

Agriculture, forestry and fishery statistics

2017 edition



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**Agriculture, forestry
and fishery statistics**

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Foreword

High quality agricultural statistics from Member States are important in helping to design and monitor agricultural policy in the European Union (EU). Agricultural statistics continue to be dynamic, responding to new policy requirements. The mid-term revision of the *Common Agricultural Policy (CAP) 2014-2020* will come into force in January 2018, leading to new needs for data.

Increasingly, agriculture, forestry and fishery statistics cross-link to data on the environment, on sustainability, on competitiveness and on the EU's regions. This reflects the part that agriculture plays in policies that guarantee European citizens healthy and quality food production, that preserve the environment and that help develop rural areas.



Eurostat's programme for the modernisation of agricultural statistics in the EU (*Strategy for Agricultural Statistics for 2020 and beyond*) was launched in 2016 and is progressing well.

The European Commission's legislative proposal for a *Regulation on Integrated Farm Statistics (IFS)* is an important step in providing relevant information for the implementation of the revised CAP, as well as in monitoring the upcoming Regulation on organic production and labelling of organic products.

The IFS Regulation will establish a flexible and modular framework, with a decennial *Agricultural Census* in line with the *UN Food and Agriculture Organization's programme for agricultural censuses* at its centre. Additional, regular sample data collections and ad-hoc collections will ensure continuity, whilst meeting data needs for specific topics as well as for new and emerging requirements.

This edition of *Agriculture, forestry and fishery statistics* provides an overview of EU statistics regarding the production of agricultural, fishery and forestry products, their prices, as well as data on relevant environmental features of agriculture.

I would like to draw particular attention to the special focus chapter on vineyards. It presents the structural data on vineyards. Based only on administrative data from the vineyard register, this is the first complete data collection from EU Member States that have planted vine areas over 500 hectares.

This publication can also be found online in Eurostat's Statistics Explained pages, and the most recent data can be freely downloaded from Eurostat's dissemination database.

Please enjoy reading the book.

Marcel Jortay

Director, Sectoral and Regional Statistics

Abstract

This *Agriculture, forestry and fishery statistics* statistical book provides a selection of topical data. Information is presented for the European Union (EU) and its Member States, and is supplemented (when available) with data for EFTA members and for the acceding and candidate countries to the EU. This publication aims to cover some of the most popular data within the domain of agriculture, forestry and fishery statistics. It may be viewed as an introduction to European statistics in this area and provides a starting point for those who wish to explore the wide range of data that is freely available on Eurostat website at: <http://ec.europa.eu/eurostat>

Eurostat is the statistical office of the EU, situated in Luxembourg. Its task is to provide the EU with statistics at a European level that enable comparisons between countries and regions. Eurostat's mission is to be the leading provider of high quality statistics on Europe.

ACKNOWLEDGEMENTS

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Data extraction period

The statistical data presented in this statistical book were extracted from October to November 2017. The accompanying text was drafted from October to December 2017.



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Introduction

The statistical book *'Agriculture, forestry and fishery statistics'* presents a selection of data on a wide range of agricultural, forestry and fishery topics for the European Union (EU-28 aggregates when available) and its Member States, as well as EFTA countries and the candidate countries. The data presented refer to the most recent reference years available at the time of preparing this publication, for the most part being either 2016 or 2015.

The official statistics in this publication are aimed at both specialists (including policymakers at EU and Member State level, enterprises, farms, producers' and consumers' associations, consultancy bodies and trade unions) and generalists who have an interest in the subject. Statistics are also required to support dialogue with the EU Member States and other partners.

The main objectives of the Common Agricultural Policy (CAP) are to ensure a decent standard of living for farmers, to provide a stable and safe food supply chain at affordable prices for consumers, and to ensure the development of rural areas throughout the EU. The implementation of the CAP 2014-2020 will be measured against a set of indicators that covers all policy areas and provides information at various levels.

The EU has no common forestry policy, Member States having their own national forestry policies. Nevertheless, an EU Forest Action Plan was adopted in 2006. In this regard, statistics are available to help examine the need to improve the long-term competitiveness of the EU's forest sector.

The EU's Common Fisheries Policy (CFP) sets catch limits, restricts the size of the fishing

fleet that sets to sea, and lays down technical measures such as those relating to fishing gear. In addition, the CFP aims to help producers get a fair price for their produce and to ensure that consumers can trust the seafood that they eat. A reform of the CFP in January 2014 focused on the environmental, economic and social sustainability of fishing. Statistics on fishing production, catches, landings and the fishing fleet are presented in this publication.

As the statistical authority of the Union, Eurostat works in partnership with the national statistical institutes (NSIs) and other national authorities in each Member State for the development, production and dissemination of European statistics. The partnership for agricultural statistics has been going since the early 1950s under umbrella of the European Agricultural Statistics System (EASS). More than 50 data sets are transmitted to the European Commission (Eurostat) by NSIs or other statistical authorities. Agricultural statistics support decision-making and policy design, implementation, monitoring and evaluation in areas related to agriculture, such as the CAP and climate change policies.

The agricultural statistics collected by Eurostat cover the following domains: farm structures; economic accounts for agriculture, agricultural prices and price indices; agricultural production (crop and animal production); organic farming; orchards and vineyards; and agriculture and environment. The data are collected from a variety of sources (micro-data collected at farm level, aggregated data, administrative sources etc.).



The 2017 edition of Agriculture, forestry and fishery statistics is divided into seven chapters:

- The first chapter, 'Vineyards in the EU', presents the structural statistics on vineyards. It is a tool for monitoring the market of wine and other grape-based products and is covered by [Regulation \(EU\) No 1337/2011](#) concerning European statistics on permanent crops. Data were collected for the first time in 2015, based on the data from the vineyard register and provided by all those Member States having at least 500 hectares of planted vines.
- Chapter 2, 'Farmers in the EU', focusses on the people working in agriculture. It presents various socio-economic characteristics of farmers, such as their age, gender and level of education. It also details different features of the work on farms. Finally, it concentrates on the rural areas – the areas where most farmers live.
- Chapter 3, 'Agricultural accounts and prices', covers the economic developments within the agricultural industry and presents data on output and input values, income indicators, as well as price trends.
- Chapter 4, 'Agricultural products', presents the most recent data on some of the most important EU agricultural products, first for crops (cereals, sugar beet, oilseeds, vegetables, fruit, grapes and olives), then for livestock and meat (livestock numbers and meat production) and lastly for milk (milk and milk products).
- Chapter 5, 'Agriculture and environment', provides a selection of indicators that focus on the interaction between agriculture and the environment. The 2017 edition shines

the spotlight on organic farming statistics (total organic area, potential for growth, crop types, organic livestock and fully organic farm holdings) and on the agri-environmental indicator 'Mineral fertiliser consumption', which represents partial nutrient inputs to the agricultural system.

The final two chapters take a look beyond agriculture and provide an overview of the state of the EU's forestry and fishery industries:

- Chapter 6, 'Forestry', provides data on the EU's forest area, forest ownership and timber resources, as well as economic and employment figures for the forestry sector;
- Chapter 7, 'Fisheries', gives a statistical overview of total fishery production, catches, aquaculture, landings of fishery products (product weight and value) and the EU's fishing fleet by number of vessels, total gross tonnage and engine power.

This publication presents only a relatively small proportion of the statistics that are collected on the agricultural, forestry and fishery industries. More detailed data as well as methodological information both for these topics and a much broader range of economic, social and environmental themes can be found on the Eurostat website at: <http://ec.europa.eu/eurostat>.

The Eurostat website offers free access to Eurostat's databases, predefined tables, methodological documents and publications, including this one which is available within the Statistics Explained section of the website.

1

Vineyards in the EU





Introduction

Structural statistics on vineyards are a tool for monitoring the market of wine and other grape-based products. The Commission needs information on the production potential of vineyards in order to ensure that the Common Agricultural Policy (CAP) is properly administered.

The CAP includes provisions for the wine sector. As of 2016, in the wine sector, the planting rights system was replaced by a dynamic planting-authorisation management mechanism. More information can be found on DG AGRI's site: *'The reforms of the EU wine market'*⁽¹⁾.

This chapter describes the vineyards in the European Union (EU) in 2015. It presents the area under vines, the number of wine-grower holdings as well as other indicators such as the

size class of the wine-grower holding, the main vine varieties and age of vines.

Only EU Member States having a minimum planted area of 500 hectares (ha) of vineyards are included in the data collection. This means that a total of 17 EU Member States are covered⁽²⁾ representing 99.97 % of total area under vines in the EU⁽³⁾. Holdings producing exclusively table grapes are excluded from this data collection.

The analysis over time (2009-2015) needs to take into account a major methodological change: previous data collections were based on a mixture of dedicated surveys and vineyard register data, while the 2015 data collection was based on data extracted only from the vineyard register.

(1) https://ec.europa.eu/agriculture/wine/reforms_en

(2) Belgium, Denmark, Estonia, Ireland, Latvia, Lithuania, Malta, the Netherlands, Poland, Finland and Sweden are below 500 ha of vineyards threshold criteria, and therefore are not included in the data collection.

(3) In 2010, following the latest agricultural census, there were only 1030 ha dedicated to wine-growing area in the eleven Member States which are below the threshold of 500 ha.



3.2 million hectares of vineyards in the EU

The total area under vines in the EU was 3.2 million ha in 2015. It represented 1.8 % of the total utilised agricultural area (UAA). The EU represented around 45 % of the world's total area under vines⁽⁴⁾.

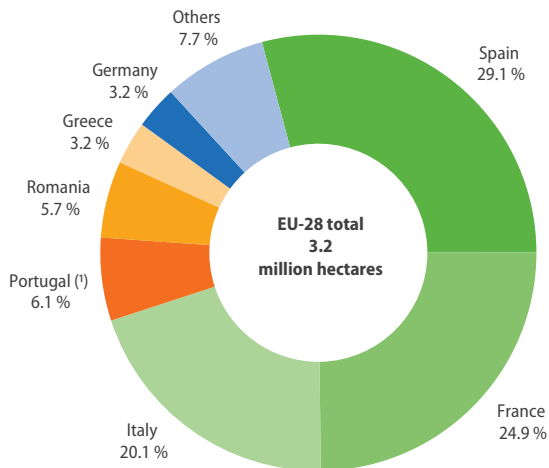
There were 17 large scale wine grower Member States. Three Member States — Spain, France and Italy — made up close to three quarters (74.1 %) of the EU area under vines (see Figure 1.1.1).

Portugal, Romania, Greece and Germany were the next largest producers with a total share of 18.2 %. Hungary, Bulgaria, Austria, Croatia, the Czech Republic, Slovenia and Slovakia followed. Cyprus, the United Kingdom and Luxembourg each had less than 8000 ha of area under vines (0.3 % of the total area under vines). Contrary to the previous data collection, in 2015 Malta was below the reporting threshold for structural vineyard data collection with 450 ha of vines.

(4) <http://www.fao.org/faostat/en/#data/QC>

Figure 1.1.1: Area under vines, 2015

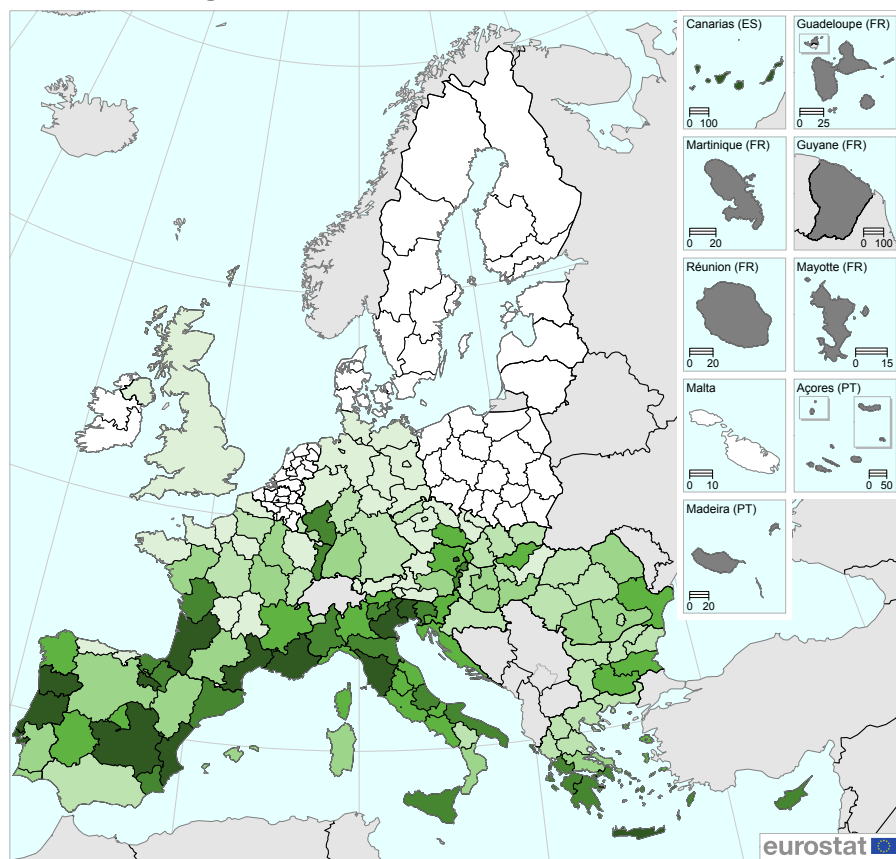
(%)



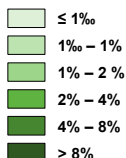
(1) Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

Source: Eurostat (online data code vit_t1)

Map 1.1.1: Area under vines, by NUTS 2 regions, 2015
(% of total utilised agricultural area)



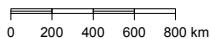
(% of total utilised agricultural area)



Data not available

EU Member States not included in the data collection

Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat - GISCO, 11/2017



Note: "Structural statistics on vineyards cover the EU Member States having a minimum planted area of 500 hectares (ha) of vineyards. Therefore Belgium, Denmark, Estonia, Ireland, Latvia, Lithuania, Malta, the Netherlands, Poland, Finland and Sweden are not included in the data collection."

Germany: NUTS level 1. Cyprus, Luxembourg and the United Kingdom: national data.

Source: Eurostat (online data codes: vit_t1 and agr_r_acs)



All the NUTS 2 regions with over 8 % of the utilised agricultural area under vines were located in the France, Spain, Portugal and Greece

with the exception of the German region of Rheinland-Pfalz (NUTS 1) and the Austrian region of Wien (see Map 1.1.1).

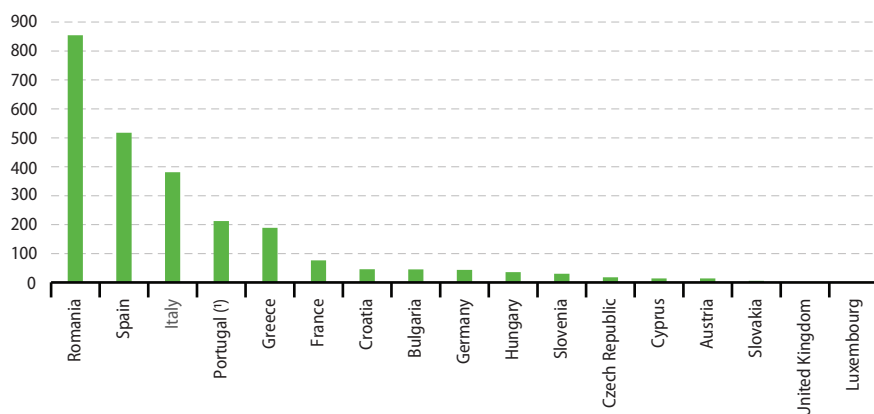
Table 1.1.1: Key variables on wine-grower holdings, 2015

	Area (ha)	Vineyard holdings (number)	Average area per holding (ha per holding)
EU-28	3 230 241	2 484 963	1.30
Belgium	–	–	–
Bulgaria	59 991	45 179	1.33
Czech Republic	17 689	18 216	0.97
Denmark	–	–	–
Germany	102 581	43 389	2.36
Estonia	–	–	–
Ireland	–	–	–
Greece	103 298	188 896	0.55
Spain	941 154	517 615	1.82
France	802 896	76 453	10.50
Croatia	20 393	46 068	0.44
Italy	650 690	381 141	1.71
Cyprus	7 781	14 202	0.55
Latvia	–	–	–
Lithuania	–	–	–
Luxembourg	1 295	326	3.97
Hungary	65 049	35 741	1.82
Malta	–	–	–
Netherlands	–	–	–
Austria	45 574	14 133	3.22
Poland	–	–	–
Portugal (1)	198 586	212 128	0.94
Romania	183 717	854 766	0.21
Slovenia	15 806	30 224	0.52
Slovakia	12 054	5 933	2.03
Finland	–	–	–
Sweden	–	–	–
United Kingdom	1 687	553	3.05

(1) In 2015, Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30); not included.

Source: Eurostat (online data code: vit_t1)

Figure 1.1.2: Wine-grower holdings, 2015
(thousands)



(¹) In 2015, Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

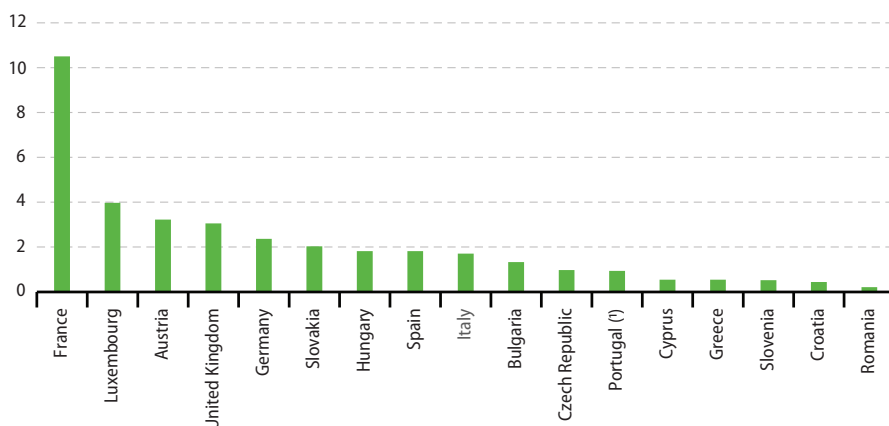
Source: Eurostat (online data code vit_t1)

2.5 million wine-grower holdings in the EU

2.5 million agricultural holdings were growing vines according to the 2015 data collection. More than one third (34.4 %, corresponding to 0.9 million holdings) were located in Romania alone,

indicating a small average area under vines per holding. Spain (0.5 million or 20.8 %) and Italy (0.4 million or 15.3 %) made up for another third of the EU wine-grower holdings (see Table 1.1.1 and Figure 1.1.2).

