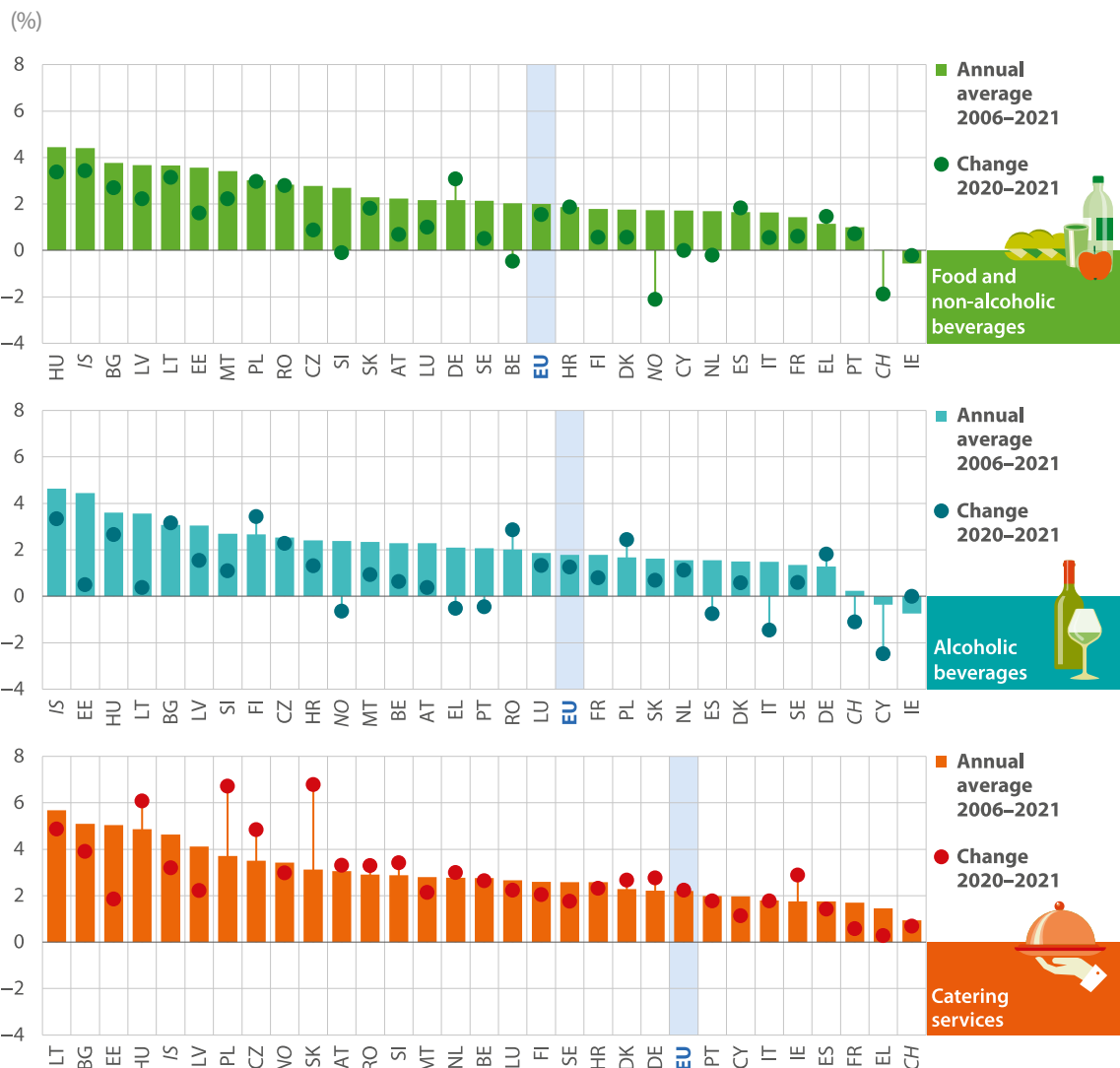
Source: Eurostat (online data code: [prc_hicp_aind](#))



Prices are a key consideration for many consumers when deciding what to eat and drink; they can also impact on the choice made in relation to more sustainable and healthy diets.

Between 2006 and 2021, [consumer prices](#) in the EU increased 27.5 %. Consumer price increases for F&B and catering services were of a similar magnitude or higher, increasing 26.8 % for non-alcoholic beverages, 30.3 % for alcoholic beverages, 35.3 % for food, and 38.6 % for catering services.

Long-term and recent changes in consumer prices



Note: ranked on the annual average rate of change for 2006–2021.

Source: Eurostat (online data code: [prc_hicp_aind](#))

EU consumer prices for alcoholic beverages rose, on average, 1.8 % per year between 2006 and 2021. The price of food and non-alcoholic beverages and the price of catering services rose at a slightly faster pace, averaging 2.0 % per year and 2.2 % per year, respectively.

In 2021, consumer prices for alcoholic beverages rose 1.3 % (compared with the year before); as such, they

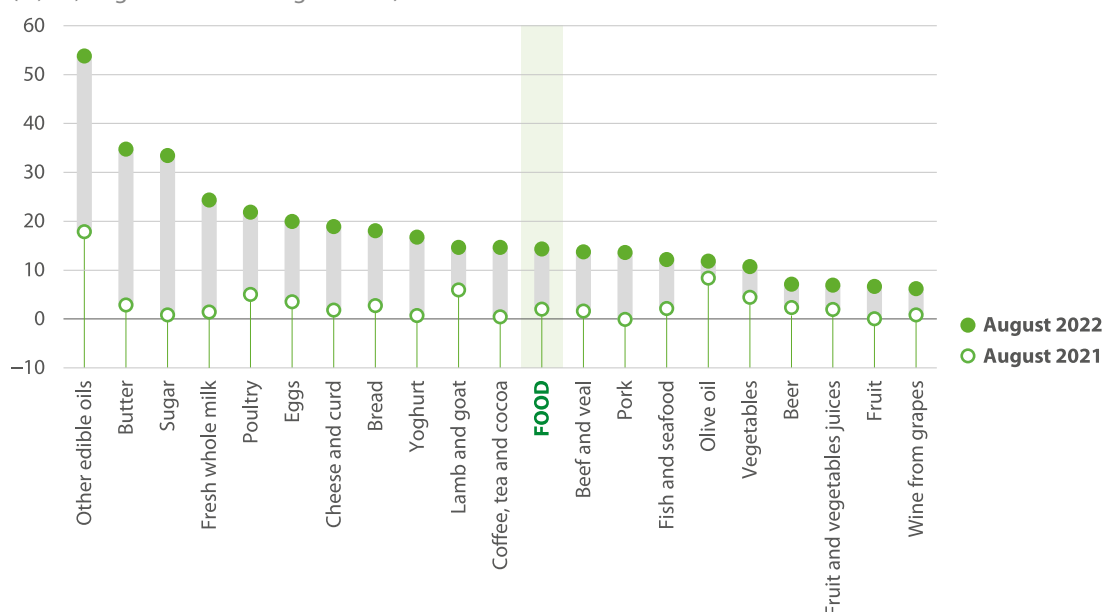
were rising at a slower pace than their long-term development during the period 2006–2021. This pattern was repeated for food and non-alcoholic beverages, where the latest annual rate of increase was 1.6 %. The annual change in consumer prices of catering services in 2021 was identical to the long-term development, up 2.2 %.