Figure 1.1.3: Average size of area under vines per wine-grower holding, 2015
(ha per holding)



(¹) In 2015, Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

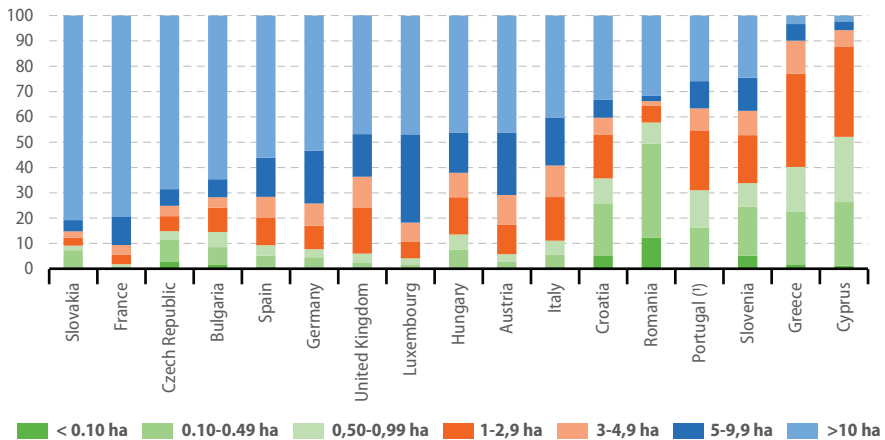
Source: Eurostat (online data code vit_t1)



The average vineyard area per holding in the EU was 1.3 ha. The largest holdings were in France where more than 0.8 million ha of vineyards were spread among less than 80 000 agricultural holdings, resulting in an average of 10.5 ha of vineyards per holding. The smallest average vineyard area per holding were reported in

Romania (0.2 ha), Croatia (0.4 ha), Slovenia (0.5 ha), Greece (0.6 ha) and Cyprus (0.6 ha); a strong contrast with the situation in France. The other Member States reported areas per holding between 0.9 ha (Portugal) and 4.0 ha (Luxembourg) (see Figure 1.1.3).

Figure 1.1.4: Area of vineyards by size class of the wine-grower holding, 2015
(% of total vineyard area)



Note: Ranked on the share of ">10 ha".

(*) Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

Source: Eurostat (online data code vit_t2)

In Slovakia, France, Czech Republic, Bulgaria, Spain and Germany more than half of the area under vines were cultivated by holdings with more than 10 ha of vineyards (Figure 1.1.4).

In contrast in Cyprus, Greece and Romania holdings with less than 1 ha under vines covered more than 40% of the total area under vines.

More than half of the area under vines occupied by red main varieties

The main vine varieties covered 94.4% of all area used for vines in the EU in 2015. The share of small, often regional varieties was only 5.6%. There were over 500 different 'main vine varieties' ^(*). The number of main varieties varied from 2 in Cyprus to 96 in Italy.

The red main varieties covered a larger area than white varieties (see Table 1.1.2 and Figure 1.1.5), however, it needs to be taken into account that data for some Member States are incomplete.

In 2015, 52.7 % of the area under main vine varieties was occupied by red main varieties and 42.7 % by white main varieties. The red varieties dominated in 7 wine-grower Member States: Bulgaria, Greece, Spain, France, Italy, Cyprus and Portugal. White varieties dominated in the Czech Republic, Germany, Croatia, Hungary, Austria, Slovenia and Slovakia. In Greece, a significant share of area was occupied by varieties of other colours (20.6 %), mostly the pink 'Roditis' variety.

^(*) In the Regulation (EC) No 1337/2011, the "Main vine varieties" are only the varieties having an area bigger than 500 ha at national level.

Table 1.1.2: Area of vineyards by main vine varieties, 2015
(hectare)

	Total main varieties	Red varieties	White varieties	Other colour varieties or not specified
EU-28	3 049 305	1 606 477	1 302 366	140 461
Belgium	–	–	–	–
Bulgaria	54 322	31 214	22 311	797
Czech Republic	14 273	4 432	8 294	1 547
Denmark	–	–	–	–
Germany	96 652	32 259	64 393	:
Estonia	–	–	–	–
Ireland	–	–	–	–
Greece	52 451	21 709	19 962	10 781
Spain	916 101	477 412	436 876	1 814
France	776 658	502 303	265 427	8 928
Croatia	12 115	4 499	7 616	:
Italy	638 684	341 322	276 653	20 709
Cyprus	5 313	3 239	2 074	:
Latvia	–	–	–	–
Lithuania	–	–	–	–
Luxembourg	:	:	:	:
Hungary	60 285	17 419	40 527	2 339
Malta	–	–	–	–
Netherlands	–	–	–	–
Austria	41 129	13 733	27 395	:
Poland	–	–	–	–
Portugal ⁽¹⁾	194 063	122 336	64 181	7 545
Romania ⁽²⁾	167 384	28 381	53 002	86 001
Slovenia	12 047	3 686	8 360	:
Slovakia	7 828	2 533	5 295	:
Finland	–	–	–	–
Sweden	–	–	–	–
United Kingdom	:	:	:	:

Note: Luxembourg and the United Kingdom: not available. Breakdown provided only when the total area of a single variety is of at least 500 ha.

⁽¹⁾ Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

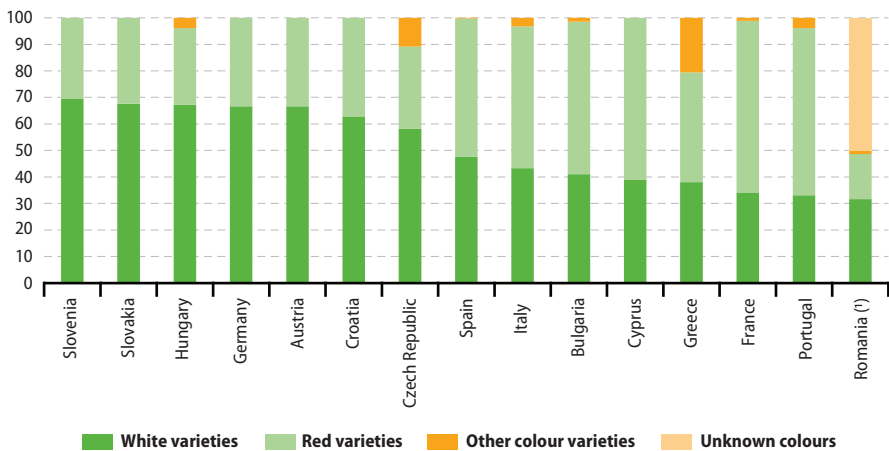
⁽²⁾ Data source did not allow the identification of colour for slightly over half of the vine producing area (50.1 %).

Source: Eurostat (online data code vit_t4)



Figure 1.1.5: Area of vineyards by main vine varieties, 2015

(%)



Note: Luxembourg and the United Kingdom: not available. Ranked on the share of "white" variety. Breakdown provided only when the total area of a single variety is of at least 500 ha.

(*) Data source did not allow the identification of colour for slightly over half of the vine producing area (50.1 %).

Source: Eurostat (online data code vit_t4)

In 2015, the most cultivated main red varieties in the EU were Cabernet Sauvignon (6.7% of all area under red main varieties), Garnacha tinta, Merlot noir, Bobal, Cabernet franc and Montepulciano. The most cultivated main white varieties in 2015 were Airen (16.4% of all area under white main varieties), Trebbiano toscano, Chardonnay blanc, Cayetana blanca, Trebbiano Romagnolo and Verdejo bianco.

The largest red variety Cabernet Sauvignon and the third largest Merlot noir were cultivated in a large number of countries: Cabernet in

11 Member States and Merlot in 12 Member States. Garnacha tinta, Bobal, Cabernet franc and Montepulciano were large varieties but grown in much more limited number of Member States. For the large white varieties the geographical spread was much more limited. Airen was cultivated only in Spain, Trebbiano in Italy and France and Cayetana blanca in Spain.

Only Chardonnay was a commonly cultivated across the EU, in total in 12 wine-grower countries.

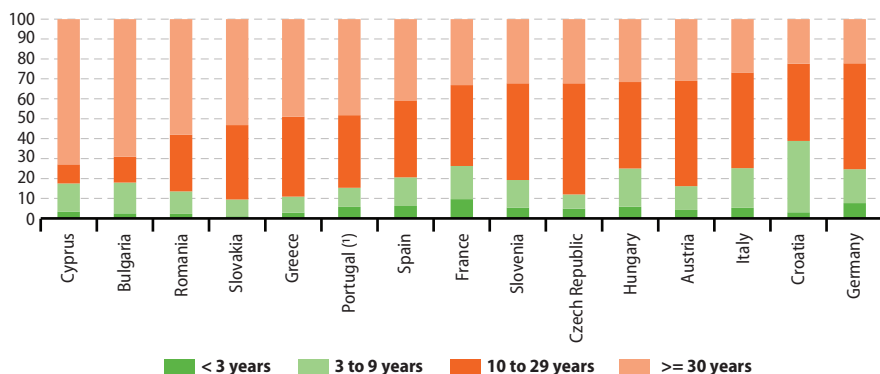
Older vines dominated the vineyards in the EU

In the EU the older vines dominated the vineyards⁽⁶⁾. 40.7 % of the area under vines was between 10 and 29 years old, and another 37.1 % older than 30 years. Very young vines (less than 3-year-old) covered 6.5 %, while 15.7 % of the area under vines belonged to the 3 to 9 years age class.

As shown in Figure 1.1.6, the share of area under vines with at least 30 years old vines varied significantly: from 22.2 % in Germany to 72.9 % in Cyprus. Very young vines (less than three years) had the highest shares of the area in France (9.7 %) and Germany (7.7 %).

Figure 1.1.6: Area of main varieties by age group, 2015

(%)



Note: Luxembourg and the United Kingdom: not available. Ranked on the share of vineyard area aged 30 years or older. Breakdown provided only when the total area of a single variety is of at least 500 ha.

(1) Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

Source: Eurostat (online data code vit_t4)

Quality wines make up 83 % of the area under vines

The type of grapes the vineyards produce is classified into six different categories, as presented in Table 1.1.3 and Figures 1.1.7 and 1.1.8. Two of the categories used in the classification are considered 'quality wine':

- Protected designation of origin (PDO) and
- Protected geographical indication (PGI).

In 2015, 82.1 % of the EU vine area was dedicated to the production of quality wines, while

13.1 % was dedicated to table wines. In the Czech Republic, Slovenia, Austria, Germany and Luxembourg only vines for quality wines (PDO & PGI) were grown. In Hungary, Slovakia, the United Kingdom and Croatia the share of the area producing quality wines was over 90 %.

In Romania (72.1 %), Bulgaria (38.4 %) and Italy (26.2 %) the share of the area dedicated to the production of table wines was the highest. Greece was the only Member State which presented a significant area (38.5 %) for the production of raisins (dried grapes).

⁽⁶⁾ Age groups are linked to main varieties.



Table 1.1.3: Area of vineyards by type of production, 2015
(hectare)

	Area							
	Total	Wine grapes (1)	of which:				Raisins	Other vines (2)
			PDO	PGI	Table wine	Dual purpose		
EU-28	3 230 241	3 178 040	2 098 803	553 322	422 788	103 110	39 931	12 263
Belgium	–	–	–	–	–	–	–	–
Bulgaria	59 991	59 970	15 340	21 362	23 035	222	:	20
Czech Republic	17 689	17 653	17 537	116	:	:	:	32
Denmark	–	–	–	–	–	–	–	–
Germany	102 581	102 544	102 505	38	:	:	:	37
Estonia	–	–	–	–	–	–	–	–
Ireland	–	–	–	–	–	–	–	–
Greece	103 298	63 327	14 519	39 671	6 888	2 248	39 756	216
Spain	941 154	939 789	831 057	68 246	36 862	3 624	5	1 359
France	802 896	799 894	508 656	168 752	26 545	95 940	0	3 002
Croatia	20 393	19 335	18 545	:	789	0	2	1 055
Italy	650 690	645 458	292 397	181 870	170 712	480	168	5 064
Cyprus	7 781	7 767	435	6 363	481	489	:	13
Latvia	–	–	–	–	–	–	–	–
Lithuania	–	–	–	–	–	–	–	–
Luxembourg	1 295	1 295	1 295	:	:	:	:	:
Hungary	65 049	64 055	63 361	0	694	:	:	995
Malta	–	–	–	–	–	–	–	–
Netherlands	–	–	–	–	–	–	–	–
Austria	45 574	45 439	45 439	:	:	:	:	135
Poland	–	–	–	–	–	–	–	–
Portugal (3)	198 586	198 586	126 337	48 097	24 152	:	:	0
Romania	183 717	183 532	32 730	18 237	132 458	107	0	184
Slovenia	15 806	15 688	15 688	:	:	:	:	118
Slovakia	12 054	12 021	11 390	458	170	:	:	33
Finland	–	–	–	–	–	–	–	–
Sweden	–	–	–	–	–	–	–	–
United Kingdom	1 687	1 687	1 572	112	2	:	:	0

Note: PDO: protected designation of origin. PGI: protected geographical indication.

(1) 'Wine grapes' includes vines for wine grapes 'in production' and 'not yet in production'.

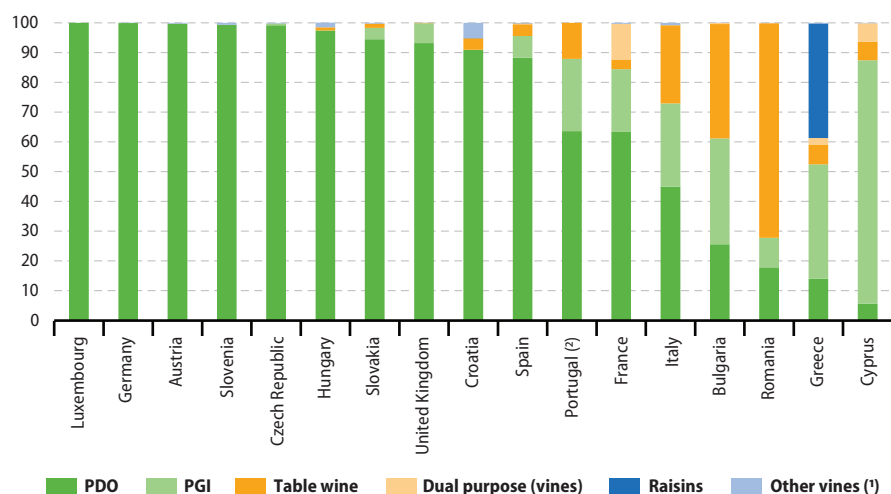
(2) 'Other vines' includes vines to produce material for the vegetative propagation of vines and other vines not elsewhere classified.

(3) Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

Source: Eurostat (online data code vit_t1)

Figure 1.1.7: Area of vineyards by type of production, 2015

(%)



Note: Ranked by the share of "PDO". PDO: protected designation of origin. PGI: protected geographical indication.

(!) 'Other vines' includes vines to produce material for the vegetative propagation of vines and other vines not elsewhere classified.

(?) Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

Source: Eurostat (online data code vit_t1)

Decreasing trend in the area under vines from 1999 to 2009 and relatively stable general trend in 2015

The area under vines in the EU has decreased over time. The total area in the surveyed countries decreased from 3.4 million ha in 1999 to 3.2 million ha in 2009. In 2015 the total area under vines increased by 1.1 % compared with 2009, but decreased by 5.0 % compared with 1999 (see Table 1.1.4 and Figure 1.1.9) although the coverage throughout the time period increased given the EU enlargements (9 wine-grower Member States in 1999, 17 wine-grower Member States in 2009 and 2015).

From 1999 to 2009, among the nine Member States with available data, the United Kingdom was the only Member State where the area under

vines increased, while in all other Member States it decreased.

In Spain alone, the area under vine in 2009 was 0.4 million ha less than in 1999, which represented a decrease of 28.3 %. The decrease was not so strong in Portugal and France where the area decreased by 16.5 % and 9.8 % respectively.

From 2009 to 2015 the comparisons are more challenging as the data collection method changed in some countries. The 1999 and 2009 data collections were based on a mixture of dedicated surveys and vineyard register data, while the 2015 data collection was based on data extracted solely from the vineyard register. The general trend at EU-level seems to be relatively stable.

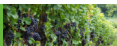


Table 1.1.4: Area under vines, 1999, 2009 and 2015
(hectare)

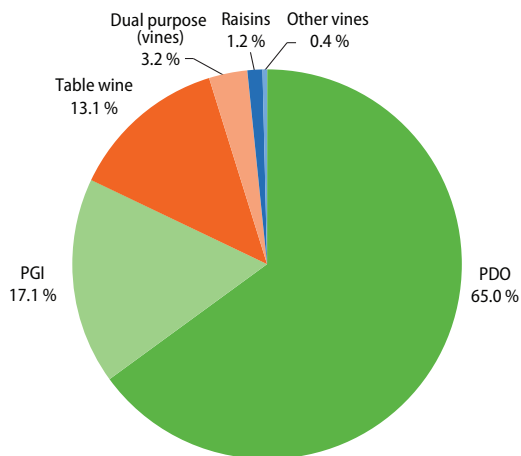
	Area		
	1999	2009	2015
EU-28	3 400 567	3 196 597	3 230 241
Belgium	–	–	–
Bulgaria	:	56 200	59 991
Czech Republic	:	16 189	17 689
Denmark	–	–	–
Germany	104 312	102 306	102 581
Estonia	–	–	–
Ireland	–	–	–
Greece	87 156	81 542	103 298
Spain	1 438 489	1 030 742	941 154
France	866 965	782 428	802 896
Croatia	:	:	20 393
Italy	642 261	610 291	650 690
Cyprus	:	8 653	7 781
Latvia	–	–	–
Lithuania	–	–	–
Luxembourg	1 348	1 302	1 295
Hungary	:	83 361	65 049
Malta	:	618	–
Netherlands	–	–	–
Austria	48 558	45 586	45 574
Poland	–	–	–
Portugal (¹)	210 603	175 933	198 586
Romania	:	171 090	183 717
Slovenia	:	16 480	15 806
Slovakia	:	12 678	12 054
Finland	–	–	–
Sweden	–	–	–
United Kingdom	874	1 198	1 687

Note: The data exclude area used only for producing table grapes.

(¹) In 2015, Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

Source: Eurostat (online data codes vit_t2)

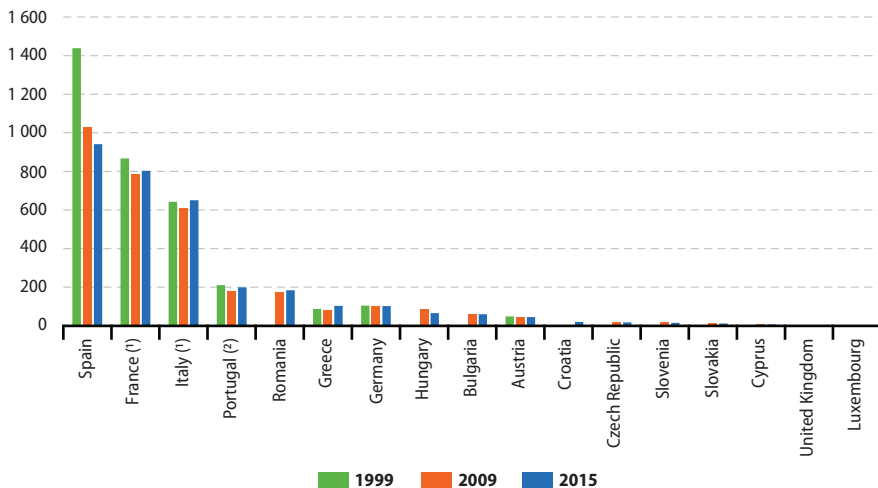
Figure 1.1.8: Area of vineyards by type of production, EU-28, 2015
(%)



Note: PDO - protected designation of origin, PGI - protected geographical indication.

Source: Eurostat (online data code vit_t1)

Figure 1.1.9: Area under vines, 1999, 2009 and 2015
(thousands ha)



Note: The area of table grape vines was not included in 1999 or 2009. 1999 data not available for: Bulgaria, the Czech Republic, Cyprus, Hungary, Malta, Romania, Slovenia and Slovakia. 2009 data not available for: Croatia.

(1) France and Italy conducted the 2009 survey together with the agricultural census in 2010.

(2) 2015: Região Autónoma dos Açores (PT20) and Região Autónoma da Madeira (PT30): not included.