The highest annual price increases for food and non-alcoholic beverages – at least 3.0 % in 2021 – were recorded in Hungary, Lithuania, Germany and Poland. By contrast, the price of food and non-alcoholic beverages fell moderately in Slovenia, the Netherlands, Ireland and Belgium. The highest annual price increases for alcoholic beverages were recorded in Finland (3.4 %) and Bulgaria (3.2 %); consumer

prices for these items fell in five southern EU Member States, most notably Cyprus (down 2.5 %). The highest price increases for catering services were recorded in Hungary, Poland and Slovakia – increases in the range of 6.1–6.8 % in 2021. The latest price increases for these three Member States were considerably higher than their long-term averages, which was also the case in Czechia and Ireland.

Annual change in consumer prices of selected food and beverage products

(%, EU, August 2021 and August 2022)



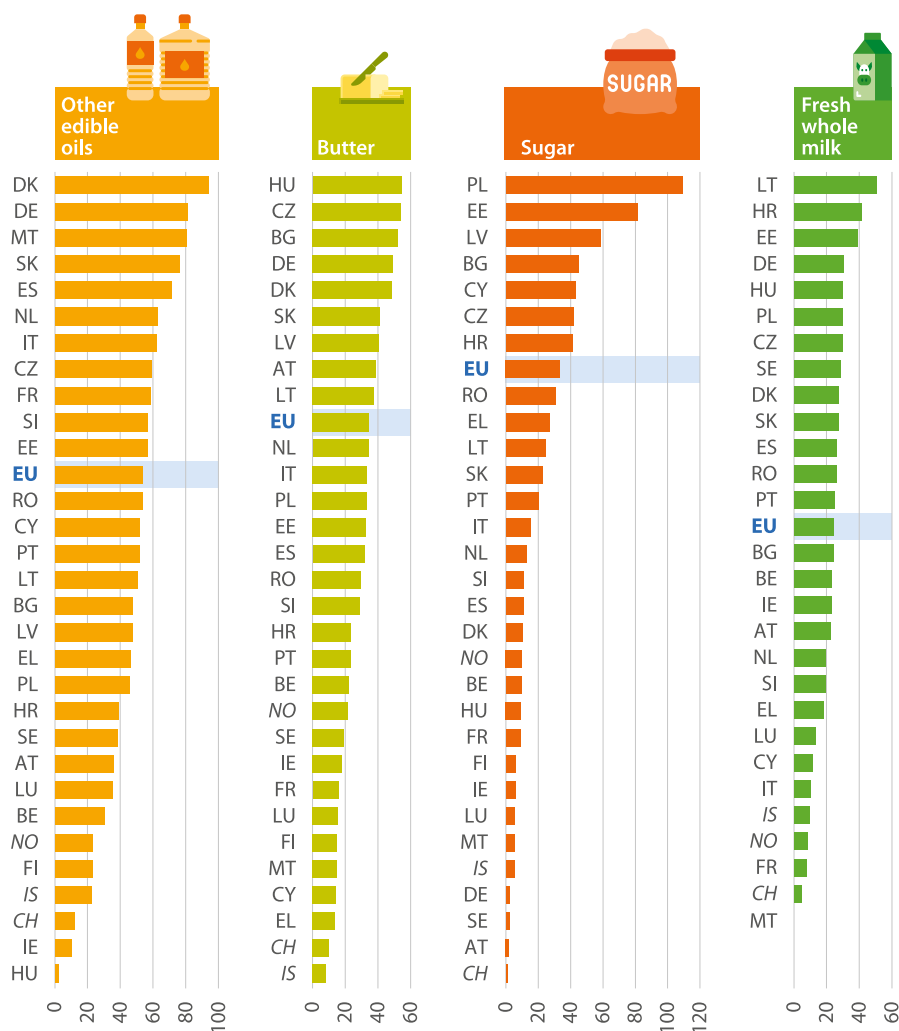
Source: Eurostat (online data code: [prc_fsc_idx](#))

Global food prices initially started to rise in the middle of 2020 as the impact of the COVID-19 pandemic led to pressure on supply chains. The rising cost of energy and fertilisers – major components of intermediate consumption for some farmers – has also put pressure on food prices, as has the rising cost of energy for food transporters/distributors. The war in Ukraine is another reason that may explain, at least in part, rising food prices in the EU, especially when it has led to a reduction in the supply of goods to EU markets, for example cereals and fertilisers.

Having increased 2.0 % during the 12-month period to August 2021, there was a period of rapid price acceleration for food products in the EU; prices rose at an annual rate of 14.3 % in August 2022. Much higher price increases were recorded for selected food products – in particular some oils and fats: for example, the price of other edible oils and of butter rose 53.8 % and 34.7 % respectively during the 12 months to August 2022. The price of sugar rose 33.4 %, while there were also very large price increases for a number of other food staples, including fresh whole milk, poultry, eggs, cheese and bread.

Annual change in consumer prices of selected food products

(%, August 2021–August 2022)

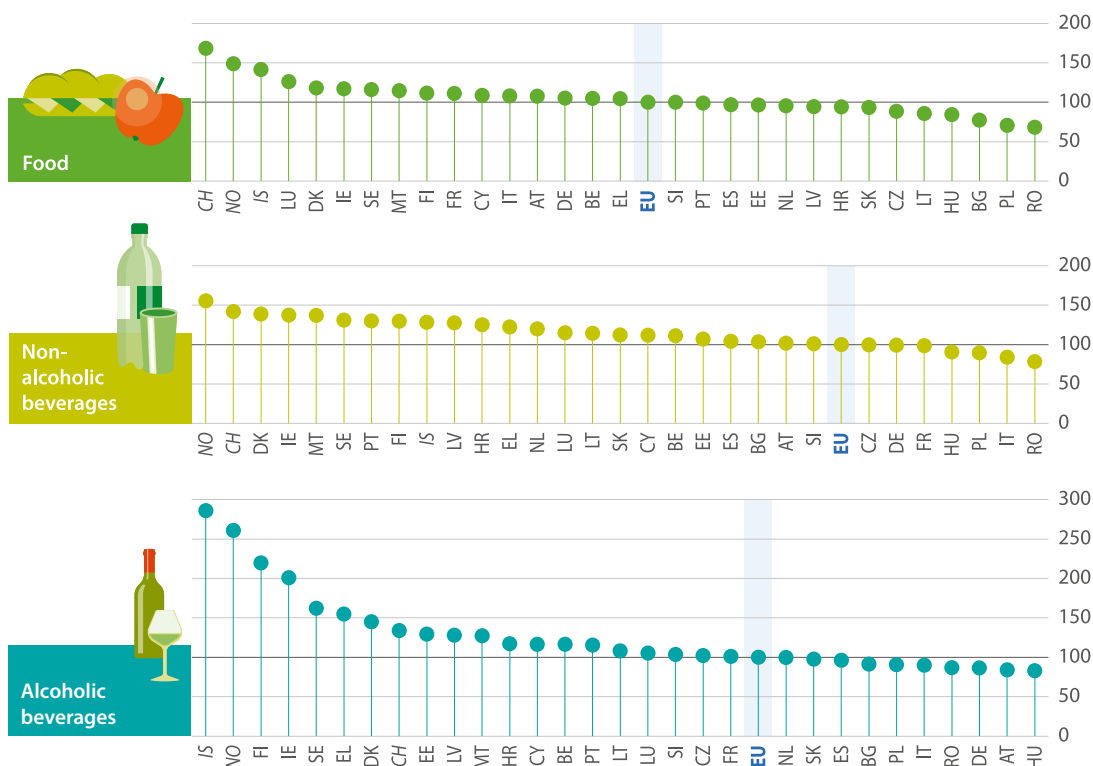


During the 12-month period to August 2022, the highest consumer price increases among food products in the EU were recorded for other edible oils, butter, sugar and fresh whole milk. The price of sugar in Poland more than doubled during this period, while price increases in Denmark were almost as high for other edible oils (up 94.0 %).

In August 2022, annual changes in consumer prices were rising at a faster pace than the EU average for all four of these selected food products in Czechia. In a similar vein, prices were rising at a faster pace than the EU average for three out of the four selected food products in Denmark, Estonia, Germany and Slovakia. None of the EU Member States recorded a fall in the price of any of these four food products during the 12-month period to August 2022.

Price level comparisons

(EU = 100, 2021)



Source: Eurostat (online data code: [prc_ppp_ind](#))

Despite considerable differences in the developments of consumer prices over the last 15 years, a geographic pattern can still be observed in [price levels](#) for food in 2021. Baltic, central and eastern EU Member States generally had price levels below the EU average, as did the Netherlands, Spain and Portugal. The Nordic and remaining western and southern Member States had above average food prices. In Romania, food prices were 68.2 % of the EU average whereas in Luxembourg they were 126.4 % of the EU average.

For non-alcoholic beverages, only seven EU Member States had price levels below the EU average in 2021. Five of the six most populous Member States had below average prices (Romania, Italy, Poland, France

and Germany), while the other (Spain) had a price level that was 4.0 % above the EU average. Price levels for non-alcoholic beverages ranged from 78.4 % of the EU average in Romania to 138.5 % in Denmark.

A similar situation was observed for alcoholic beverages, with five of the six most populous EU Member States among the 10 Member States where prices were below the EU average; France had a price level for alcoholic beverages that was just above the EU average. Price levels for alcoholic beverages ranged from 82.9 % of the EU average in Hungary to 200.8 % in Ireland and 219.4 % in Finland. This large range may in part reflect differences in the taxation of alcoholic beverages.

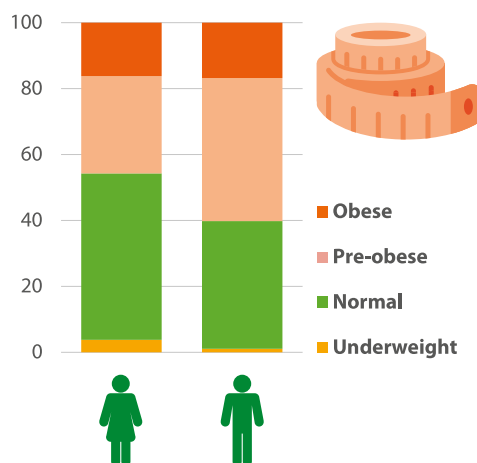
Body mass index

Share of the adult population aged 18 years and over, by body mass index and sex

(%, EU, 2019)

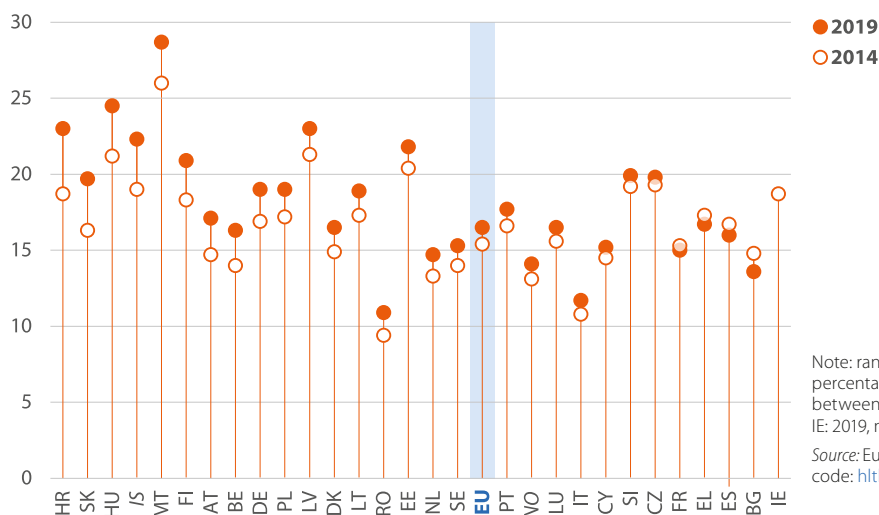
The body mass index (BMI) is defined as someone's weight (in kilograms) divided by their height (in metres) squared. Adults (aged 18 years and over) are considered underweight with a BMI less than 18.5, of normal weight with a BMI from 18.5 to less than 25, pre-obese with a BMI from 25 to less than 30, and obese with a BMI equal to or greater than 30.

In 2019, a higher proportion of women (3.8 %) in the EU were considered underweight, compared with 1.0 % of men. At the other end of the scale, almost half (45.8 %) of all women were considered overweight (either pre-obese or obese), compared with three fifths (60.2 %) of men. Breaking down these figures, there was little difference between the sexes in relation to the share of people considered obese; 16.3 % for women and 16.8 % for men. The share of obese people in the EU's adult population (men and women combined) tends to increase as a function of age: in 2019, a peak of 22.2 % was recorded among those aged 55–64 years, with slightly lower shares for older age groups.



Share of the adult population aged 18 years and over who were obese

(%, 2014 and 2019)



Between 2014 and 2019 the share of the EU's adult population who were considered obese rose from 15.4 % to 16.5 %. This pattern – a growing share of obese people – was repeated in 22 of the EU Member States (no data for Ireland), with the largest increases

in Croatia (up 4.3 percentage points), Slovakia (up 3.4 points) and Hungary (up 3.3 points). France, Greece, Spain and Bulgaria were the only Member States to record a fall in their proportion of obese people during this period.