Source: Eurostat (online codes vit_t2)



Data sources and availability

European statistics on the structure and production potential of vineyards have been collected from 1979 onwards. More thorough surveys have been done every ten years (1979, 1989, 1999 and 2009) until 2009. France and Italy conducted the 2009 survey together with the agricultural census in 2010. From 2015 onwards the data are to be extracted every 5 years from the vineyard register.

Since 2011 the statistics on vineyards are covered by [Regulation \(EU\) No 1337/2011](#). The first data collection under this legislation took place in

2015, and its results are presented in this article. Previously, EU statistics on vineyards were governed by [Council Regulation \(EEC\) No 357/79](#) of 5 February 1979 on statistical surveys of areas under vines.

[Regulation \(EU\) No 1337/2011](#) is applicable to all Member States having a minimum planted area of 500 ha of vineyards. For the variety data only the main vine varieties having an area bigger than 500 ha at national level are included. It is not necessary to report smaller areas.

2

Farmers in the EU





Introduction

Rural development policy aims to improve: competitiveness in agriculture and forestry; the quality of the environment and countryside; life in rural areas; and the diversification of rural economies. As agriculture has modernised and the importance of industry and more recently services within the economy has increased, so agriculture has become much less important as a source of jobs. Consequently, increasing emphasis is placed on the role farmers can play in rural development, including forestry, biodiversity, the diversification of the rural economy to create alternative jobs and environmental protection in rural areas.

The common agricultural policy is one of the oldest policies of the European Union (EU). Major reforms shaped the CAP in 1992, 2003 and 2013, adapting the policy to a changing world (CAP)⁽¹⁾.

The latest reform of the CAP was formally adopted by the European Parliament and the Council in December 2013. It was designed to lead to far-reaching changes: making direct payments fairer and greener, strengthening the position of farmers within the food production chain, and making the CAP more efficient and more transparent, while providing a response to the challenges of food safety, climate change, growth and jobs in rural areas, thereby helping the EU to achieve its Europe 2020⁽²⁾ objectives of promoting smart, sustainable and inclusive growth.

This chapter focusses on the people working in agriculture. It presents various socio-economic characteristics of farmers, such as their age, gender and level of education. It also presents in detail different features of the work on farms. Finally it concentrates on the rural areas – the areas where most farmers live.

(1) https://ec.europa.eu/agriculture/cap-overview_en

(2) https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester/framework/europe-2020-strategy_en



2.1 Agricultural work force

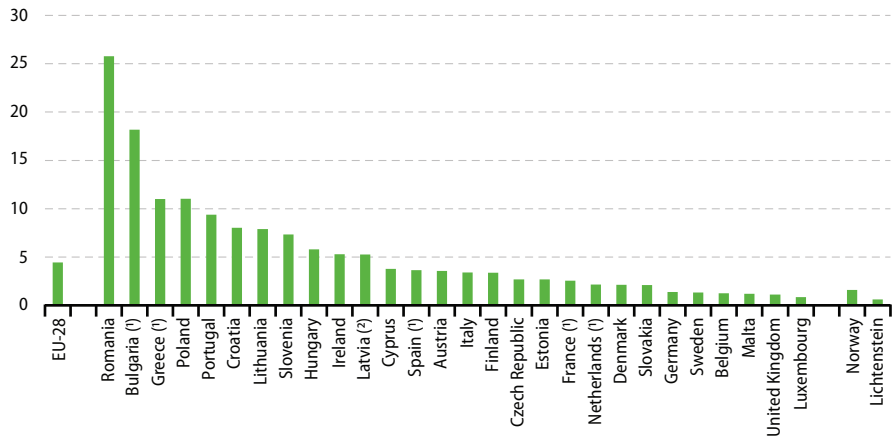
In the EU-28 around 10 million people work in agriculture

According to the national accounts around 10 million people worked in agriculture in the EU-28 in 2015 and accounted for 4.4 % of total employment. Almost three quarters (72.8 %) of the agricultural workforce in the EU-28 was concentrated in seven countries: Romania, Poland, Italy, France, Spain, Bulgaria and Germany.

Employment in agriculture constituted more than 10 % of total employment in four Member States: Romania (25.8 %), Bulgaria (18.2 %), Greece (11.0 %) and Poland (11.0 %). Very low shares — below 2 % — were reported in Germany (1.4 %), Sweden (1.3 %), Belgium (1.2 %), Malta (1.2 %), the United Kingdom (1.1 %) and Luxembourg (0.8 %) (see Figure 2.1.1).

Figure 2.1.1: Employment in agriculture, 2015

(%)



(*) Provisional.

(*) 2014 data instead of 2015.

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

Agriculture was the main component of the primary sector in all Member States. In the national accounts this sector is composed of three activities: agriculture (crop and animal production, hunting and related service activities), forestry and lodging as well as fishing and aquaculture. However, the proportions of people employed in forestry and fishing were very small in majority of Member States.

Employment in forestry exceeding 20 % of the employment in the primary sector was reported in Sweden (40.2 %), Slovakia (34.7 %), Estonia (29.2 %), Latvia (24.5 %) and Finland (20.8 %).

Employment in fishing activities did not reach 5 % of primary sector employment in any country but Malta (23.9 %) and Spain (5.2 %).

2.2 Socio-demographic characteristics

People working in agriculture are on average older than the total working population

As reported in the 2016 Labour Force Survey (LFS), in the EU-28, 31.8 % of the agricultural labour force was below 40 years old compared to 42.4 % in the total working population. 59.2 % of those working in agriculture were 40-64 years old, against 55.2 % of the overall working population. 9.0 % were older than 64, compared with only 2.4 % in the total working population (see Table 2.2.1). Looking at national data, the proportion of people aged under 40 was higher in the total working population than among people working in agriculture in all countries

except for Luxembourg and Denmark. By contrast, in all countries the proportion of people aged 65 and over was higher among people working in agriculture than in the total working population.

The highest proportions of young people (below 40 years old) in the agricultural labour force were reported in Luxembourg (50.0 %) and Denmark (44.7 %) and the lowest in Portugal (13.9 %). People aged 65 and above accounted for over 15 % of farm workers in six Member States, with the highest levels reported in Portugal (41.6 %) and Ireland (21.7 %). More than half of farmers were aged between 40 and 64 in all countries but Luxembourg, Portugal and Denmark.

Table 2.2.1: Distribution of working population by age groups, 2016
(%)

	Total			Agriculture		
	15-39	40-64	65 and over	15-39	40-64	65 and over
EU-28	42.4	55.2	2.4	31.8	59.2	9.0
Belgium	44.1	54.9	1.0	26.9	64.6	:
Bulgaria	40.2	57.8	2.1	35.3	60.7	:
Czech Republic	41.8	55.8	2.4	32.7	63.8	3.5
Denmark	44.0	52.8	3.2	44.7	43.2	12.2
Germany	40.2	57.2	2.7	29.5	62.1	8.4
Estonia	42.4	52.6	5.0	29.9	64.4	:
Ireland	46.3	50.4	3.3	22.2	56.1	21.7
Greece	40.3	57.9	1.7	24.8	68.4	6.8
Spain	40.6	58.5	0.9	36.9	61.3	1.8
France	42.6	56.1	1.3	30.3	66.0	3.7
Croatia	46.2	52.3	1.5	23.5	62.3	14.2
Italy	35.0	62.7	2.3	32.5	60.6	6.9
Cyprus	49.0	48.4	2.5	32.2	52.1	15.7
Latvia	42.7	53.8	3.5	26.5	67.9	5.6
Lithuania	41.4	55.4	3.2	25.7	66.5	:
Luxembourg	48.3	51.3	0.4	50.0	45.8	:
Hungary	43.0	56.0	1.0	35.0	62.9	:
Malta	53.8	44.5	1.7	:	73.7	:
Netherlands	45.5	52.1	2.4	35.6	59.5	4.9
Austria	46.0	52.2	1.8	25.3	61.0	13.8
Poland	48.2	49.9	1.8	32.7	64.1	3.2
Portugal	39.5	55.4	5.1	13.9	44.5	41.6
Romania	44.0	52.7	3.3	35.3	51.1	13.6
Slovenia	44.6	54.1	1.4	25.8	57.0	17.5
Slovakia	46.5	52.7	0.8	36.0	62.1	:
Finland	43.3	53.9	2.8	29.6	57.9	12.5
Sweden	43.7	52.8	3.5	32.4	52.4	15.2
United Kingdom	46.0	50.2	3.8	31.2	50.2	18.6
Iceland	46.5	47.8	5.7	21.2	66.7	:
Norway	44.8	51.6	3.5	36.9	50.5	12.6
Switzerland	44.6	51.4	3.9	30.5	55.2	14.4
Form. Yug. Rep. of Macedonia	45.8	52.9	1.3	29.5	64.2	6.3
Turkey	57.5	39.8	2.7	36.5	53.5	10.0

Source: Eurostat (online data code: [lfsa_egan2](#) and [lfsa_egan22d](#))

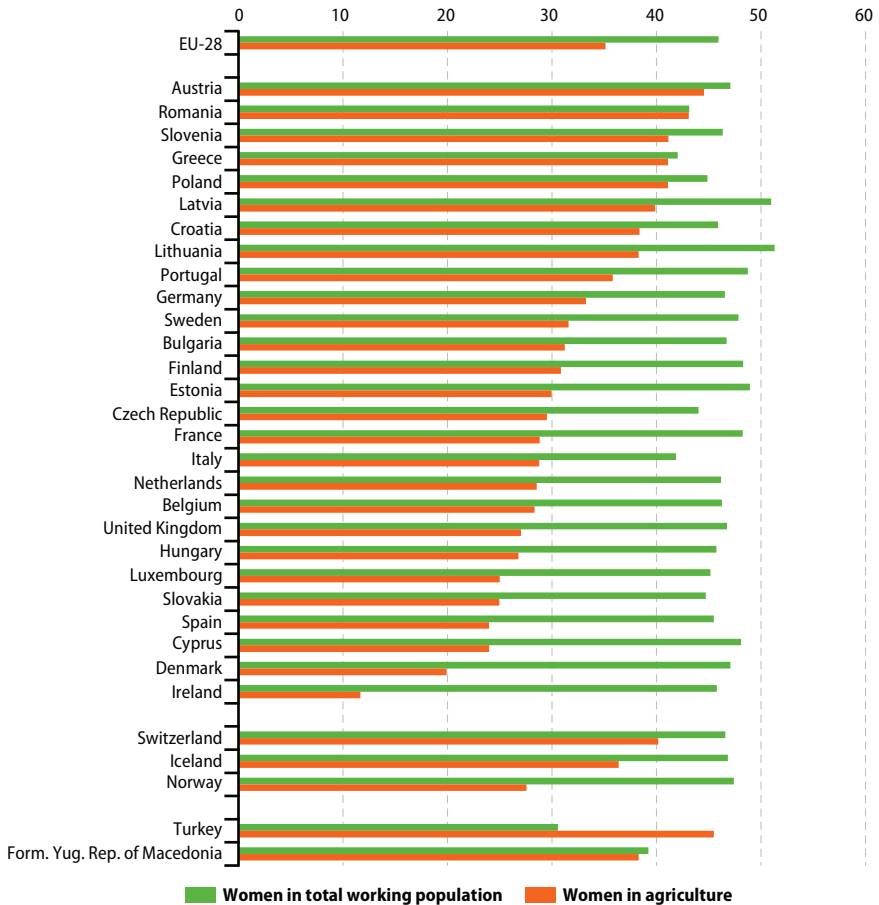


In the EU-28 women account for 35.1 % of the agricultural workforce

The 2016 Labour Force Survey (LFS) shows that the proportion of women working in agriculture across the EU was much smaller than their share of the total working population (35.1 % against 45.9 %) (see Figure 2.2.1).

Women accounted for more than 40 % of the agricultural workforce in only five Member States, namely Austria (44.5 %), Romania (43.1 %) Poland, Greece and Slovenia (41.1 % in each of three countries). By contrast, the lowest proportions of women farmers were reported in Denmark (19.9 %) and Ireland (11.6 %).

Figure 2.2.1: Women in total working population and in agriculture, 2016 (%)



Note: Malta not presented due to low reliability.

Source: Eurostat (online data code [lfsa_egan2](#) and [lfsa_egan22d](#))



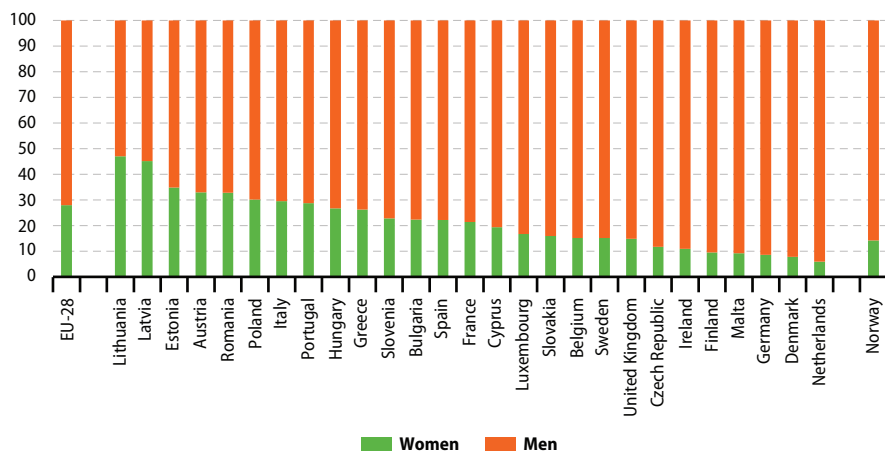
In Lithuania and Latvia the proportion of female farm managers reaches almost 50 %

In addition, in 2013, far fewer women than men were managers in the agricultural sector. At EU-28 level less than one third (27.9 %) of farm managers were women. Women accounted for

fewer than half of farm managers in all Member States; the highest proportions were reported in Lithuania (47.1 %) and Latvia (45.2 %). In Finland, Malta, Germany, Denmark and the Netherlands the proportion of female farm managers did not exceed 10 % (see Figure 2.2.2).

Figure 2.2.2: Farm managers by sex, 2013

(%)



Note: data for Croatia not available.

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

Half of people working in agriculture reach medium level of education

In 2016, the education levels (as classified by the International standard classification of education (ISCED)) of those working in agriculture differed markedly from those of the total working population. While 17.9 % of the total working population in the EU-28 had at most completed a low level of education, the proportion was 40.7 % for people working in agriculture.

As for those who had reached at least a medium level of education, the shares were quite similar for both populations (48.0 % for the total working population vs 50.2 % for those in agriculture). Among the overall working population 33.9 % have graduated from tertiary education, and thus had a high level of educational attainment, while only 8.9 % of those in agriculture have reached this level (see Table 2.2.2).

**Table 2.2.2: Educational attainment of working population, 2016**

(%)

	Total			Agriculture		
	Low	Medium	High	Low	Medium	High
EU-28	17.9	48.0	33.9	40.7	50.2	8.9
Belgium	16.4	39.8	43.9	29.4	50.6	20.0
Bulgaria	10.3	57.2	32.4	42.9	49.8	7.3
Czech Republic	4.1	71.9	24.0	4.1	84.5	11.4
Denmark	20.3	42.3	34.4	36.4	44.8	10.4
Germany	12.4	58.5	28.9	13.0	63.5	23.5
Estonia	9.8	50.2	40.1	27.2	52.9	19.9
Ireland	14.3	37.1	45.4	44.2	41.3	13.0
Greece	23.4	41.5	35.1	64.2	31.2	4.5
Spain	34.0	23.9	42.1	72.5	16.8	10.6
France	15.5	44.6	39.6	24.1	58.8	17.1
Croatia	10.3	61.9	27.9	47.8	46.6	:
Italy	31.5	47.2	21.3	61.0	34.7	4.2
Cyprus	16.8	37.3	45.8	61.5	30.4	:
Latvia	7.6	55.1	37.1	18.3	70.7	11.0
Lithuania	3.5	52.2	44.3	10.9	76.0	13.1
Luxembourg	16.1	31.4	41.6	:	65.7	:
Hungary	12.0	61.8	26.2	26.3	62.6	11.1
Malta	42.2	32.2	25.5	90.2	:	:
Netherlands	21.4	41.7	35.7	33.7	51.4	13.9
Austria	13.1	52.9	34.0	24.2	55.7	20.0
Poland	5.3	61.1	33.6	15.6	77.9	6.5
Portugal	47.7	26.0	26.3	87.6	7.9	4.4
Romania	20.5	59.0	20.5	54.9	43.5	1.6
Slovenia	8.8	56.6	34.6	37.2	53.8	:
Slovakia	4.3	72.0	23.6	.	87.9	6.8
Finland	10.8	46.2	43.1	23.7	56.7	19.6
Sweden	12.9	46.3	40.6	24.2	58.2	17.2
United Kingdom	16.3	40.4	43.1	29.9	44.4	25.5
Iceland	26.4	38.1	35.5	41.8	47.1	:
Norway	16.7	39.9	43.4	26.2	53.0	20.8
Switzerland	13.9	46.7	39.1	18.0	54.8	26.7
Form. Yug. Rep. of Macedonia	19.2	54.6	26.3	54.8	41.3	3.9
Turkey	57.4	20.3	22.4	90.1	7.7	2.2

Note: due to non-response, data for some countries may not sum up to 100%.

Source: Eurostat (online data code: [ifsa_egaed](#) and Eurostat own calculations)

In all countries surveyed, the proportion of people who have at most completed a low level of education was higher among the agricultural labour force than in the total working population, and much lower as regards tertiary education. In 18 Member States the proportion of those with at least a medium level of education was higher among people working in agriculture than in the total working population.

Among people working in agriculture more than 50 % had a low level of education in seven Member States; the highest shares, exceeding 85 %, were reported in Malta (90.2 %) and Portugal (87.6 %). The lowest proportions was observed in the Czech Republic (4.1 %). The proportion of tertiary graduates among people working in agriculture ranged from 1.6 % in Romania up to 25.5 % in the United Kingdom.



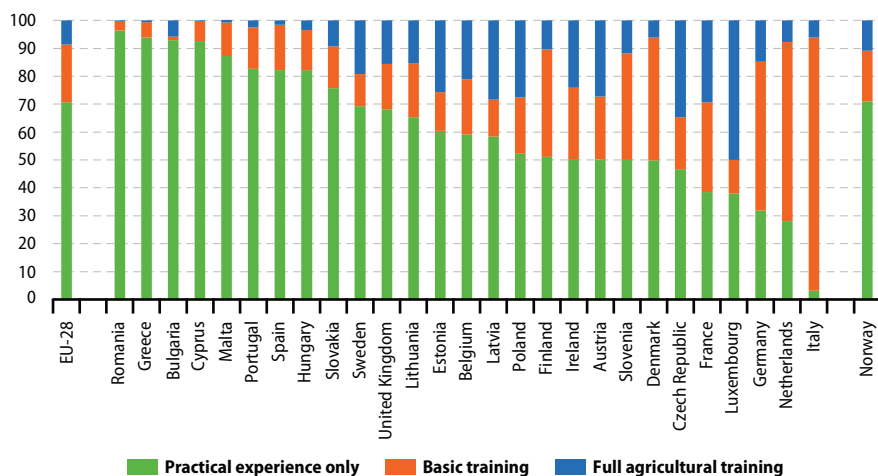
8.6 % of farm managers followed full agricultural training in the EU-28

Besides educational attainment levels, more detailed information on the agricultural training of farm managers is also very important. As reported by the Farm Structure Survey (FSS) in 2013, in the EU-28 70.7 % of farm managers had only practical experience, 20.7 % had basic agricultural training and 8.6 % had followed full agricultural training (see Figure 2.2.3).

Figures varied significantly between countries. In 20 Member States, half or more of farm managers reported having only practical experience. The highest figures for this, exceeding 90 %, were in Romania, Greece, Bulgaria and Cyprus. Italy, on the other hand, reported that just 3.1 % of farmers had only practical experience, while 90.8 % declared having basic agricultural training.

Figure 2.2.3: Agricultural training of farm managers, 2013

(%)



Note: data for Croatia not available.

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

In the Netherlands and Germany more than 50 % of farmers had basic agricultural training (64.2 % and 53.2 %, respectively). By contrast, fewer than 10 % of farmers had that kind of training in Cyprus, Greece, Romania and Bulgaria.

As for full agricultural training, the highest proportion was in Luxembourg, where half of all

farm managers had such training. It was followed by the Czech Republic, France, Latvia, Poland, Austria and Estonia, all of which had proportions higher than 25 %. The lowest proportions, of less than 1 %, were reported in Malta, Greece, Cyprus and Romania.



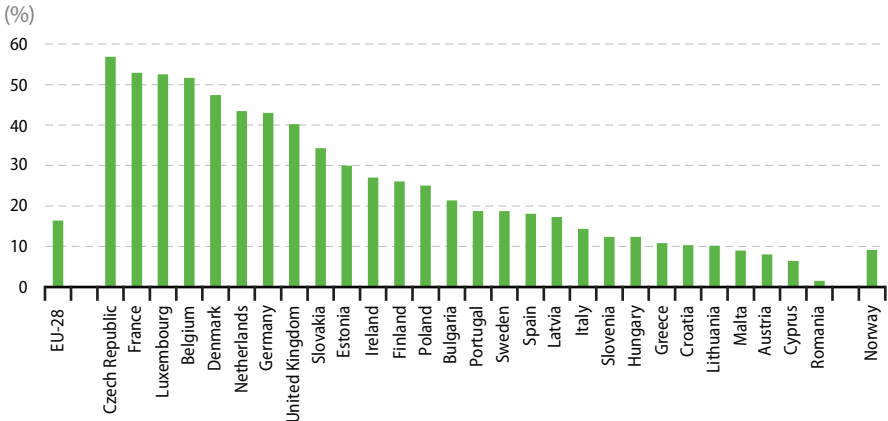
2.3 Farm work characteristics

In the EU-28 only 16.4 % of people work full-time

According to the 2013 Farm Structure Survey (FSS), around 22 million people worked regularly in agriculture in the EU-28, but only 16.4 % of them worked on a farm full time (see Figure 2.3.1). The proportion varied from slightly over 50 % in the Czech Republic, France, Luxembourg

and Belgium to less than 10 % in Malta, Austria and Cyprus. Romania had the lowest proportion, with only 1.5 % of people engaged in agricultural work full-time. To estimate the actual volume of work devoted to farming, these figures are converted to full-time work equivalents (measured as annual work units (AWUs)).

Figure 2.3.1: People employed on farms on a regular basis working full time, 2013



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

Around three-quarters of farm labour force comes from family (holders and family members)

Converted into AWUs, the equivalent of 9.5 million people worked full time on farms in the EU-28 in 2013. Family labour represented 76.5 % of the total (44.1 % sole holders and 32.4 % family members), 15.4 % were regular non-family workers and 8.1 % were non-regular non-family workers (see Table 2.3.1). Farming was predominantly a family activity in most Member States and Norway, with family labour accounting for over 90 % of agricultural work in Poland, Slovenia, Croatia and Ireland. By contrast, in Slovakia and the Czech Republic only around a

quarter of people (measured in AWU) working in agriculture were family members. In all Member States except Croatia, Slovenia and Poland, the work of sole holders exceeded that of family members in family labour. In contrast to family labour, there was a small number of countries where non-family labour accounted for more than 50 % of the labour force. These included the Czech Republic (74.2 %), Slovakia (72.4 %), France (59.0 %) and Estonia (53.6 %). The proportion of non-regular non-family labour force exceeded 10 % in six Member States, with the highest levels reported in Spain (18.7 %), Italy (14.8 %) and the Netherlands (14.1 %).

Table 2.3.1: Farm labour force in annual work units, 2013

(%)

	Sole holders	Family members	Non-family regular workers	Non-family non-regular workers
EU-28	44.1	32.4	15.4	8.1
Belgium	46.8	24.1	20.8	8.3
Bulgaria	42.6	34.0	16.6	6.8
Czech Republic	15.7	10.0	70.4	3.8
Denmark	38.1	14.6	43.4	3.9
Germany	37.2	24.6	27.5	10.7
Estonia	27.0	19.4	51.3	2.3
Ireland	62.7	29.3	6.2	1.9
Greece	54.0	31.2	3.7	11.1
Spain	37.8	22.0	21.5	18.7
France	33.4	7.6	47.4	11.6
Croatia	42.5	50.7	5.8	1.0
Italy	49.5	26.0	9.7	14.8
Cyprus	44.7	24.9	22.5	7.9
Latvia	46.4	36.2	17.0	0.4
Lithuania	52.4	26.9	19.1	1.6
Luxembourg	42.5	25.8	27.5	4.5
Hungary	43.4	29.2	19.7	7.8
Malta	61.6	27.4	9.4	1.3
Netherlands	32.8	25.1	28.1	14.1
Austria	56.7	26.9	13.3	3.1
Poland	44.5	49.3	3.5	2.7
Portugal	41.8	35.5	15.0	7.7
Romania	50.4	38.9	4.2	6.5
Slovenia	43.8	49.9	2.7	3.6
Slovakia	18.4	9.2	69.3	3.1
Finland	49.4	24.4	18.3	7.9
Sweden	44.6	23.8	25.4	6.2
United Kingdom	40.1	26.3	26.8	6.8
Norway	52.3	24.8	15.8	7.1

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

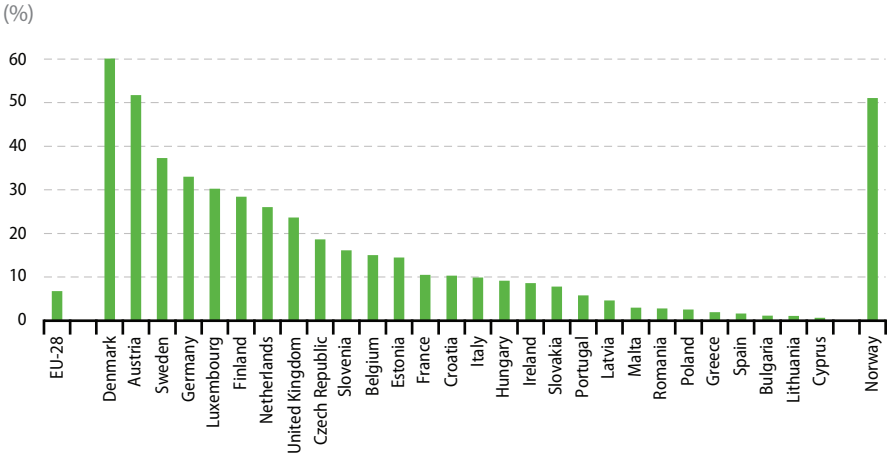
Processing of farm products is the most frequent 'other gainful activity'

In addition to farm work, farmers may also carry out other gainful activities (OGA). In 2013 only 6.8 % of EU-28 farms declared that they performed other gainful activities related to the holding. However, national figures varied significantly.

In seven Member States more than a quarter of farms carried out other gainful activities, with the highest levels in Denmark (60.1 %) and Austria (51.7 %). By contrast, in 14 Member States fewer than 10 % of farms performed other gainful activities, with Cyprus reporting the lowest figure of just 0.7 % (see Figure 2.3.2).



Figure 2.3.2: Farms performing ‘other gainful activities’, 2013

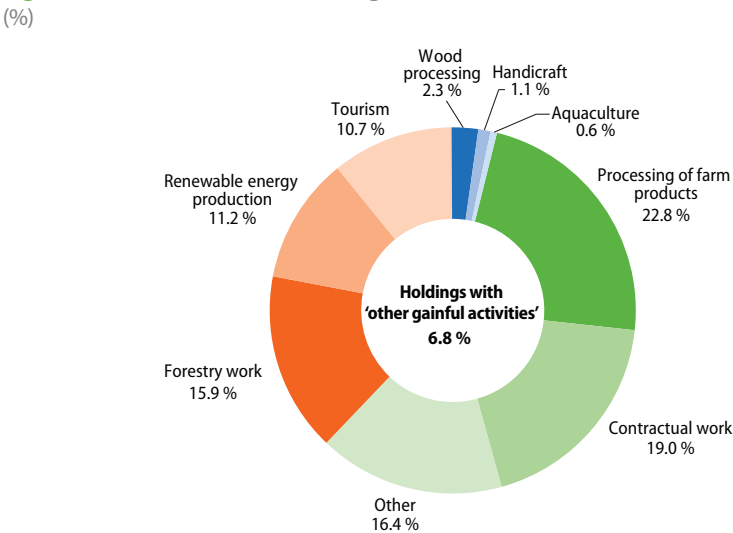


Source: Eurostat (online data code ef_ogadsexage)

The most popular types of other gainful activities at EU-28 level were processing of farm products (conducted by 22.8 % of farms), contractual work (19.0 %), other gainful activities not classified

elsewhere (16.4 %) and forestry work (15.9 %). The least common activities were wood processing (2.3 %), handicraft (1.1 %) and aquaculture (0.6 %) (see Figure 2.3.3).

Figure 2.3.3: Distribution of ‘other gainful activities’ in the EU-28, 2013



Note: Calculated using national data.

Source: Eurostat (online data code: ef_ogadsexage)

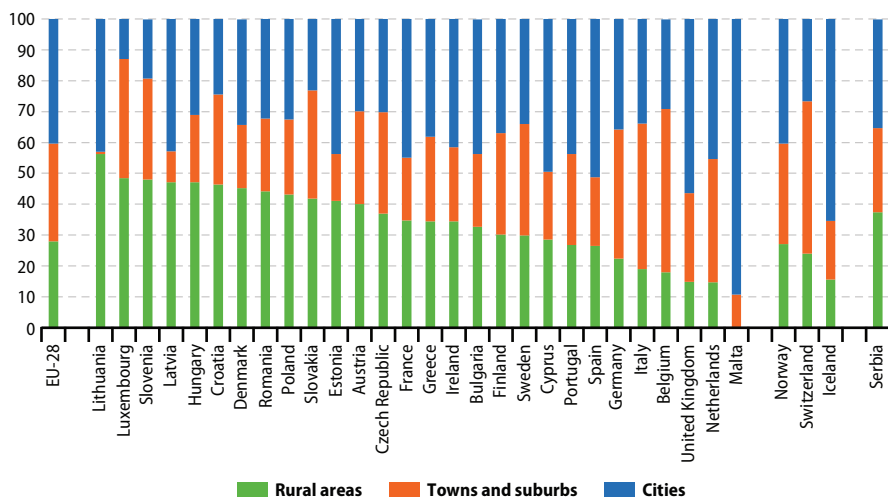


2.4 Rural areas — place where most farmers live

When analysing information on farmers it is also worth looking at the areas where farmers live, i.e. rural areas. In 2015, 28.0 % of people in the EU-28 lived in rural areas, 31.7 % in towns and suburbs and 40.4 % in cities (see Figure 2.4.1). Across the Member States there were considerable differences in the proportions of people living in these three types of area. In 12 Member States the highest proportions of people lived in rural areas; in Lithuania this was even more than half

of the population (56.2 %). By contrast, in the United Kingdom, Spain and Cyprus around half the population lived in cities. The proportion was highest in Malta, with 89.4 % of people living in cities. Belgium, Italy, Germany and the Netherlands had the highest proportions of people living in towns and suburbs. Belgium reported that more than half of its population (52.8 %) lived in such areas.

Figure 2.4.1: Distribution of population by degree of urbanisation, 2015 (%)



Source: Eurostat (online data code: [ilc_lwho01](#))

In the EU-28 the lowest income is reported in rural areas

It is difficult to find an instrument that provides good information on farmers' incomes. The design of the EU Statistics on Income and Living Conditions (EU-SILC) — a multi-purpose survey focusing mainly on income — does not allow for analysis of farmers' incomes. Nevertheless the degree of urbanisation provides some

information; in the case of farmers it is the rural area, i.e. where they live. According to EU-SILC, in 2015 the median equivalised net income^(*) in the EU-28 was EUR 16 127 per person. When looking at the degree of urbanisation, the most disadvantaged in terms of income were rural

^(*) Equivalised income is a measure of household income that takes account of the differences in a household's size and composition, and thus is equivalised or made equivalent for all household sizes and compositions. It is used for the calculation of poverty and social exclusion indicators.



areas, with a reported median income 12.5 % lower than the EU-28 average. By contrast, median income in cities and towns and suburbs exceeded the EU-28 average (by 4.9 % and 5.4 %, respectively). In 15 out of 17 Member States that had a median income below the EU-28 average, the lowest income levels were reported for those living in rural areas. This group of countries also reported the biggest variations in income levels between rural areas and cities.

This was particularly true in Bulgaria and Romania — two countries with the lowest income levels. In the countries with an income level above the EU-28 average, people living in rural areas of Austria and the United Kingdom recorded the highest level of income. In Ireland, France, Luxembourg, Finland and Sweden the highest income was reported for those living in the cities (see Table 2.4.1).

Table 2.4.1: Median equivalised net income by degree of urbanisation, 2015
(EUR)

	Rural areas	Towns and suburbs	Cities
EU-28	14 111	16 999	16 919
Belgium	22 175	22 486	19 558
Bulgaria	2 514	3 240	4 195
Czech Republic	7 257	7 208	7 903
Denmark	27 850	30 366	28 112
Germany	20 141	21 217	20 309
Estonia	7 369	7 545	8 903
Ireland	20 879	19 646	23 510
Greece	6 532	7 813	8 233
Spain	11 413	13 251	14 793
France	20 861	20 809	22 177
Croatia	4 820	5 632	6 513
Italy	15 048	15 739	16 626
Cyprus	12 249	12 126	15 346
Latvia	5 039	5 960	6 637
Lithuania	4 409	4 803	6 497
Luxembourg	37 372	31 299	37 452
Hungary	4 093	4 525	5 603
Malta	:	13 049	13 603
Netherlands	20 955	21 789	20 974
Austria	23 972	22 878	22 704
Poland	4 781	5 798	6 643
Portugal	7 234	8 533	9 211
Romania	1 676	2 467	3 053
Slovenia	12 070	12 457	12 936
Slovakia	6 528	6 794	7 627
Finland	22 788	23 515	25 263
Sweden	25 528	27 247	27 300
United Kingdom	22 160	21 940	20 025
Iceland	23 235	22 786	24 410
Norway	42 686	42 619	40 144
Switzerland	37 651	39 856	40 315
Serbia	1 973	2 605	3 306

Source: Eurostat (online data code: [ilc_d117](#))

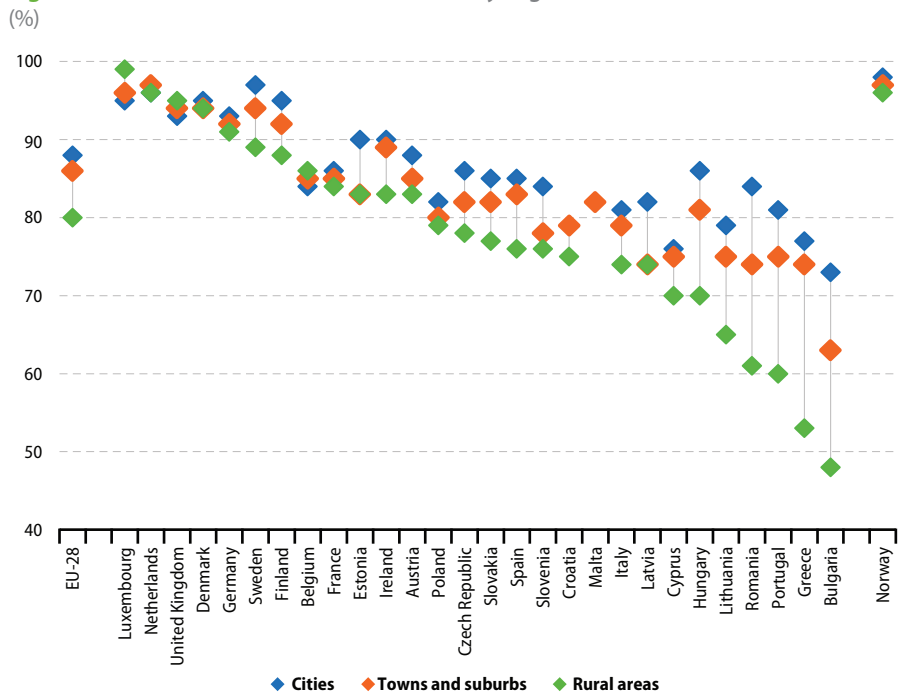


Internet is the least accessible in the rural areas

As with the analysis of income, there is no good data source on use of ICT by farmers. However the EU survey on ICT usage in households and by individuals provides information by degree of urbanisation, a dimension that is important given that farmers live in rural areas. The results of the 2016 ICT survey showed a quite visible rural-urban divide within the EU-28 on internet access. EU-wide, the rates of internet access were higher among households in cities as well as in towns and suburbs (88 % and 86 %, respectively) than those living in rural areas (80 %) (see Figure 2.4.2). In 21 Member States the share of households

with internet access was lower in rural areas than in cities and towns and suburbs. The proportion was lowest in rural areas in Bulgaria, Greece, Lithuania, Hungary, Portugal and Romania. In Denmark, Estonia and Latvia the proportion of households with internet access was higher in cities but there was no difference between towns and suburbs and rural areas. By contrast, in Belgium, Luxembourg and the United Kingdom the highest shares of households with internet access were reported in rural areas. As for the rural areas themselves, the highest proportions (95 % or over) of households with internet access were reported in Luxembourg, the Netherlands and the United Kingdom. Greece and Bulgaria had the lowest shares at around 50 %.

Figure 2.4.2: Households with internet access by degree of urbanisation, 2016



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



Data sources and availability

The life of farmers has been described in this article by using different data sources. The main data source is the FSS, but it is not the only one. To compare information on farmers with the rest of the population, other data sources have also been used. These include the national accounts, the LFS, the EU-SILC and the EU survey on ICT usage in households and by individuals.

National accounts are a system of accounts and balance sheets that provide a broad and integrated framework to describe the economy. They provide information broken down by industry using the NACE classification. Employment in the national accounts combines data from many sources, such as labour force surveys, population censuses, employment registers, income tax registers, business production surveys, labour cost surveys, etc. Employment in national accounts covers everyone engaged in some form of productive activity. It is mainly measured in persons and in hours worked, differentiates between employees and self-employed and is broken down by economic activity. Employment data is broken down by branches and can be presented with different levels of detail. In the first level agriculture is included in branch A together with forestry and fishing. The three activities are separated when the classification is further broken down into 64 branches: A1 – Agriculture (Crop and animal production, hunting and related service activities); A2 — Forestry and logging; and A3 — Fishing and aquaculture. In the article, data is presented for the branch A1 - Agriculture.

The Labour Force Survey (LFS) is a large-sample survey among private households which collects detailed data on characteristics of

employment and unemployment. For the LFS, employed persons are those aged 15 and over who during the reference week performed work, even for just one hour, for pay, profit or family gain. This includes people who were not at work but had a job or business from which they were temporarily absent. The LFS sample covers all domains of economic activity and uses the NACE classification.