Share of the adult population aged 18 years and over who were underweight/obese, by income level

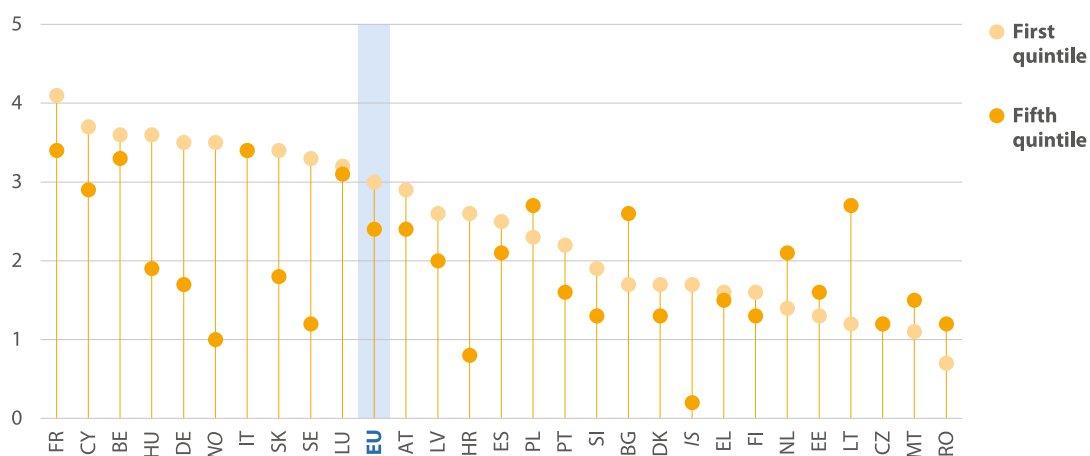
(%, 2019)

Underweight people are at greater risk, among other conditions, of malnutrition, decreased muscle strength, osteoporosis or lowered immunity, while overweight people have an increased risk, among other conditions, of high blood pressure, coronary heart disease, type 2 diabetes or stroke; people with either condition are more likely to die at a younger age.

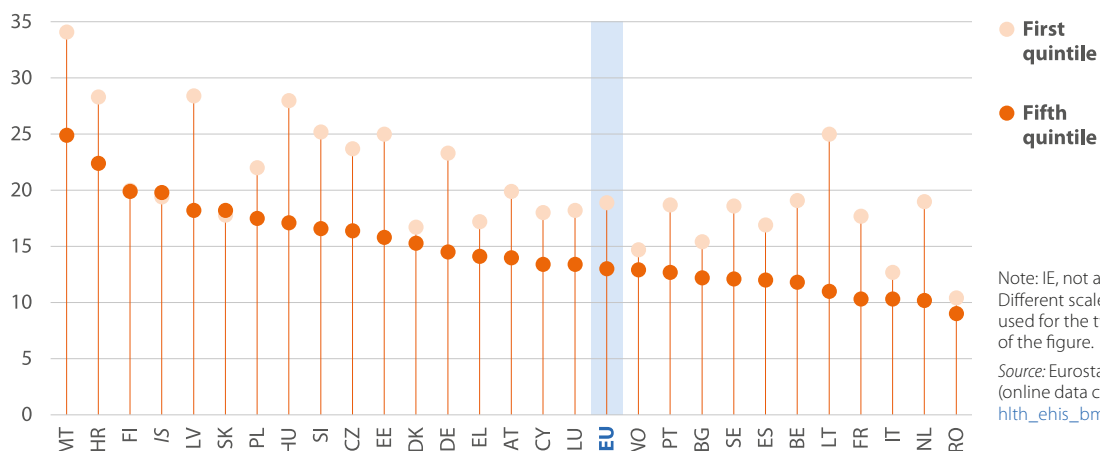
Among others, various cultural, social, educational and economic factors influence eating habits. Disadvantaged groups face a number of barriers

when trying to access safe, sufficient and nutritious food. The prevalence of obesity varies by income and educational level: in 2019, some 18.9 % of the EU's adult population in the first income quintile (the 20 % of the population with the lowest incomes) were obese, compared with 13.0 % for the fifth quintile (the 20 % of the population with the highest incomes). Conversely, the share of underweight people in the EU was also higher among adults in the first income quintile (3.0 %) than it was for adults in the fifth quintile (2.4 %).

Underweight



Obese



Note: IE, not available. Different scales are used for the two parts of the figure.

Source: Eurostat (online data code: [hlth_ehis_bm1i](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&code=hlth_ehis_bm1i))

Food poverty

Food poverty

(%, 2021)

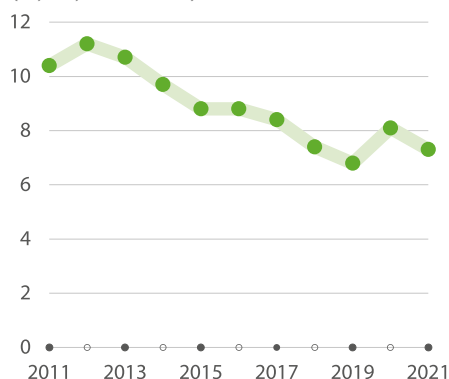
More than one quarter (22.4 %) of all people in Bulgaria experienced this measure of food poverty in 2021, with the next highest share in Romania (19.2 %); Hungary, Slovakia (2020 data), Greece and Germany also recorded double-digit shares. By contrast, 0.4 % of people in Cyprus were unable to afford a meal with meat, chicken, fish, or a vegetarian equivalent every second day.

Note: SK, NO and CH, 2020. IS: 2018.

Source: Eurostat (online data code: [ilc_mdcs03](#))

Developments of food poverty

(%, EU, 2011–2021)



Note: inability to afford a meal with meat, chicken, fish or a vegetarian equivalent every second day.

Source: Eurostat (online data code: [ilc_mdcs03](#))

The share of people in the EU unable to afford a meal with meat, chicken, fish, or a vegetarian equivalent every second day climbed to 8.1 % in 2020, reflecting, at least in part, the impact of the COVID-19 crisis. However, it subsequently fell in 2021, when about 1 in every 14 people (7.3 %) within the EU experienced this form of food poverty.

Food poverty among people aged 16 years or over

(%, EU, 2021)



When evaluated by age (for those aged 16 years or over), the share of people in the EU unable to afford a meal with meat, chicken, fish, or a vegetarian equivalent every second day was noticeably higher among younger and older people – those aged 16–24 years (7.9 %) and those aged 55 years and over (7.7 %). Between these ages, a lower proportion of people experienced this measure of food poverty: 6.5 % for people aged 25–34 years, 5.8 % for people aged 35–44 years and 7.1 % for people aged 45–54 years.

Across the EU, some 7.4 % of all women aged 16 years and over were unable to afford a meal with meat, chicken, fish, or a vegetarian equivalent every second day in 2021. This was somewhat higher than the share recorded for men within the same age group (6.9 %).

Source: Eurostat (online data code: [hlth_dm030](#))

10

Agriculture and food: environment



Fertilisers and pesticides

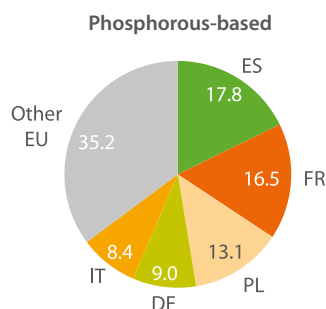
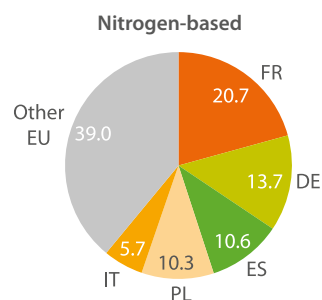
Share of Member States in EU consumption of inorganic fertilisers

(% based on tonnes, 2020)

Inorganic and organic fertilisers are widely used in agriculture to optimise production. Excessive use of inorganic fertilisers may lead to environmental pollution. Around 10 million tonnes of nitrogen-based fertilisers were applied to agricultural land in the EU in 2020 as well as around 1.2 million tonnes of phosphorous-based fertilisers. France had the largest consumption of nitrogen-based fertilisers in 2020 (20.7 % of the EU total), while Spain had the largest use of phosphorous-based fertilisers (17.8 %)

Note: EU total (used to calculate the shares) includes earlier reference periods for some EU Member States. CY and MT: 2019. BE: 2018.