The Farm Structure Survey (FSS) provides a wide range of information on agricultural holdings, including detailed data on farm labour force characteristics. The FSS is carried out in the form of an agricultural census every 10 years and as a sample survey every 3 years.

The EU statistics on income and living conditions (EU-SILC) is a large-sample survey of private households. It is a multi-purpose instrument which focuses mainly on income. Detailed data is collected on income components, mostly personal income, although a few household income components are included. However, information on social exclusion, housing conditions, labour, education and health information is also obtained.

The survey on ICT usage in households and by individuals is an annual data collection exercise that initially concentrated on access and connectivity issues. Its scope has since been extended to cover a variety of subjects related to communication technologies. The survey covers households with at least one member in the 16-74 age group.

3

Agricultural accounts and prices





Introduction

One of the principal objectives of the common agricultural policy (CAP) is to provide farmers with a reasonable standard of living. Although this concept is not defined explicitly within the CAP, a range of indicators — including those on income development from farming activities — may be used to determine the progress being made towards this objective. Economic accounts for agriculture (EAA) provide an insight, among others, into:

- the economic viability of agriculture;
- the income received by farmers;
- the structure and composition of agricultural production and intermediate consumption;
- relationships between prices and quantities of both inputs and outputs.

3.1 Agricultural output

The economic accounts for agriculture show that the total output of the agricultural industry (comprising the output values of crops and animals, agricultural services and the goods and services produced from inseparable non-agricultural secondary activities) in the EU-28 in 2016 was an estimated EUR 405 billion at basic prices (see Table 3.1.1). The equivalent of 59.1 % of the value of agricultural output generated was spent on intermediate consumption (input goods and services). The residual gross value added at basic prices was the equivalent of 40.9 % of the value of total output in 2016 or EUR 165.7 billion (see Table 3.1.2).

Final output

In 2016 France was the largest agricultural producer in the EU-28 (EUR 70.3 billion or 17.4 % of the EU-28 total), followed by Italy (13.2 %), Germany (13.1 %) and Spain (11.6 %); relative to its size, the Netherlands accounted for quite a high share of the EU-28's agricultural output (6.7 %) as shown in Table 3.1.1.

Compared with 2010, the value of agricultural industry rose in 2016 in almost all of the EU

Member States, except Croatia (where output decreased by 25.1 %) and at a lesser extent Greece (by – 1.6 %), Denmark and Malta (by – 0.1 % each). The highest increases in output value (in absolute terms) were recorded for the EU's larger producers, rising by EUR 6.4 billion in Spain, 5.2 billion in Italy, EUR 4.2 billion in the United Kingdom, EUR 2.7 billion in Poland and EUR 2.2 billion in France.

Table 3.1.2 shows the main components of the EU-28's agricultural industry at basic prices. In 2016 crop output was 51.9 % of the total output value of the agricultural industry and animal output was 39.2 %. The agricultural services and inseparable secondary activities, generally the processing of agricultural products, provided the residual shares of 5.0 % and 3.9 % respectively. The agricultural products accounting for the highest share of output value in the EU-28's agricultural industry in 2016 were 'vegetables and horticultural plants' (13.2 %) 'milk' (12.2 %) and cereals (10.7 %), while pig (8.5 %) and cattle (8.2 %) output also accounted for relatively large shares (see Figure 3.1.1).

**Table 3.1.1: Output value of the agricultural industry, 2010 and 2013-2016**

	Value (million EUR)					Share of EU-28 (%)	
	2010	2013	2014	2015	2016	2010	2016
EU-28	372 902	428 278	422 734	416 719	405 008	100.0	100.0
Belgium	7 758	8 595	8 124	8 068	7 990	2.1	2.0
Bulgaria	3 822	4 394	4 302	4 033	4 004	1.0	1.0
Czech Republic	4 058	4 936	4 976	4 711	4 918	1.1	1.2
Denmark	9 741	10 963	11 034	10 264	9 733	2.6	2.4
Germany	51 164	60 461	59 626	53 061	52 940	13.7	13.1
Estonia	668	924	900	935	750	0.2	0.2
Ireland	5 822	7 671	7 294	7 397	7 420	1.6	1.8
Greece	10 567	10 365	10 577	10 921	10 398	2.8	2.6
Spain	40 371	44 065	43 994	45 491	46 807	10.8	11.6
France	68 125	74 185	75 335	75 252	70 350	18.3	17.4
Croatia	2 914	2 415	2 041	2 090	2 184	0.8	0.5
Italy	48 160	57 520	54 281	55 879	53 407	12.9	13.2
Cyprus	686	697	663	680	686	0.2	0.2
Latvia	942	1 299	1 315	1 435	1 316	0.3	0.3
Lithuania	2 043	2 856	2 806	2 972	2 835	0.5	0.7
Luxembourg	334	423	459	405	413	0.1	0.1
Hungary	6 122	7 811	7 957	8 022	8 309	1.6	2.1
Malta	126	132	127	129	126	0.0	0.0
Netherlands	25 319	28 241	27 086	26 759	27 020	6.8	6.7
Austria	6 328	7 015	6 960	6 779	6 810	1.7	1.7
Poland	19 751	23 669	23 060	22 349	22 411	5.3	5.5
Portugal	6 452	6 797	6 823	7 115	6 941	1.7	1.7
Romania	15 301	17 756	16 771	15 465	15 444	4.1	3.8
Slovenia	1 104	1 160	1 227	1 277	1 211	0.3	0.3
Slovakia	1 887	2 407	2 392	2 161	2 391	0.5	0.6
Finland	4 214	4 854	4 630	4 317	4 314	1.1	1.1
Sweden	5 379	6 417	6 219	6 148	5 959	1.4	1.5
United Kingdom	23 746	30 250	31 756	32 602	27 925	6.4	6.9
Iceland	292	376	428	441	494	-	-
Norway	4 594	5 160	5 091	5 059	4 989	-	-
Switzerland	7 279	8 376	8 802	9 564	9 435	-	-

Note: values at basic prices.

Source: Eurostat (online data code: aact_eaa01)

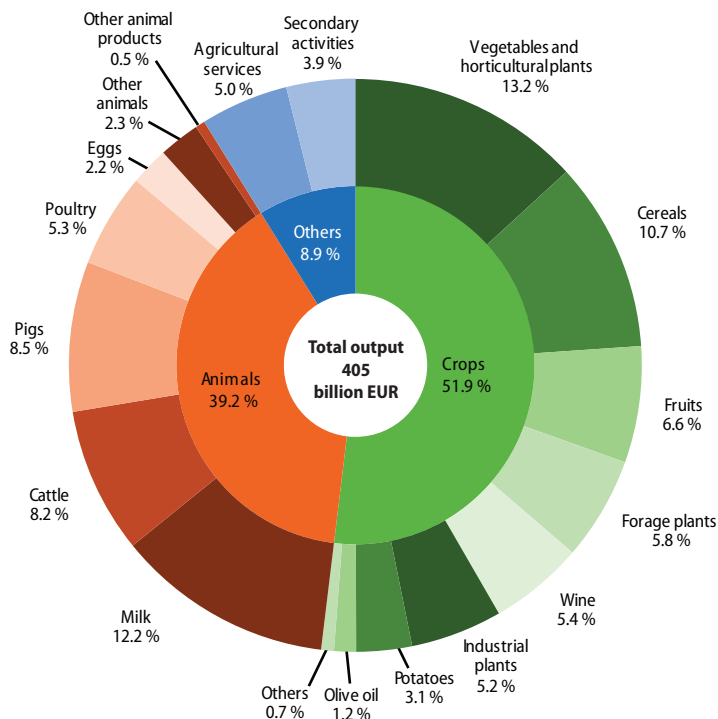
Table 3.1.2: Main components of the agricultural industry, EU-28, 2015-2016

	2015 (million EUR)	2016 (million EUR)	Change 2015-16 (%)	Share in output value of the agricultural industry, 2016 (%)
Output of agricultural industry	416 719	405 008	-2.8	100.0
Crop output	215 686	210 282	-2.5	51.9
Animal output	164 342	158 873	-3.3	39.2
Agricultural services	20 317	20 104	-1.0	5.0
Secondary activities	16 373	15 750	-3.8	3.9
- Intermediate consumption	247 658	239 355	-3.4	59.1
= Gross value added	169 060	165 654	-2.0	40.9
- Consumption of fixed capital	61 141	60 803	-0.6	-
- Taxes on production	5 601	4 877	-12.9	-
+ Subsidies on production	50 477	52 628	4.3	-
= Factor income	152 796	152 603	-0.1	-

Note: production value at basic prices.

Source: Eurostat (online data code: aact_eaa01)

Figure 3.1.1: Output of the agricultural industry, EU-28, 2016
(% of total output)



Note: values at basic prices.

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

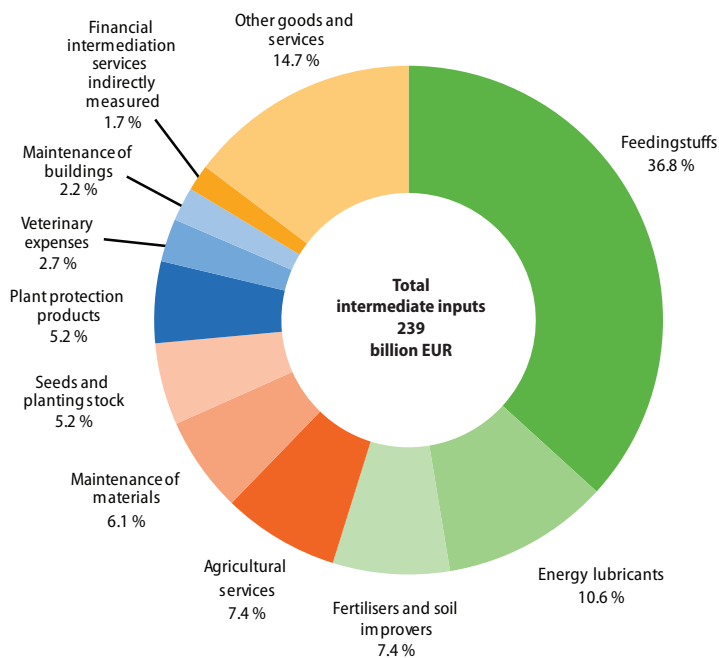
Intermediate consumption

Intermediate consumption covers purchases made by farmers for raw and auxiliary materials that are used as inputs for crop and animal production; it also includes expenditure on veterinary services, repairs and maintenance, and other services. Intermediate consumption

within the EU-28's agricultural industry in 2016 was valued at EUR 239.4 billion at basic prices or 59.1 % of the output value. The intermediate consumption in the agricultural industry decreased from 2015 (EUR 247.7 billion, or 59.4 % of the output value) to 2016 by 3.4 % (see Table 3.1.2).



Figure 3.1.2: Intermediate inputs consumed by the agricultural industry, EU-28, 2016
(% of total intermediate inputs)



Note: values at basic prices.

Source: Eurostat (online data code: aact_eaa01)

Feedingstuffs for animals accounted by far for the highest share (36.8 %) of total intermediate inputs within the EU-28's agricultural activity in 2016, valued at more than three times the share of energy and lubricants (10.6 %); the latter are used for both animal and crop production.

Fertilisers and soil improvers (7.4 %) accounted for the highest share of intermediate inputs among those inputs used exclusively for crop production (see Figure 3.1.2).



Three main intermediate inputs are used for the production of crops: seeds and plantings, fertilisers, and plant protection products, which together accounted for 20.3 % of the production value of crops in the EU-28 in 2016 (1.7 percentage points higher than in 2010).

The two main intermediate inputs for animal production: feedingstuffs and veterinary expenses, together accounted for 59.5 % of the EU-28's production value for animals in 2016. This was 0.3 percentage points lower than in 2010 (see Table 3.1.3).

Table 3.1.3: Share of main intermediate inputs in crop and animal production, 2010 and 2013-2016

(% of total intermediate inputs)

	Seeds, fertilisers and plant protection in crop production					Feedingstuffs and veterinary expenses in animal production				
	2010	2013	2014	2015	2016	2010	2013	2014	2015	2016
EU-28	18.6	20.1	20.6	20.5	20.3	59.8	60.7	57.1	59.0	59.5
Belgium	21.4	22.0	24.9	23.2	23.0	67.9	76.7	73.7	75.2	76.1
Bulgaria	18.6	18.8	15.3	17.6	17.1	74.9	68.2	71.0	62.8	59.5
Czech Republic	23.5	21.7	21.4	22.6	21.6	76.8	77.2	71.6	75.8	74.8
Denmark	21.6	25.6	26.4	23.9	24.0	54.2	56.5	51.2	61.3	64.5
Germany	20.6	20.5	21.1	24.0	22.2	65.1	62.1	59.7	67.5	65.7
Estonia	21.4	23.2	24.8	24.0	38.5	59.7	60.4	58.6	70.0	68.5
Ireland	33.3	36.2	40.2	40.7	36.5	59.4	60.2	50.5	48.8	50.7
Greece	11.4	11.6	11.5	10.9	11.9	63.6	75.0	77.4	72.4	77.0
Spain	11.5	14.2	15.1	13.9	12.6	69.0	68.5	64.1	69.9	70.1
France	20.5	23.9	23.4	22.5	23.7	64.2	68.4	62.9	64.0	63.6
Croatia	24.2	28.0	28.5	27.7	25.9	61.5	74.7	74.6	68.2	67.9
Italy	12.1	11.7	12.8	12.3	13.1	58.4	55.9	54.0	52.8	54.8
Cyprus	16.2	18.4	20.6	19.0	26.9	56.9	46.2	50.5	60.1	48.5
Latvia	29.6	37.3	33.9	31.7	33.3	59.2	62.2	58.3	57.9	57.8
Lithuania	29.1	28.9	31.4	28.0	32.1	62.1	60.3	56.8	64.8	63.0
Luxembourg	19.9	19.0	16.5	20.8	18.8	79.7	94.8	96.4	91.2	87.9
Hungary	27.7	28.1	26.6	27.2	25.6	66.9	62.9	55.3	56.5	59.0
Malta	13.3	12.5	13.0	11.4	13.2	47.9	55.2	51.8	48.1	44.8
Netherlands	18.0	18.6	18.9	18.5	18.7	49.3	55.2	50.9	52.6	52.0
Austria	14.9	17.9	18.1	18.3	16.1	49.9	49.4	49.4	49.5	51.0
Poland	20.4	23.8	26.4	30.4	28.5	49.1	51.5	52.2	47.2	46.7
Portugal	11.4	12.2	12.4	11.2	12.0	74.6	76.9	71.3	73.7	77.8
Romania	16.3	16.9	16.5	15.9	17.3	89.7	83.5	76.3	71.0	73.1
Slovenia	17.5	18.8	17.0	16.1	16.3	77.8	76.1	74.4	77.1	79.9
Slovakia	31.0	33.4	32.4	35.4	31.0	40.1	37.7	41.7	45.9	54.6
Finland	35.2	36.4	39.8	39.0	35.7	37.7	45.3	40.9	45.6	50.5
Sweden	26.3	27.1	25.3	24.3	26.9	49.5	54.0	51.5	50.7	47.8
United Kingdom	37.7	34.3	34.5	36.3	35.3	40.7	43.0	39.2	40.4	40.1
Iceland	25.0	23.8	19.0	21.5	19.2	49.7	57.1	59.0	46.0	51.1
Norway	18.3	21.2	20.4	19.0	19.5	47.3	50.1	51.4	52.1	52.2
Switzerland	14.6	15.4	14.9	15.1	14.8	55.8	51.4	50.5	52.9	51.8

Note: values at basic prices.

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



Gross value added and subsidies

Gross value added at basic prices of the EU-28's agricultural industry in 2016 was an estimated EUR 165.7 billion, while subsidies on production amounted to EUR 52.6 billion (see Table 3.1.4). The highest subsidies were generally granted to those EU Member States with the highest levels of output (France, Germany, Spain and Italy). Certain Member States received relatively more subsidies, considering their contribution to the gross value added, than others. In particular, Germany accounted for 12.7 % of subsidies on production in the total EU, but only for 10.3 % of EU-28 gross value added (2.5 percentage points of difference). Finland (2.4 percentage points), Ireland (1.8 percentage points) and Greece (1.3 percentage points) registered also a higher share

of subsidies in relation to their contribution to gross value added.

The type of subsidies provided to the EU-28's agricultural industry has changed over time as a result of successive reforms of the CAP, 'decoupling' subsidies from particular crops and moving towards a system of single-farm payments.

Subsidies on products in the EU-28 declined from EUR 5.7 billion in 2010 to EUR 3.8 billion by 2014. However, they increased from EUR 4.9 billion in 2015 to 5.3 billion in 2016 with the introduction of certain coupled payments. Subsidies on production in the EU-28 declined by EUR 1.7 billion from 2010 to 2016, changing from EUR 50.9 billion in 2010 to EUR 52.6 billion by 2016 (see Table 3.1.4).

Table 3.1.4: Agricultural gross value added and subsidies, 2010 and 2013-2016
(million EUR)

	Gross value added					Subsidies on production				
	2010	2013	2014	2015	2016	2010	2013	2014	2015	2016
EU-28	155 593	172 465	172 344	169 060	165 654	50 917	52 401	53 494	50 477	52 628
Belgium	2 491	2 293	2 142	2 239	2 164	691	598	643	645	611
Bulgaria	1 356	1 694	1 732	1 621	1 777	466	852	821	677	810
Czech Republic	966	1 427	1 486	1 423	1 688	1 062	1 059	1 198	1 093	1 135
Denmark	2 665	2 800	3 209	2 347	1 938	982	999	964	940	941
Germany	18 236	21 994	21 546	15 283	16 986	7 311	6 999	6 961	6 991	6 699
Estonia	235	333	344	277	151	165	192	168	150	167
Ireland	1 389	2 001	2 174	2 376	2 316	1 695	1 640	1 603	1 472	1 667
Greece	5 617	4 964	5 194	5 750	5 210	2 793	2 558	2 518	2 301	2 361
Spain	22 366	22 619	22 996	23 995	25 497	6 081	5 878	5 944	5 673	5 805
France	27 862	26 381	28 979	30 086	26 826	8 545	8 274	8 045	8 455	8 178
Croatia	1 370	1 006	786	885	968	46	184	265	393	382
Italy	26 448	33 024	30 471	32 611	30 577	4 406	4 797	5 918	4 018	5 142
Cyprus	315	321	268	274	305	40	51	66	33	56
Latvia	236	255	298	400	333	249	304	291	264	289
Lithuania	651	1 058	1 022	1 121	998	199	196	202	194	170
Luxembourg	97	103	128	99	113	65	65	66	73	64
Hungary	1 980	2 903	3 231	3 251	3 450	1 288	1 574	1 617	1 318	1 334
Malta	58	56	55	63	62	25	18	20	28	6
Netherlands	9 673	10 194	9 965	9 999	10 370	922	1 144	1 031	1 056	887
Austria	2 579	2 736	2 687	2 629	2 749	1 547	1 518	1 440	1 379	1 461
Poland	8 236	9 398	8 141	7 858	8 588	3 045	3 855	4 077	4 073	3 728
Portugal	2 608	2 539	2 486	2 623	2 584	724	723	688	610	1 052
Romania	6 591	7 621	7 110	6 501	6 541	1 012	1 460	1 839	1 577	2 628
Slovenia	404	407	476	533	474	242	259	251	243	253
Slovakia	361	598	602	474	626	433	469	489	467	488
Finland	1 445	1 277	1 272	1 081	1 045	1 832	1 738	1 711	1 591	1 579
Sweden	1 548	1 625	1 700	1 850	1 641	976	1 068	1 014	901	946
United Kingdom	7 811	10 835	11 844	11 412	9 678	4 074	3 931	3 648	3 861	3 790
Iceland	86	90	122	158	162	4	1	1	1	2
Norway	1 953	2 050	2 033	2 065	2 040	604	740	710	661	610
Switzerland	2 776	3 251	3 485	3 597	3 678	2 084	2 375	2 424	2 746	2 694

Note: values at basic prices.

Source: Eurostat (online data code: aact_eaa01)



3.2 Agricultural labour input

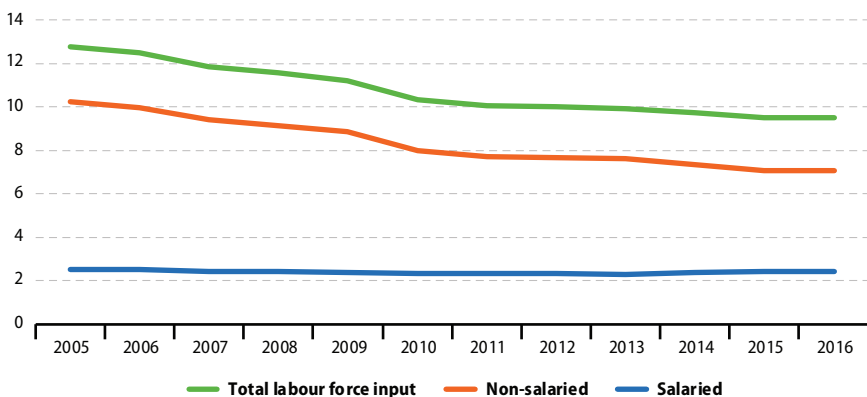
The vast majority of the EU's farms are relatively small, family-run holdings. Often, these holdings draw on family members to provide labour (in addition to the farm holder). Agriculture is also characterised by seasonal labour peaks (for example those linked to harvesting), with high numbers of workers hired for relatively short periods of time. Otherwise, some farmers are occupied on a part-time basis (and they may have alternative, sometimes important sources of income) so while there are a large number of people providing labour within agriculture, many of these will have their main employment elsewhere. For this reason, estimates are made of the volume of labour input provided in terms of full-time labour equivalents (measured in annual work units (AWU)).

EU-28 agricultural labour input was estimated at 9.5 million AWUs (the equivalent of 9.5 million people working full-time) in 2016. As shown in Table 3.1.5, among the EU Member States, the highest levels of agricultural labour input were recorded for Poland (1.7 million AWUs), Romania (1.6 million AWUs) and Italy (1.1 million AWUs).

Between 2005 and 2016 there was a reduction of one quarter (-25.7 %) in agricultural labour input in the EU-28. The overall contraction of 3.3 million AWUs between 2005 and 2016 was almost exclusively due to a reduction in non-salaried labour input (2.4 million AWUs or 74.3 % of the total labour force input in 2016). Although the volume of agricultural labour input from salaried persons in the EU-28 fell in successive years from 2005 onwards, there was a slight increase in the number of AWUs for salaried persons in 2012, 2015 and in 2016 (see Figure 3.2.1).

As shown in the Table 3.2.1, the total agricultural labour input declined over the period 2010-2016 (- 8.3 %). Only 3 Member States recorded an increase: Slovenia and Lithuania (both + 3.8 %) and Malta (+ 2.0 %), while for the United Kingdom it remained relatively stable. A further 13 Member States registered declines in agricultural labour input, although less marked than for EU-28. The remaining 11 Member States showed steeper decreases, in particular Bulgaria (- 36.8 %), Estonia (- 20.0 %) and Portugal (-19.0 %).

Figure 3.2.1: Agricultural labour input, EU-28, 2005-2016
(million annual work units)



Source: Eurostat (online data code: aact_ali01)

**Table 3.2.1: Agricultural labour input, 2010 and 2013-2016**

	Total agricultural labour input (thousand annual work unit)					Change 2010-2016 (%)
	2010	2013	2014	2015	2016	
EU-28	10 345.3	9 913.5	9 737.4	9 504.3	9 490.1	-8.3
Belgium	61.9	57.9	57.3	56.8	57.5	-7.1
Bulgaria	406.5	321.2	297.5	276.4	256.8	-36.8
Czech Republic	108.8	105.1	104.9	104.8	104.5	-4.0
Denmark	54.2	52.7	54.1	55.1	54.0	-0.4
Germany	522.0	503.0	504.0	496.0	480.0	-8.0
Estonia	25.4	22.3	22.0	20.3	20.3	-20.0
Ireland	165.6	163.6	163.6	163.6	163.6	-1.2
Greece	441.5	467.0	454.5	442.4	430.8	-2.4
Spain	963.8	841.7	824.3	818.7	849.2	-11.9
France	809.1	781.0	774.5	761.6	752.9	-6.9
Croatia	202.0	191.0	188.0	182.0	174.0	-13.9
Italy	1 164.0	1 077.5	1 095.3	1 111.8	1 125.3	-3.3
Cyprus	25.4	25.6	25.0	17.7	20.9	-17.9
Latvia	85.9	82.9	76.4	77.9	76.3	-11.2
Lithuania	143.4	144.8	149.9	150.8	148.8	3.8
Luxembourg	3.7	3.6	3.5	3.5	3.5	-7.5
Hungary	444.2	444.4	462.9	441.9	434.3	-2.2
Malta	4.9	5.0	5.0	5.0	5.0	2.0
Netherlands	150.4	148.2	146.2	146.5	146.4	-2.7
Austria	127.9	124.2	121.8	119.6	118.0	-7.8
Poland	1 914.8	1 937.1	1 937.1	1 937.1	1 675.8	-12.5
Portugal	309.4	281.3	265.2	258.2	250.7	-19.0
Romania	1 639.0	1 564.0	1 433.0	1 293.0	1 592.0	-2.9
Slovenia	77.0	82.8	81.8	81.4	80.0	3.8
Slovakia	56.1	54.2	53.9	48.9	48.7	-13.2
Finland	82.1	75.9	81.2	79.4	71.0	-13.5
Sweden	65.3	62.1	60.8	59.6	58.3	-10.7
United Kingdom	291.1	293.5	293.6	294.3	291.7	0.2
Iceland	4.2	4.0	3.5	3.8	3.8	-10.2
Norway	51.4	48.1	47.0	45.9	45.0	-12.5
Switzerland	80.7	77.7	77.4	76.5	75.6	-6.3

Source: Eurostat (online data code: aact_ali01)



3.3 Agricultural income

Agricultural income (i.e. factor income) is a key measure for determining the viability of the agricultural sector. The factor income of the agricultural industry (the remuneration of all factors of production: land, capital, labour) in the EU-28 was valued at EUR 152.6 billion in basic price terms in 2016 (see Table 3.1.2).

Within agricultural accounts, real factor income per AWU, expressed as an index, is a measure of relative labour productivity. From 2005, the EU-28 index of agricultural income per AWU (2010=100) rose for two consecutive years, before falling back in 2009 (at the height of the financial and economic crisis) to almost the same level as in 2005. Thereafter, the index of real agricultural income per AWU rebounded, with relatively rapid growth in 2010 and 2011. Real agricultural income per AWU in the EU-28 remained relatively high from 2012 to 2016, with values around the 2011 level (see Figure 3.3.1).

The overall pattern for the development of real agricultural income per AWU in the EU-28 during the 2005–2016 period can be linked to the development of the two underlying components (income, and labour input) that are used in the construction of the index. EU-28 real factor income per AWU for the agricultural industry fluctuated considerably but in broad terms showed little overall change. This higher factor income was shared amongst a smaller workforce, resulting in stronger rises in average income per AWU.

The variations in real factor income per AWU can be linked to rising commodity prices (in 2007 and again in 2010 and 2011) and the downturn in agricultural activity resulting from the financial

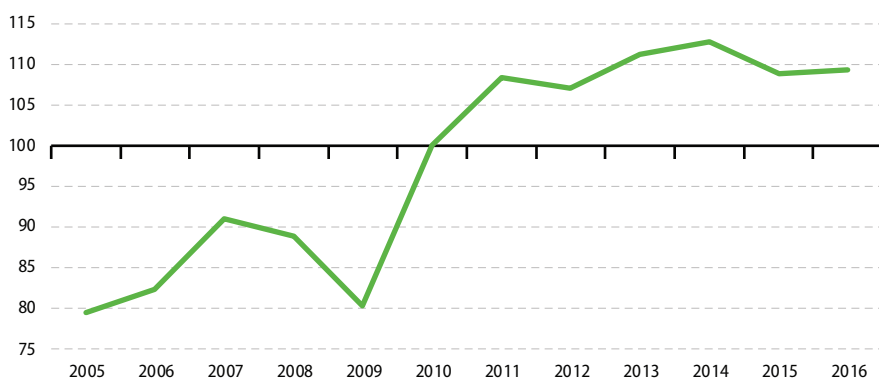
and economic crisis (in 2008 and 2009). Some of the biggest changes in EU-28 real factor income per AWU were recorded in 2009 and 2010, (– 9.5 % followed by + 24.8 %) and these were apparent in the overall development of the index for real agricultural income per AWU (see Figure 3.3.1). On the other hand, the relatively large declines in agricultural labour input recorded in 2007 and 2010 were also apparent as agricultural income per AWU increased in both years.

A group of eleven EU Member States reported that their index of agricultural income per AWU in 2016 was at a lower level than in 2010 (see Table 3.3.1). This group included Denmark (where the biggest contraction in income per AWU was recorded, – 39.7 %), Estonia (– 34.8 %), Malta (– 30.6 %), Finland (– 30.5 %) and Belgium (– 9.5 %). In the case of Malta, the reduction in agricultural income per AWU could be attributed to a reduction in real factor income combined with an increase in the number of AWUs, whereas in the other three EU Member States it could be largely attributed to a reduction in real factor income alone.

The index of real agricultural income per AWU rose in the EU Member States between 2010 and 2016. Increases were relatively small (below +10.0 %) in the Netherlands, Luxembourg and Slovenia. By contrast, the index of agricultural income per AWU (2010=100) increased more than 20 % between 2010 and 2016 in Bulgaria (188.2), Slovakia (173.2), Hungary (163.3), the Czech Republic (155.1), Portugal (130.6), Italy (129.9), Cyprus (125.8), Poland (125.2), Ireland (123.7) and Spain (123.0).



Figure 3.3.1: Agricultural income per annual work unit (Indicator A), EU-28, 2005-2016
(2010 = 100)



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

Table 3.3.1: Agricultural income per annual work unit (Indicator A), 2005-2016
(2010 = 100)

	Average 2005-2010	Average 2010-2016	2013	2014	2015	2016
EU-28	87.0	108.2	111.2	112.8	108.8	109.3
Belgium	87.8	90.9	87.7	83.4	87.3	80.5
Bulgaria	93.0	146.9	162.0	172.8	158.1	188.2
Czech Republic	91.7	135.9	134.9	155.3	137.7	155.1
Denmark	81.7	104.3	106.7	119.7	77.5	60.3
Germany	79.0	98.8	115.6	109.4	72.4	81.3
Estonia	76.5	114.2	134.6	127.4	103.2	65.2
Ireland	113.2	119.7	121.6	125.9	119.4	123.7
Greece	93.0	90.5	80.6	88.9	97.1	92.4
Spain	100.0	110.8	112.7	116.3	119.7	123.0
France	87.3	100.8	89.6	101.8	108.6	95.6
Croatia	100.3	95.6	90.3	78.2	105.8	117.7
Italy	110.3	127.9	150.2	136.3	133.7	129.9
Cyprus	99.7	103.4	102.2	94.7	123.3	125.8
Latvia	85.1	111.7	103.9	115.7	131.2	120.3
Lithuania	93.3	132.8	144.6	131.9	145.2	120.5
Luxembourg	127.3	102.5	91.6	121.4	95.2	103.6
Hungary	96.5	144.4	150.0	160.0	152.6	163.3
Malta	105.2	85.1	81.0	79.7	96.2	69.4
Netherlands	94.2	98.4	105.8	101.3	99.8	101.0
Austria	98.3	97.1	94.7	87.9	81.6	92.6
Poland	73.6	108.9	114.9	103.0	99.3	125.2
Portugal	93.2	104.5	106.9	108.2	110.7	130.6
Romania	83.2	113.5	111.5	121.8	120.7	118.1
Slovenia	98.8	103.5	92.8	105.3	115.7	104.9
Slovakia	76.5	134.6	130.3	143.3	142.7	173.2
Finland	87.4	81.8	86.3	77.9	64.8	69.5
Sweden	93.9	100.1	91.8	101.1	106.6	97.7
United Kingdom	90.8	108.0	119.2	116.2	98.2	95.4
Iceland	121.2	132.7	98.3	156.4	175.7	168.1
Norway	86.6	108.2	99.2	108.1	123.3	126.1
Switzerland	100.2	108.8	110.0	117.2	110.3	118.0

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



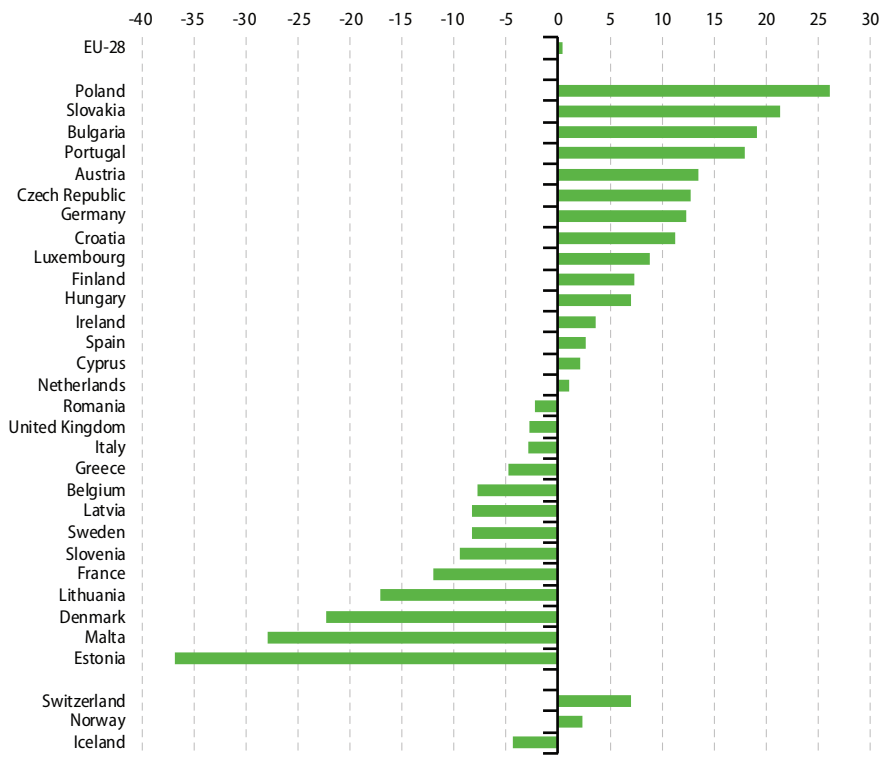
3

Agricultural accounts and prices

The latest developments from 2015–2016 (see Figure 3.3.2) show that the index of real agricultural income per AWU rose by 26.1% in Poland, while double-digit gains were also recorded in Slovakia (21.3%), Bulgaria (19.1%), Portugal (18.0%), Austria (13.5%), the Czech Republic (12.7%), Germany (12.3%) and Croatia (11.3).

A majority of Member States saw their real agricultural income per AWU vary by no more than +/- 10% between 2015 and 2016. In 2016, Estonia ranked first among the countries with the highest decrease (-36.8%), followed by Malta (-27.9%), Denmark (-22.3%), Lithuania (-17.1%) and France (-12.0%).

Figure 3.3.2: Change in agricultural income per annual work unit (Indicator A), 2015-2016 (%)



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



3.4 Price indices

EU-28 output prices for agricultural goods rose by 8.7 % in nominal terms from 2010–2016 (see Figure 3.4.1). Taking into account price inflation (based on the harmonised index of consumer prices, HICP), the real increase in (deflated) output prices for agricultural goods was 0.9 %. After a period of successive increases from 2010 to 2013, in 2014 the output price indexes of agricultural goods showed a general decrease, reaching 112.4 in 2014, 109.8 in 2015 and 108.7 in 2016 (2010 = 100) nominal prices.

Figure 3.4.1 also shows that prices for crop output increased 4.2 % over the period 2010–2016, while

for animal output there was a decrease of 2.8 %.

Table 3.4.1 presents information on deflated price indices for crop and animal outputs for the 2011–2016 period. For crop output at EU-28 level, the price indexes were lower in 2016 than in 2011 presenting a 3.4 % decrease. This was the case of the majority of EU Member States. Lithuania (– 38.7 %), Slovakia (– 28.7 %) and Latvia (– 25.1 %) were the EU Member States with the sharpest decreases of deflated output prices for crops. By contrast, output prices for crops rose at a relatively fast pace in Malta (+ 22.3 %) and Spain (+ 14.2 %) during the period 2011–2016.