Source: Eurostat (online data code: [aei_fm_usefert](#))

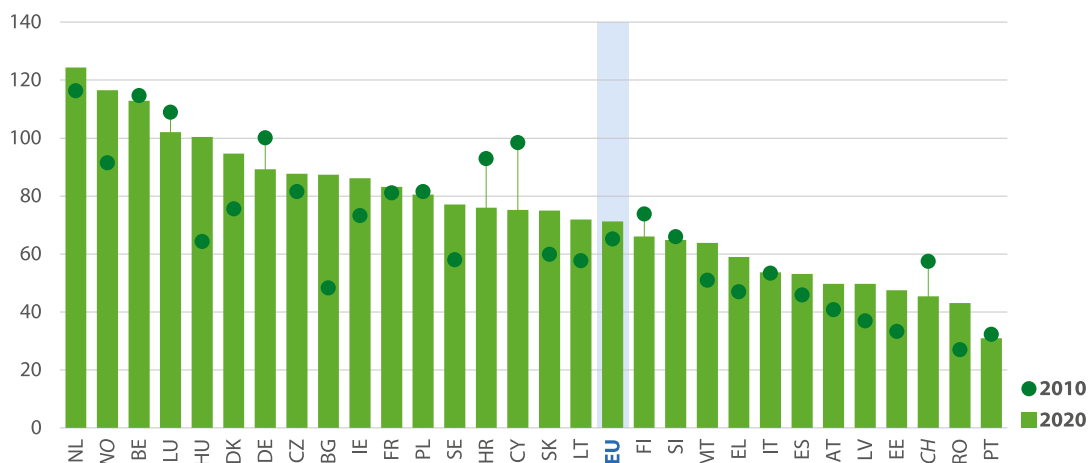


Consumption of inorganic fertilisers

(kg per hectare of UAA, 2010 and 2020)

A standardised measure of the extent of the use of fertilisers can be calculated relative to the utilised agricultural area. In 2020, 71 kilograms of inorganic fertilisers were used per hectare in the EU. The Netherlands had the highest use, 124 kilograms per hectare, while Belgium, Luxembourg and Hungary also used more than 100 kilograms per hectare. In Austria, Latvia, Estonia, Romania and Portugal, inorganic fertiliser consumption was below 50 kilograms per hectare.

Between 2010 and 2020, the use of inorganic fertilisers relative to the utilised agricultural area in the EU increased by 9.4 %. Most EU Member States reported an increase in this ratio, with growth of more than 50.0 % in Bulgaria, Romania and Hungary. The largest decrease was recorded for Cyprus (down 23.6 %).

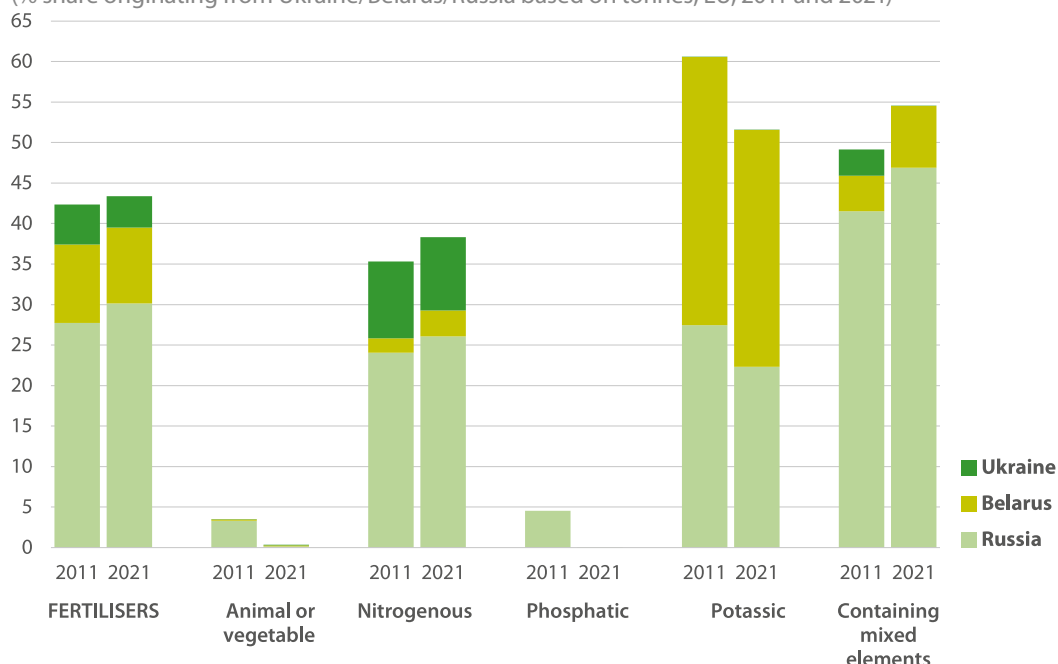


Note: EU total for inorganic fertilisers includes earlier reference periods for some EU Member States. CY and MT: 2019 for inorganic fertilisers. BE: 2018 for inorganic fertilisers.

Source: Eurostat (online data codes: [aei_fm_usefert](#) and [ef_m_farmleg](#))

Extra-EU imports of fertilisers

(% share originating from Ukraine/Belarus/Russia based on tonnes, EU, 2011 and 2021)



Fertilisers (organic and inorganic) imported into the EU in 2021 were valued at €6.1 billion, equivalent to 0.29 % of the value of all imported goods. In quantity terms, more than two fifths (42.7 %) of imported fertilisers were nitrogen-based, nearly one third (31.4 %) contained mixed elements and nearly one fifth (19.1 %) were potassium-based; there were relatively small shares of phosphorous-based fertilizers (3.7 %) and organic (animal and vegetable) fertilisers (0.7 %).

Note: Belarus and Ukraine, phosphatic, not available.

Source: Eurostat (online data codes: [DS-045409](#))