Table 3.4.1: Deflated price indices, crop and animal output, 2011-2016
(2010 = 100)

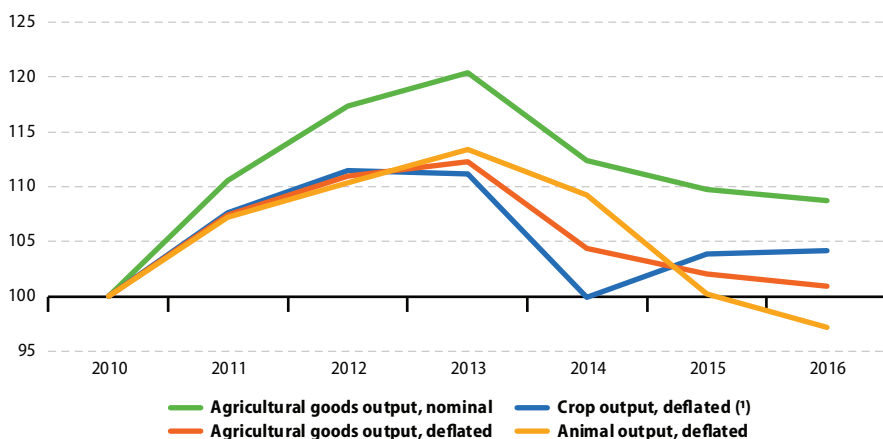
	Crop output (I ¹)						Animal output					
	2011	2012	2013	2014	2015	2016	2011	2012	2013	2014	2015	2016
EU-28	107.6	111.5	111.2	99.9	103.9	104.2	107.2	110.4	113.4	109.3	100.2	97.2
Belgium	89.7	107.1	109.4	75.5	84.1	91.7	105.2	109.2	113.4	104.9	90.9	87.5
Bulgaria	125.9	148.5	109.8	105.3	115.8	112.0	105.5	105.3	113.1	113.6	108.4	103.4
Czech Republic	130.6	129.6	134.7	120.0	117.0	112.6	105.9	107.7	110.3	115.3	102.9	94.9
Denmark	120.6	124.7	119.7	107.1	108.5	106.5	107.8	114.3	122.1	107.5	97.8	92.9
Germany	113.0	120.6	112.9	96.7	106.5	108.7	109.1	109.7	113.9	108.1	95.2	92.6
Estonia	:	:	:	:	:	:	:	:	:	:	:	:
Ireland	108.2	125.4	133.2	104.2	103.7	107.5	114.7	116.5	126.1	117.7	112.6	106.3
Greece	100.5	97.5	100.7	99.3	107.3	106.0	98.5	97.4	98.3	100.1	101.3	99.0
Spain	92.1	101.3	103.5	91.8	109.3	106.3	105.4	112.7	113.4	111.4	102.9	99.6
France	112.3	115.5	116.3	108.0	106.5	109.1	106.7	110.7	113.3	111.4	103.5	102.0
Croatia	106.9	111.5	96.4	87.6	93.5	93.1	103.4	108.3	106.7	106.1	99.9	98.0
Italy	105.6	107.8	112.1	105.4	108.0	104.6	107.4	111.2	111.9	109.3	104.0	100.1
Cyprus	119.9	120.4	121.0	115.3	119.3	125.0	106.9	104.7	104.7	105.8	104.6	111.2
Latvia	120.2	122.3	106.6	94.6	96.6	95.1	106.8	107.4	111.4	104.0	87.4	87.0
Lithuania	132.1	124.4	119.4	101.2	101.4	93.4	108.8	107.2	113.7	102.2	87.8	86.2
Luxembourg	105.5	117.2	100.1	92.5	95.6	94.9	104.6	104.6	112.5	110.3	96.2	95.1
Hungary	118.8	132.6	113.1	103.0	109.4	102.5	111.8	116.5	118.5	117.0	107.2	106.0
Malta	96.2	106.4	99.9	85.3	109.3	118.5	103.5	107.3	111.9	105.2	102.8	100.8
Netherlands	97.5	97.2	103.6	92.5	96.4	99.9	107.9	110.3	112.2	110.8	99.0	94.3
Austria	101.6	102.8	97.9	87.8	90.2	89.3	106.2	108.9	111.2	108.3	100.4	97.7
Poland	117.8	113.9	105.8	95.3	98.5	99.0	112.1	117.2	118.1	113.3	103.6	104.6
Portugal	92.9	91.4	96.8	88.2	91.4	101.4	100.4	103.8	107.4	106.1	96.9	91.1
Romania	111.1	119.7	122.0	103.3	101.0	102.2	103.6	107.7	107.1	106.2	103.1	101.8
Slovenia	106.0	106.4	119.8	100.7	107.0	111.5	108.3	110.0	112.0	112.5	103.7	98.0
Slovakia	119.3	121.5	110.1	95.4	95.7	90.6	106.0	110.4	108.1	107.4	102.9	98.7
Finland	116.5	116.4	122.6	104.0	106.0	107.6	107.0	111.2	117.1	102.4	95.9	89.9
Sweden	109.6	109.1	105.2	98.4	99.9	99.0	100.9	100.2	106.6	104.9	100.4	102.0
United Kingdom	113.4	115.5	116.7	96.4	90.8	94.9	104.9	106.9	112.0	106.1	95.4	91.4

(¹) Including fruit and vegetables.

Source: Eurostat (online data code: [agri_pi10_outa](#))

**Figure 3.4.1: Output price indices, EU-28, 2010-2016**

(2010 = 100)



(!) Including fruit and vegetables.

Source: Eurostat (online data code: [apri_pi10_oua](#))

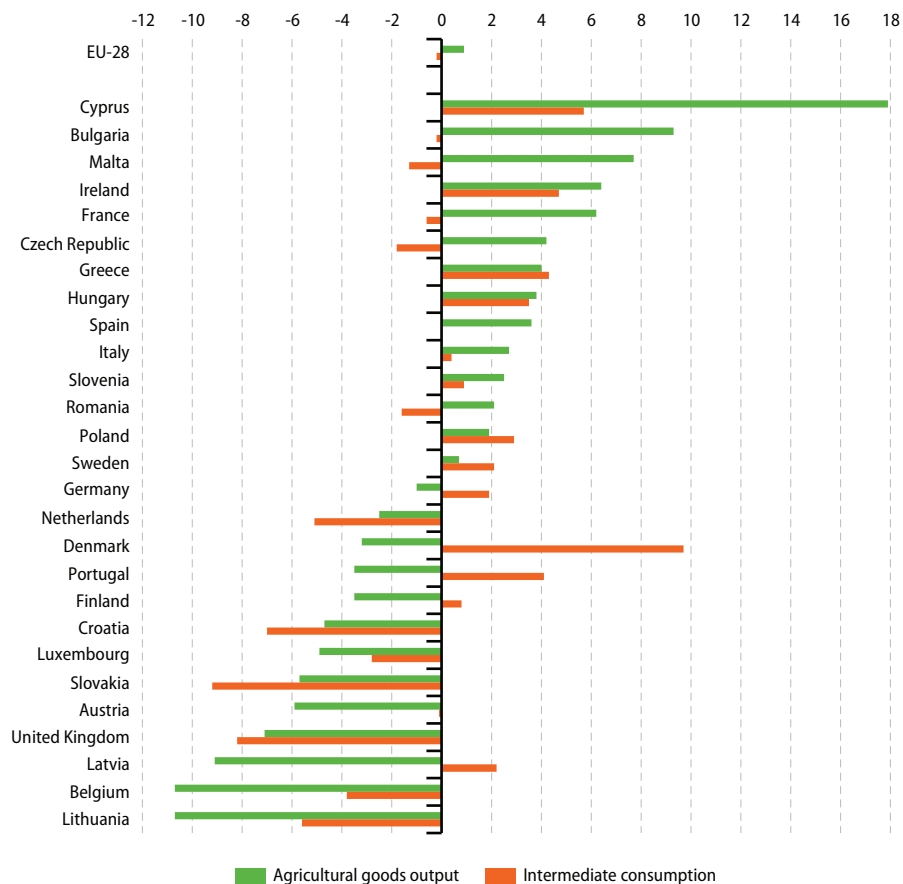
From 2011 to 2016 the output prices for animals decreased by 10.0 % in the EU-28. Decreases occurred in all the EU Member States with the exception of Greece, Cyprus and Sweden (with growth of 0.5%, 4.3% and 1.1% respectively). Lithuania (– 22.6 %), Latvia (– 19.8 %), Belgium (– 17.7 %) and Finland (– 17.1 %) recorded the highest decreases.

Figure 3.4.2 provides a comparison between deflated price indices for intermediate consumption and the output of agricultural goods. Deflated prices for intermediate consumption in the EU-28's agricultural industry decreased by 0.2 % between 2010 and 2016,

while the output price index for agricultural goods rose by 0.9 % (over the same period). There does not appear to be any robust link between the developments of these two indices across the EU Member States. In four EU Member States there was a relatively high price increase (over 3.5 %) for both intermediate consumption and the output of agricultural goods (Hungary, Greece, Ireland and Cyprus). In Denmark and Portugal the intermediate consumption recorded a price increase of over 4 % and there was a negative growth in the prices of agricultural goods output.



Figure 3.4.2: Change in deflated price indices for the agricultural industry, 2010-2016 (%)



Note: Estonia not available. Ranked on 'Agricultural goods output'.
 Source: Eurostat (online data codes: [apri_pi10_outa](#) and [apri_pi10_ina](#))



Data sources and availability

Economic accounts for agriculture (EAA) are a satellite account of the European system of accounts (ESA 2010). They cover the agricultural products and services produced over the accounting period sold by agricultural units, held in stocks on farms, or used for further processing by agricultural producers. The concepts of the EAA are adapted to the particular nature of the agricultural industry: for example, the EAA includes not only the production of grapes and olives but also the production of wine and olive oil by agricultural producers. It includes information on intra unit consumption of crop products used in animal feed, as well as output accounted for by own account production of fixed capital goods and own final consumption of agricultural units.

The EAA comprises a production account, a generation of income account, an entrepreneurial income account and some elements of a capital account. For the production items, EU Member States transmit to Eurostat values at basic prices, as well as their components (values at producer prices, subsidies on products, and taxes on products).

The output of agricultural activity includes output sold (including trade in agricultural goods and services between agricultural units), changes in stocks, output for own final use (own final consumption and own-account gross fixed capital formation), output produced for further processing by agricultural producers, as well as intra-unit consumption of livestock feed products. The output of the agricultural sector is made up of the sum of the output of agricultural products and of the goods and services produced in inseparable non-agricultural secondary activities; animal and crop output are the main product categories of agricultural output.

Three indicators are computed in relation to agricultural income:

- an index of real income of factors in agricultural activity per AWU (indicator A);
- an index of real net agricultural entrepreneurial income, per unpaid AWU (indicator B);
- and the net entrepreneurial income of agriculture (indicator C).

The information presented on agricultural income relates to indicator A (the real income of factors in agriculture per AWU). This indicator corresponds to the real (deflated) net value added at factor cost of agriculture per AWU. Net value added at factor cost is calculated by subtracting from the value of agricultural output at basic prices the value of intermediate consumption, the consumption of fixed capital, and adding the value of (other) subsidies less taxes on production.

Agricultural price statistics provide information on the development of producer (output) prices for agricultural products and purchaser prices for the means of agricultural production (the intermediate consumption of goods and services within the production process). Data on prices are available for single commodities and for larger aggregates in the form of absolute prices and price indices.

The index of producer prices for agricultural products is based on sales of agricultural products, while the input index (for intermediate goods and services) is based on purchases of the means of agricultural production. Prices should be recorded at points which are as close as possible to those of the transactions which the farmer actually undertakes. This means that product prices should be recorded at the first marketing stage so as to best indicate the actual producer prices received by farmers.



Similarly the prices paid by farmers for their means of production should be recorded at the last marketing stage, that at which the items arrive on the farm, so as to best indicate the purchase prices paid by farmers. It is assumed, by convention, that the fertilisers and feeding stuffs purchased are used in the same production period and that there are no stocks on farm.

As regards spatial comparisons, the structure of the weights with respect to products and means of production reflect the value of the sales and purchases in each country during the base year (currently 2010=100); the weights therefore differ from one country to another.

4

Agricultural products





Introduction

There is a diverse range of natural environments, climates and farming practices across the European Union (EU), reflected in the broad array of food and drink products that are made available for human consumption and animal feed, as well as a range of inputs for non-food processes. Indeed, agricultural products form a major part of the cultural identity of the EU's people and its regions.

Statistics on agricultural products may be used to analyse developments within agricultural markets in order to help distinguish between

cycles and changing production patterns; they can also be used to study how markets respond to policy actions. Agricultural product data also provide supply-side information, furthering understanding as regards price developments which are of particular interest to agricultural commodity traders and policy analysts.

This chapter presents statistics on crop production, livestock and meat production and milk and milk products in the European Union (EU).



4.1 Crops

The term 'crop' covers a very broad range of cultivated plants. Within each type of crop there can be considerable diversity in terms of genetic and phenotypic (physical or biochemical) characteristics. The range and variety of crops grown across the European Union (EU) reflects their heritable traits as well as the ability of plant breeders to harness those traits to best respond to the myriad of topographic and climatic conditions, pests and diseases.

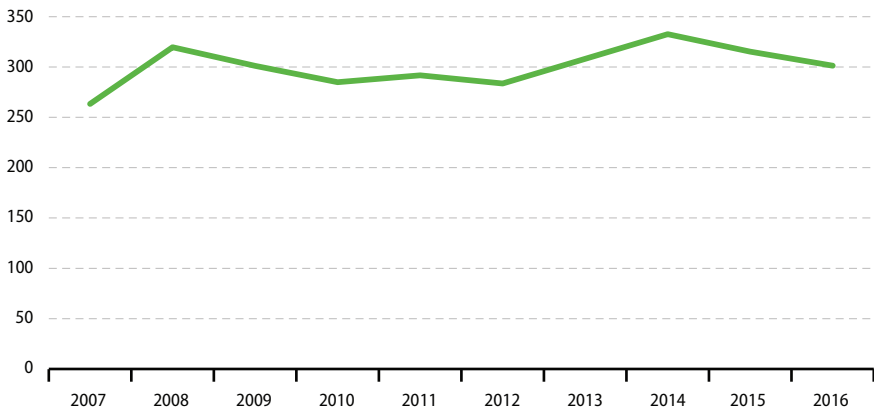
The statistics on crop production in this chapter are shown at an aggregated level and have been selected from over 100 different crop products for which official statistics are collected.

Cereals

In 2016, the harvest of cereals in the EU decreased by about 4.4 % compared to the previous year, which was largely explained by unfavourable climatic conditions.

The harvested production of cereals (including rice) in the EU-28 was around 301 million tonnes in 2016 (see Table 4.1.1). This represented about 11.6 % of global cereal production⁽¹⁾. EU-28 production of cereals in 2016 was almost 13.9 million tonnes lower than in 2015 (see Figure 4.1.1).

Figure 4.1.1: Production of cereals, EU-28, 2007–2016
(million tonnes)



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

⁽¹⁾ Based on estimates made by the United Nations' Food and Agriculture Organization. See <http://www.fao.org/3/a-I5703E.pdf> Food Outlook.

Table 4.1.1: Production of cereals, 2016
(thousand tonnes)

	Total cereals	Common wheat and spelt	Grain maize and corn-cob-mix	Barley	Oats	Rye and winter cereal mixtures (maslin)
EU-28	301 358	134 558	62 793	60 082	8 123	7 689
Belgium	2 335	1 447	481	346	16	2
Bulgaria	8 945	5 608	2 226	709	31	15
Czech Republic	8 596	5 455	846	1 845	132	107
Denmark	9 130	4 202	44	3 950	278	577
Germany	45 401	24 329	4 018	10 731	536	3 174
Estonia	934	456	0	357	65	32
Ireland	2 311	648	0	1 480	183	0
Greece	3 474	358	1 552	358	82	24
Spain	24 115	6 815	4 070	9 176	1 110	435
France	54 209	27 560	11 941	10 435	347	98
Croatia	3 554	967	2 154	263	80	5
Italy	18 219	2 989	6 840	988	260	13
Cyprus	10	0	0	3	0	0
Latvia	2 703	2 062	0	283	146	141
Lithuania	5 121	3 844	86	545	155	77
Luxembourg	139	70	1	34	5	4
Hungary	16 645	5 453	8 730	1 594	104	84
Malta	0	0	0	0	0	0
Netherlands	1 387	1 013	123	234	7	5
Austria	5 691	1 853	2 180	860	95	203
Poland	29 849	10 828	4 343	3 441	1 358	2 395
Portugal	1 142	77	711	47	66	16
Romania	21 765	8 406	10 746	1 817	381	26
Slovenia	638	163	346	92	4	4
Slovakia	4 746	2 223	1 566	603	38	46
Finland	3 564	824	0	1 581	1 035	87
Sweden	5 481	2 842	14	1 538	772	102
United Kingdom	21 965	14 383	19	6 655	816	49
Norway	1 210	286	:	574	330	20
Switzerland	743	387	144	159	7	9
Montenegro	8	2	3	1	1	0
Form. Yug. Rep. of Macedonia	641	306	147	145	8	10
Albania	698	275	380	9	32	3
Serbia	10 868	2 885	7 377	396	81	14
Turkey	34 913	16 985	6 400	6 700	225	301
Bosnia and Herzegovina	1 658	307	1 178	77	29	13

Note: 'Total cereals' includes cereals for the production of grain (including seed).

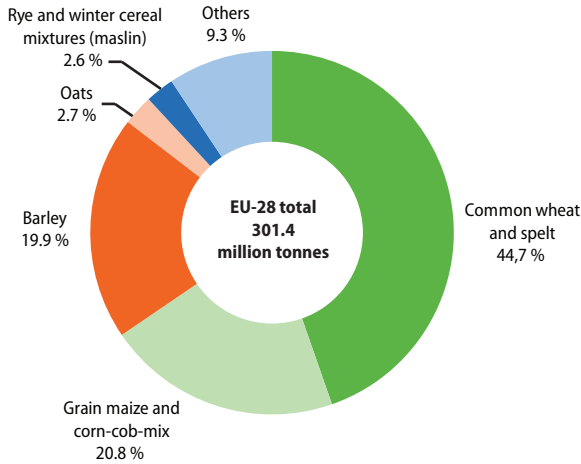
Source: Eurostat (online data code: [apro_acs_a](#))

Common wheat and spelt, grain maize and corn-cob-mix (CCM) and barley accounted for a high share (85.4 % in 2016) of the cereals produced in the EU-28 (see Figure 4.1.2).

Compared to 2015, EU-28 cereal production decreased by 4.4 % in 2016.

A decrease was recorded for common wheat and spelt (–11.5 %), rye and winter cereal mixtures (–6.2 %) and barley (–3.0 %), while grain maize and oats increased by about 6.5 % and 6.9 % respectively (see Figure 4.1.3).

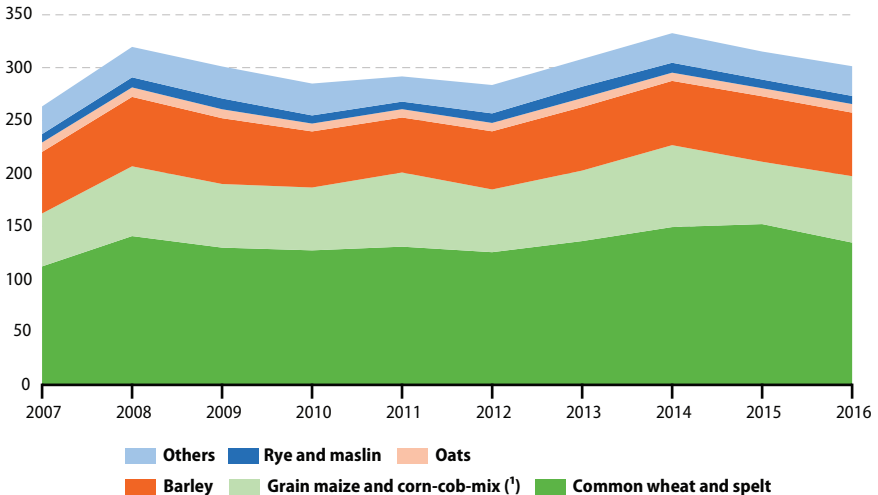
Figure 4.1.2: Share of main cereals, EU-28, 2016
(% of EU-28 total cereals production)



Note: 'Total cereals' includes cereals for the production of grain (including seed). 'Others' includes rice, triticale, sorghum and buckwheat, millet, canary seed, etc).

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

Figure 4.1.3: Production of main cereals, EU-28, 2007–2016
(million tonnes)



Note: 'Rye and maslin' includes mixture of rye with other winter sown cereals. 'Others' includes rice, triticale and sorghum.

(¹) Includes estimates for Denmark 2007-2009 and Sweden 2007-2008.