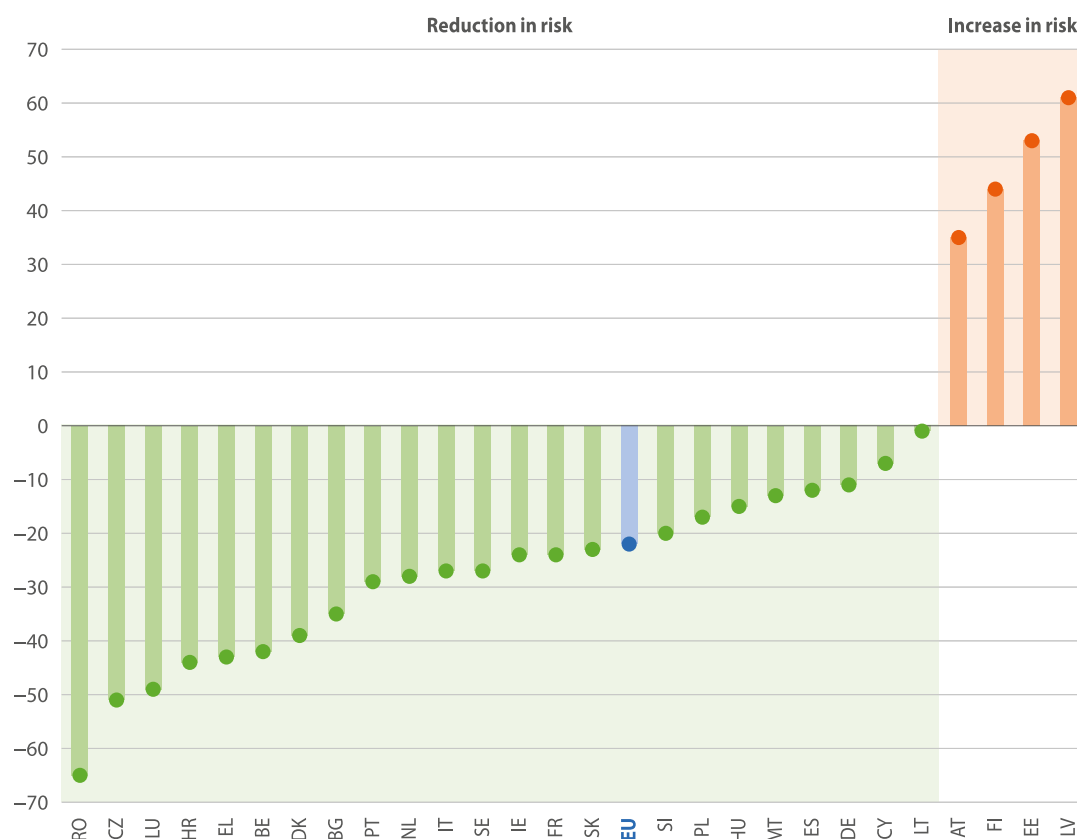
One of the concerns related to the Russian military aggression against Ukraine is the impact on the price and availability of fertilisers. In 2021, Russia was the country of origin for 30.1 % of all fertilisers imported by the EU, with large shares for mixed element fertilisers (46.9 %) as well as nitrogen-based (26.1 %) and potassium-based (22.3 %) fertilisers. Belarus, which is also subject to sanctions from the EU, provided 9.4 % of the EU's imports of fertilisers in 2021, with a large share for potassium-based fertilisers (29.2 %). Ukraine's contribution to all fertilisers imported into the EU in 2021 was 3.9 %, with a 9.0 % share for nitrogen-based fertilisers.

Between 2011 and 2021, Russia and Belarus' combined share of the EU's imports of fertilisers increased, up from 37.4 % to 39.5 %. This reflected increased shares for the two largest types of fertilisers, nitrogen-based and mixed element fertilisers. Russia and Belarus' shares fell somewhat for potassium-based fertilisers and more strongly for phosphorous-based (data for Russia only) and organic fertilisers.



Overall change in the risk from pesticide use

(%, 2020 compared with average for 2011–2013)



The types of active substances used in pesticides are changing and so the quantity of sales alone is not indicative of the potential hazards associated with the [use of pesticides](#). [Harmonised Risk indicator 1](#) includes estimates of the risk from pesticide use based on the active substances content.

The risk from pesticide use in the EU was 22 % lower in 2020 compared with an average for 2011–2013; note this indicator covers all sectors of the economy, not just sales to agriculture. During this period, the risk from pesticide use declined in a majority of EU Member States. The largest decrease was in Romania, down 65 %. The risk rose in Austria, Finland, Estonia and Latvia. Note that such increases may occur for countries starting from a baseline much lower than the EU average.

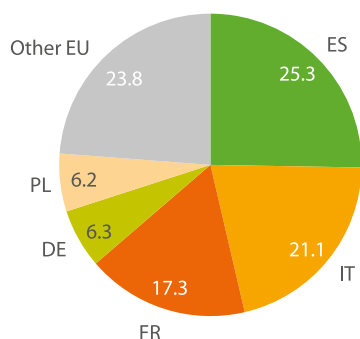
Note: more information on harmonised risk indicators is available from the European Commission's website.

Source: Eurostat (online data code: [aei_hri](#))

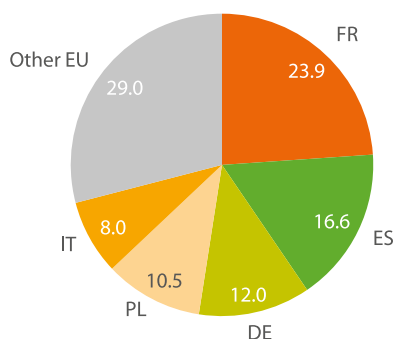
Share of Member States in EU pesticide sales

(%, 2020)

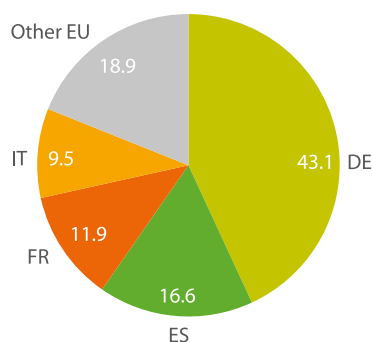
Fungicides and bactericides



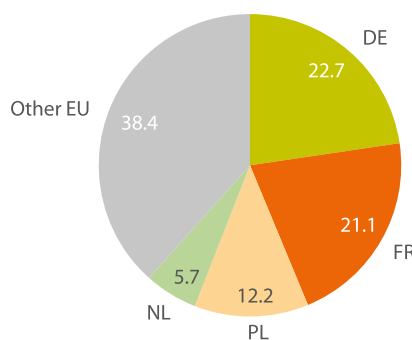
Herbicides, haulm destructors and moss killers



Insecticides and acaricides



Plant growth regulators

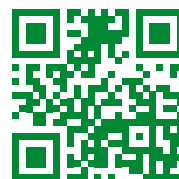


Note: EU total (used to calculate the shares) includes 2019 data for BE for fungicides and bactericides and exclude LU for fungicides and bactericides as well as for insecticides and acaricides. Due to rounding, not all shares sum to 100.0 %.

Source: Eurostat
(online data code: [aei_fm_salpest09](#))

Sales of pesticides in the EU were in excess of 350 000 tonnes in 2020, about 7 % less than in 2019.

The EU Member States making the greatest use of pesticides varied depending on the type: Germany used the most insecticides and acaricides as well as the most plant growth regulators, Spain the most fungicides and bactericides, and France the most herbicides.



For more and updated information on the consumption of pesticides, please refer to the Statistics Explained article.

Greenhouse gas emissions

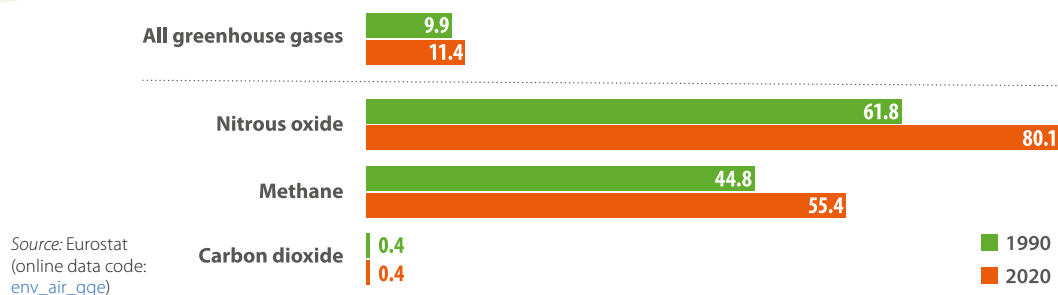
There are three principal greenhouse gases in relation to agricultural processes: carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). To be able to compare and combine the emissions of these different gases, each gas is expressed in tonnes of CO₂-equivalents (a unit based on the global warming potential of each gas relative to that of carbon dioxide; for example, methane is 25 times more potent as a greenhouse gas than carbon dioxide).

Share of agriculture in total greenhouse gas emissions

(% based on tonnes of CO₂ equivalents, EU, 1990 and 2020)

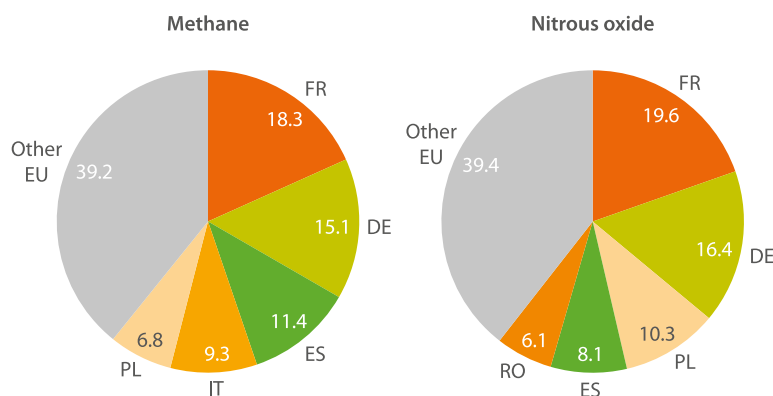
In 2020, agricultural processes in the EU produced 382 million tonnes of CO₂-equivalents of greenhouse gases. Although emissions from agriculture fell by 20.8 % between 1990 and 2020, agriculture's share of all greenhouse gas emissions increased from 9.9 % in 1990 to 11.4 % by 2020. Almost half of this overall decrease in the quantity of agricultural greenhouse gas emissions took place between 1990 and 1992 and the rest between 1992 and 2010. During the most recent decade for which data are available (2010–2020), there was an overall increase in agricultural emission levels of 1.5 %.

By far the largest greenhouse gas emissions from agriculture were methane and nitrous oxide. Agriculture was the largest source of emissions of these gases: in 2020, agriculture accounted for 55.4 % of methane emissions in the EU and 80.1 % of nitrous oxide emissions. Both of these shares increased during the last three decades.



Share of Member States in EU greenhouse gas emissions from agriculture

(% based on tonnes of CO₂ equivalents, 2020)



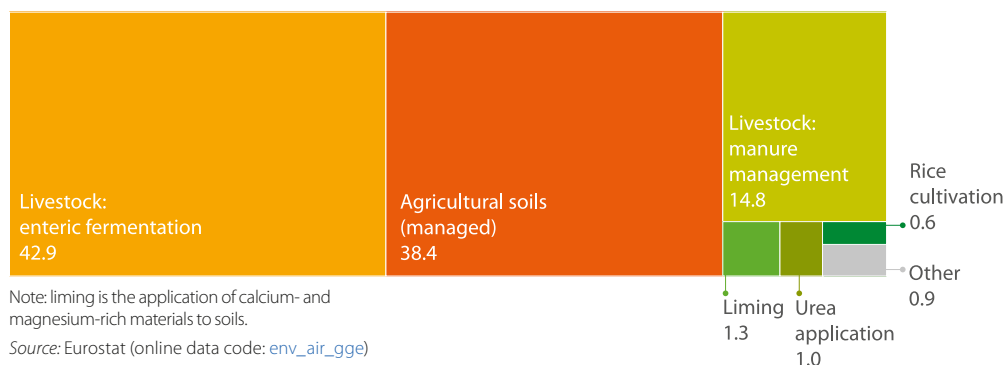
Among the EU Member States, France recorded the largest emissions of methane and nitrous oxide from agriculture (18.3 % and 19.6 % respectively of the EU total) in 2020, followed by Germany.

Note: due to rounding, the shares do not sum to 100 %.

Source: Eurostat (online data code: env_air_gge)

Structure of agricultural greenhouse gas emissions

(% based on tonnes of CO₂ equivalents, EU, 2020)



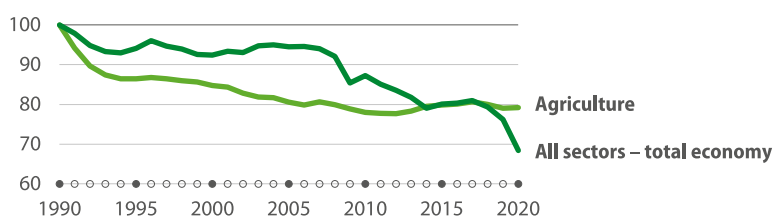
Enteric fermentation, in other words the fermentation of feed during the digestive processes of animals, is a source of methane emissions. Agricultural soils are a source of emissions of carbon dioxide, methane and nitrous oxide; they can also be a sink, storing greenhouse gases. Emissions from [manure](#) management are approximately two-thirds methane and one-third nitrous oxide.

Emissions from enteric fermentation made up more than two fifths (42.9 %) of all greenhouse gas emissions from agriculture in the EU in 2020, somewhat higher than the share (38.4 %) for managed agricultural soils; the third largest contributor to agricultural greenhouse gas emissions was manure management (14.8 %).

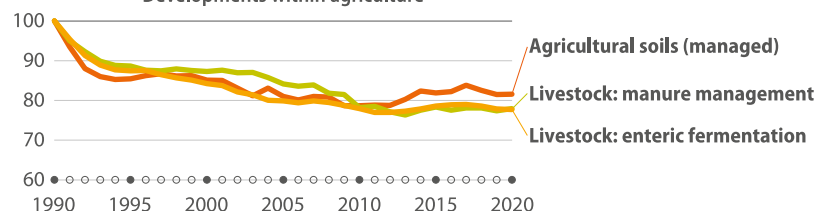
Developments in greenhouse gas emissions from agriculture

(1990 = 100, based on tonnes of CO₂ equivalents, EU, 1990–2020)

Developments for agriculture compared with the total economy



Developments within agriculture



The fall between 1990 and 2020 in EU greenhouse gas emissions from agriculture resulted from a decrease for each of the three main greenhouse gas emitting agricultural processes. Such emissions fell overall 18.5 % from managed agricultural soils, 22.0 % from manure management and 22.3 % from enteric fermentation.

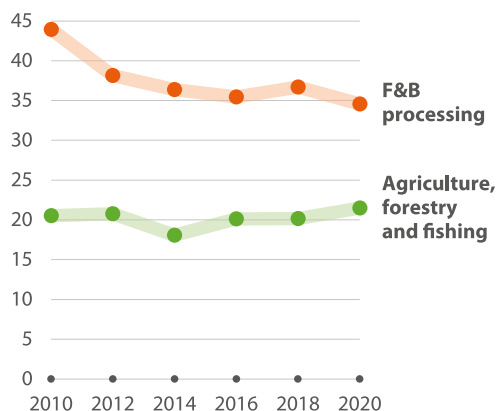


For more and updated information on greenhouse gas emissions, please refer to the [Statistics Explained](#) article.

Waste

Developments of waste generation

(million tonnes, EU, 2010–2020)



Note: F&B covers food, beverages and tobacco.

Source: Eurostat (online data code: [env_wasgen](#))

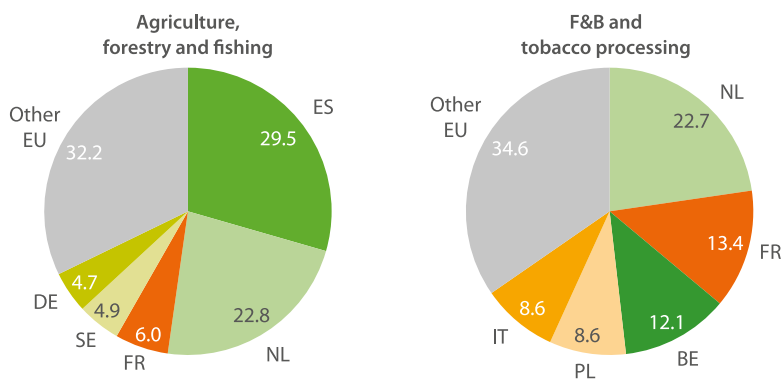
Reducing food loss and [waste](#) is an integral part of the [Farm to Fork Strategy action plan](#).

Agriculture, forestry and fishing as well as the processing of food, beverage and tobacco (hereafter referred to as F&B processing) generated 56.1 million tonnes of waste across the EU in 2020. Together these activities accounted for 2.9 % of all waste from productive activities.

EU waste generated by F&B processing fell by a little more than one fifth (down 21.4 % overall) between 2010 and 2020. The level of waste from agriculture, forestry and fishing was relatively stable, other than a short-lived contraction in 2014; it increased overall by 4.6 % between 2010 and 2020.

Share of Member States in EU waste generation from productive activities

(%, 2020)



Note: EU total (used to calculate the shares) includes 2018 data for IE. Due to rounding, not all shares sum to 100.0 %.

Source: Eurostat (online data code: [env_wasgen](#))

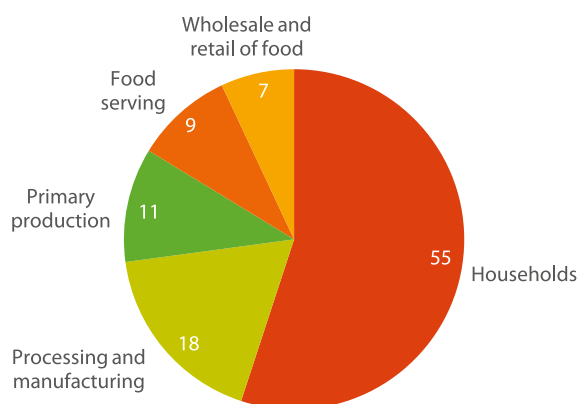
Among the EU Member States, Spain (29.5 %) and the Netherlands (22.8 %) were responsible for the largest shares of waste from agriculture, forestry and fishing in the EU in 2020, together accounting for more than half of the EU total. For F&B processing, the Netherlands was the largest waste producer (22.8 % of the EU total), followed by France (13.4 %) and Belgium (12.1 %).

Food waste

(%, EU, 2020)

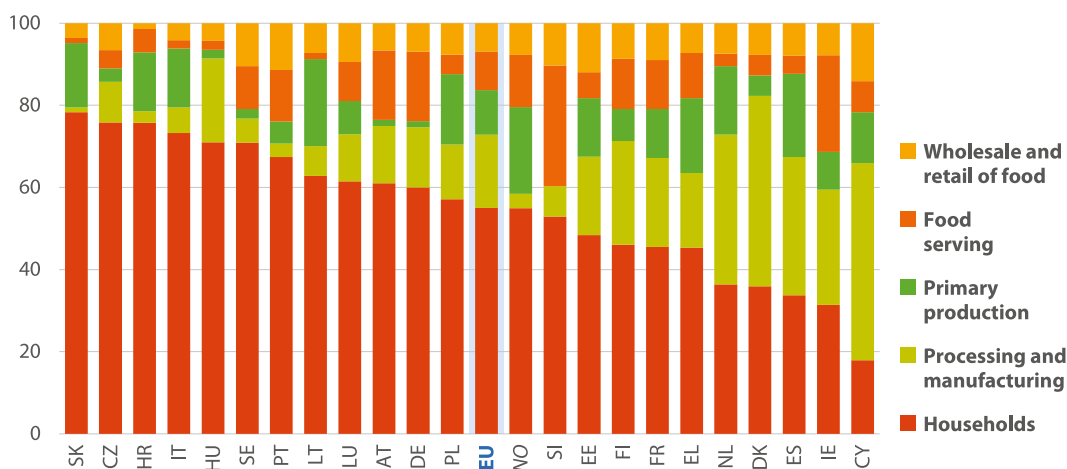
Focusing specifically on food waste, an average of 128 kilograms was collected per person within the EU in 2020. More than half (55 %) of this quantity was from households. The main productive activity from which food waste was collected was processing and manufacturing (18 %).

Source: Eurostat (online data code: [env_wasfw](#))



Food waste

(%, 2020)



The largest average amount of food waste collected in 2020 was in Cyprus, 397 kilograms per person, far ahead of the next highest quantity, 221 kilograms per person in Denmark. In 7 of the 22 EU Member States for which data are available, an average of less than 100 kilograms of food waste was collected per person in 2020, with the lowest quantities in Croatia (71 kilograms per person) and Slovenia (68 kilograms per person).

In a majority of EU Member States for which data are available, households accounted for more than half of all collected food waste in 2020. Households were the largest source of collected food waste in nearly all

Member States. Cyprus and Denmark were exceptions, in that the share of waste collected from processing and manufacturing activities was greater than that from households, while in the Netherlands and Spain the share from processing and manufacturing was the same as that from households. Among the other sources, the share of collected food waste from food serving was particularly high (29.4 %) in Slovenia.

Note: ranked on the share for households. BE, BG, LV, MT and RO, not available.

Source: Eurostat (online data code: [env_wasfw](#))

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The portal data.europa.eu provides access to open datasets from the EU institutions, bodies and agencies. These can be downloaded and reused for free, for both commercial and non-commercial purposes. The portal also provides access to a wealth of datasets from European countries.

Key figures on the European food chain

Key figures on the European food chain presents a selection of indicators concerning the food chain, from primary production in agriculture and fisheries through to consumption. Data are presented for the European Union (EU), its individual Member States and European Free Trade Agreement (EFTA) countries.

This publication may be viewed as an introduction to agriculture, fisheries and food chain statistics. It provides a starting point for those who wish to explore the wide range of data that are freely available on Eurostat's website at <https://ec.europa.eu/eurostat>, together with a range of online articles in *Statistics Explained*, some of which may be accessed through QR codes.

For more information

<https://ec.europa.eu/eurostat/>



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