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



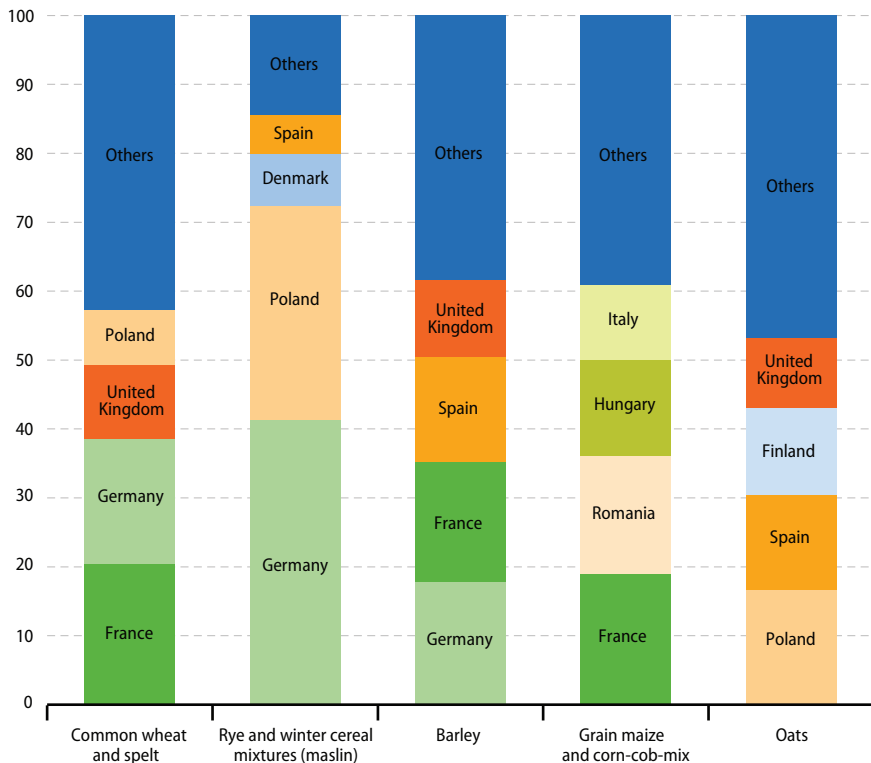
4

Agricultural products

France accounted for around a fifth of the EU-28 cereal production in 2016. France (18.0 %), Germany (15.1 %) and Poland (9.9 %) together contributed to 43% of the EU total. Spain was the next largest cereal producer, accounting for 8.0 %

of the EU-28 total. Among the EU Member States, France was the largest producer of common wheat and spelt and grain maize in 2016, for barley Germany was the largest producer with 17.9 % (see Figure 4.1.4).

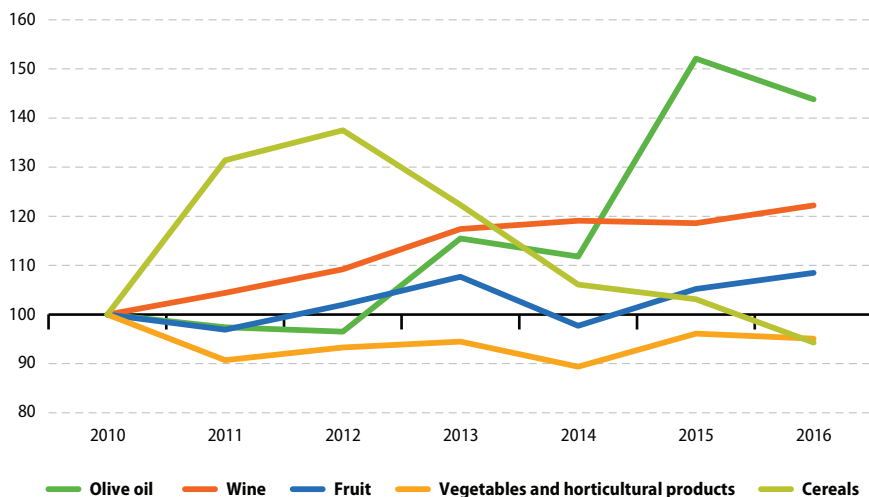
Figure 4.1.4: Production of cereals by main producing EU Member States, 2016
(% of EU-28 total cereals production)



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



Figure 4.1.5: Deflated price indices for selected crop outputs, EU-28, 2010-2016 (2010 = 100)



Note: Eurostat estimates.

Source: Eurostat (online data codes: [agri_pi10_outa](#))

In 2016, the relatively good cereal harvest, combined with sufficient stocks and a general negative trend in the common market, led to a decrease in the price of cereals⁽²⁾. This went down by 8.5 % compared to 2015 and by 21.4 % if

compared to the average of the previous 5 years (see Figure 4.1.5).

The median of soft wheat prices for 25 countries providing the data was 14.06 EUR/100 kg (see Table 4.1.2).

(2) Short Term Outlook for EU arable crops, dairy and meat markets –Autumn 2017 https://ec.europa.eu/agriculture/sites/agriculture/files/markets-and-prices/short-term-outlook/current_en.pdf



Table 4.1.2: Selling prices of selected crop products, 2016
(EUR per 100 kg)

	Soft wheat	Tomatoes ⁽¹⁾	Apples ⁽²⁾	Grapes ⁽³⁾	Olive oil ⁽⁴⁾
Belgium	13.3	:	35.4	:	:
Bulgaria	14.1	32.3	22.7	29.6	:
Czech Republic	13.7	91.1	36.3	72.4	:
Denmark	13.9	:	42.4	:	:
Germany	14.1	68.6	46.1	:	:
Estonia	14.6	:	:	:	:
Ireland	:	:	:	:	:
Greece	18.5	45.1	55.8	41.7	342.5
Spain	15.7	54.3	43.0	35.4	294.3
France	20.1	:	:	:	:
Croatia	12.2	58.5	37.2	70.7	969.6
Italy	17.8	79.6	54.0	:	454.0
Cyprus	:	:	84.0	35.0	305.0
Latvia	13.5	:	44.5	:	:
Lithuania	14.5	:	36.7	:	:
Luxembourg	14.4	:	138.0	125.0	:
Hungary	12.8	62.7	26.3	28.8	:
Malta	:	78.2	46.0	:	:
Netherlands	14.9	:	48.7	:	:
Austria	9.9	:	34.9	97.7	:
Poland	14.2	32.6	13.4	:	:
Portugal	16.5	82.2	64.0	38.1	368.5
Romania	14.0	68.4	59.5	37.2	:
Slovenia	13.4	:	49.5	55.5	:
Slovakia	12.3	68.8	34.7	53.0	:
Finland	15.1	:	146.7	:	:
Sweden	13.5	:	60.6	:	:
United Kingdom	14.7	:	84.2	:	:

(¹) Tomatoes in the open, all qualities.

(²) Dessert apples, all varieties.

(³) Grapes for wine production.

(⁴) Extra virgin olive oil: prices per 100 litres.

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



Potatoes and sugar beet

In 2016, the largest area of root crops (1.7 million hectares) was occupied by potatoes, closely followed by sugar beet (1.5 million hectares) (see Table 4.1.3). Other root crops not classified elsewhere (e.g. fodder beet, fodder kale, rutabaga, fodder carrot, turnips, etc.) were of lesser importance.

Thus, this section concentrates on potatoes and sugar beet only and offers an overview of selected statistics and indicators linked to their production in the EU-28.

The EU is the world's leading producer of sugar beet, with approximately 50 % of the global production but only 20 % of the world's sugar production comes from sugar beet^(*).

^(*) European Commission's Directorate-General of Agriculture and Rural Development. See also https://ec.europa.eu/agriculture/sugar_en

Table 4.1.3: Harvested production and cultivation area of potatoes and sugar beet, 2016

	Potatoes		Sugar beet	
	Harvested production (thousand tonnes)	Cultivation area (thousand hectares)	Harvested production (thousand tonnes)	Cultivation area (thousand hectares)
EU-28	55 969.8	1 690.4	111 722.7	1 498.2
Belgium	3 404.6	89.2	4 023.6	55.5
Bulgaria	127.2	8.4	0.0	0.0
Czech Republic	699.6	23.4	4 118.4	60.7
Denmark	1 954.0	46.1	1 696.1	33.1
Germany	10 772.1	242.5	25 497.2	334.5
Estonia	62.9	3.7	0.0	0.0
Ireland	352.0	9.0	0.0	0.0
Greece	552.2	20.1	265.1	5.0
Spain	2 246.2	72.1	3 014.4	32.9
France	6 959.6	179.0	34 644.1	405.2
Croatia	194.0	9.9	1 169.6	15.5
Italy	1 368.9	48.1	2 046.3	32.3
Cyprus	122.8	5.0	0.0	0.0
Latvia	203.6	10.9	0.0	0.0
Lithuania	344.8	21.6	933.5	15.2
Luxembourg	18.7	0.6	0.0	0.0
Hungary	429.4	16.4	1 121.3	16.0
Malta	6.8	0.8	0.0	0.0
Netherlands	6 534.3	155.6	5 502.2	70.7
Austria	767.3	21.2	3 534.4	43.5
Poland	8 624.1	300.7	13 523.8	203.4
Portugal	451.0	23.3	5.1	0.1
Romania	2 689.7	186.2	1 012.2	24.9
Slovenia	84.9	3.2	0.0	0.0
Slovakia	177.2	8.3	1 506.9	21.5
Finland	587.6	21.7	433.6	11.6
Sweden	861.3	24.2	1 988.0	30.6
United Kingdom	5 373.0	139.0	5 687.0	86.0
Iceland	10.0	0.5	0.0	0.0
Norway	363.2	12.0	:	:
Switzerland	372.9	11.0	1 337.2	19.2
Montenegro	29.9	1.6	0.0	0.0
Form. Yug. Rep. of Macedonia	198.5	13.6	0.0	0.0
Albania	238.3	9.7	29.6	0.7
Serbia	714.4	40.0	2 683.9	49.0
Turkey	4 751.0	145.0	19 465.0	322.0
Bosnia and Herzegovina	423.0	35.5	0.0	0.0
Kosovo ⁽¹⁾	98.6	3.8	:	:

⁽¹⁾ This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

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



The EU sugar market has been regulated by production quotas until September 2017. DG Agriculture and Rural development has set up a Sugar Market Observatory in order to provide the EU sugar sector with more transparency by means of disseminating market data and short-term analysis in a timely manner.

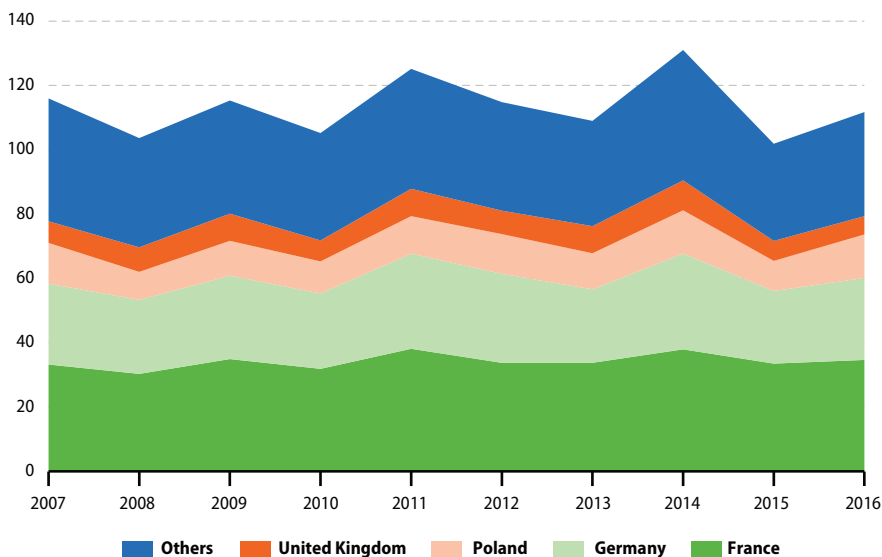
France, Germany and Poland had the highest shares of potato and sugar beet production in the EU

In 2016, the EU-28 produced 111.7 million tonnes of sugar beet — 9.7 million tonnes more than in 2015 (see Figure 4.1.6). More than half of the EU-28 sugar beet production in 2016 came from

France (31.0 %) and Germany (22.8 %) combined, Poland (12.1 %) and the United Kingdom (5.1 %) being the next largest producers.

In contrast to sugar beet, potato production was more widely spread across the EU Member States. Even so, Germany, which reported the highest level of production (19.2 % of the EU-28 total in 2016), and Poland (15.4 %) produced more than one-third of EU-28 total production. Together with three other Member States, the Netherlands (11.7 %), France (12.4 %) and the United Kingdom (9.6 %), these five countries produced 68.4 % of total EU-28 potato production.

Figure 4.1.6: Production of sugar beet by main producing EU Member States, 2007-2016 (million tonnes)



Source: Eurostat (online data code: apro_acs_a)



Oilseeds

Main oilseed crops cultivated in the EU are rape and turnip rape, sun flower and soya. The production was 31.1 million tonnes in the EU in 2016 which is in line with the 5-year average (–0.8 % if compared to the 5-year average). However, some shifts occurred between crops.

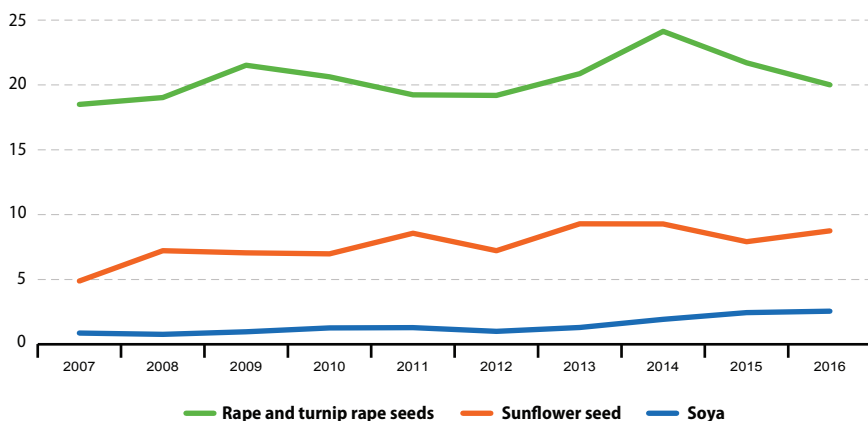
In 2016, the rape and turnip rape seeds production was 20 million tonnes and it was the most common oil seed crop in the EU despite

its sharp decline since 2014 (–17.1 %) (see Figure 4.1.7).

The EU-28 sunflower seed production in 2016 was 8.8 million tonnes and decreased by –14.8 % compared to 2014, followed by increase of 10.7 % between 2015 and 2016.

In 2016, the EU-28 soya production accounted for 2.5 million tonnes and it is steady increase since 2012.

Figure 4.1.7: Production of rape and turnip rape seed, sunflower seeds and soya, EU-28, 2007-2016
(million tonnes)



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

Vegetables

The EU supports the fruits and vegetables through the Common Market Organisation for Fruit and Vegetable (CMO). This policy has four main goals:

1. a more competitive and market-oriented sector;
2. less crisis-related instabilities in producers' income;
3. more consumption of fruit and vegetables in the EU; and
4. increased use of eco-compatible cultivation and production techniques.

The vegetable sector is a key sector in EU agriculture, weighting 13.7 % of EU agricultural output.

In 2016, the total production of vegetables^(*) in the EU was 63.9 million tonnes in 2016. Spain (24.1 %) and Italy (17.4 %) were the most important producers.

(*) It includes also melons and strawberries.

Tomatoes, carrots and onions were the most important vegetables in 2016. In the EU 18 million tonnes of tomatoes were produced in 2016. Approximately two thirds came from Italy and Spain (11.2 million tonnes). 6.6 million tonnes of onions and 5.6 million tonnes of carrots were also produced in 2016 (see Table 4.1.4).

Carrot production was relatively high in Poland and the United Kingdom — together these two countries accounted for over a quarter (14.7 % and 12.9 % respectively) of EU-28 output in 2016. The Netherlands and Spain were the EU's main onion producing Member States, together accounting for 43.4 % of EU-28 output in 2016.

Table 4.1.4: Production of fruit and vegetables, 2016
(thousand tonnes)

	Tomatoes	Carrots	Onions	Apples	Peaches	Oranges
EU-28	17 956.3	5 593.6	6 577.9	12 568.5	2 721.7	6 363.2
Belgium	259.5	385.4	130.8	233.7	0.0	0.0
Bulgaria	141.4	7.4	14.9	44.8	29.4	0.0
Czech Republic	14.4	26.6	42.0	125.0	0.3	0.0
Denmark	10.6	117.6	62.0	28.7	0.0	0.0
Germany	85.3	641.6	616.5	1 032.9	0.0	0.0
Estonia	0.4	11.1	0.1	2.8	0.0	0.0
Ireland	4.0	52.2	6.0	21.8	0.0	0.0
Greece	1 014.4	34.9	217.5	278.9	627.8	916.7
Spain	5 233.5	405.0	1 407.9	621.2	902.9	3 524.0
France (¹)	822.7	578.5	458.1	1 819.8	108.9	3.7
Croatia	24.0	12.8	25.0	44.0	3.3	0.3
Italy	5 990.5	530.8	450.7	2 455.6	945.3	1 591.5
Cyprus	13.4	1.8	6.6	4.2	1.6	26.5
Latvia	5.8	14.8	5.2	9.8	0.0	0.0
Lithuania	11.4	43.0	25.0	57.5	0.0	0.0
Luxembourg	0.1	1.0	0.1	2.4	0.0	0.0
Hungary	201.2	79.7	61.5	485.9	37.4	0.0
Malta	12.4	1.5	8.2	0.0	0.2	1.0
Netherlands	890.0	600.4	1 449.4	317.4	0.0	0.0
Austria	55.1	98.5	163.3	101.7	1.3	0.0
Poland	867.0	822.0	651.4	3 604.3	10.6	0.0
Portugal	1 693.9	95.7	69.9	241.6	24.6	299.6
Romania	425.6	111.7	189.6	456.9	22.4	0.0
Slovenia	8.7	5.6	10.9	42.7	4.7	0.0
Slovakia	18.9	6.4	29.9	20.7	1.1	0.0
Finland	40.6	73.0	26.2	6.4	0.0	0.0
Sweden	14.6	111.7	59.4	26.8	0.0	0.0
United Kingdom	97.0	723.0	390.0	481.0	0.0	0.0
Iceland	1.4	0.8	0.0	0.0	0.0	0.0
Switzerland	45.7	74.0	40.8	135.9	0.0	0.0
Montenegro	3.2	0.0	1.1	1.6	0.8	0.0
Form. Yug. Rep. of Macedonia	162.0	4.3	61.0	101.1	12.1	:
Albania	284.6	14.9	99.2	101.5	:	10.3
Turkey	12 600.0	555.0	2 255.0	2 926.0	585.0	1 850.0
Bosnia and Herzegovina	57.1	17.6	45.0	69.1	7.7	0.0

(¹) oranges: 2015 data.

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



The price index of fresh vegetables decreased by 1.0 % compared to 2015, and increased by 2.5 % if compared to the average of the previous 5 years (see Figure 9). The median price for tomatoes⁽²⁾ was € 68.37 per 100 kg (see Table 4.1.2).

Fruit

The fruit sector is another key element in EU agriculture, weighting 6.8 % of EU agricultural output.

In 2016, the total fruit production⁽³⁾ in the EU was 36.4 million tonnes. Spain (29.1 %), Italy (23.9 %) and Poland (12.2 %) were the most important producers.

The EU fruit sector offers a large number of different products. The most important fruits, in terms of the volume of harvested products, are apples (12.6 million tonnes), oranges (6.4 million tonnes) and peaches (2.7 million tonnes) (see Table 4.1.4).

Apples are produced in almost all EU Member States, although Poland (28.7%), Italy (19.5 %) and France (14.5 %) are, by far, the largest producers. Orange production in the EU is much more restricted by climatic conditions; the vast majority of oranges (80.4 %) are produced in Spain (55.4 %) and Italy (25.0 %).

In 2016, the price index for fruits increased by 3.1 % compared with 2015 and by 6.5 % compared with the period 2010-2015 (see Figure 4.1.5). The median price of dessert apples⁽⁴⁾ was about EUR 45.99 per 100 kg (see Table 4.1.2).

Grapes

The EU is the world's leading producer of wine, with almost half of the global vine-growing area and approximately 62.3 % of production by volume⁽⁵⁾.

Since the introduction of the common market organisation (CMO), the wine market has developed considerably.

The total production of grapes was 23.7 million tonnes in 2016. 2016 Italy (30.4 %), France (26.1 %), and Spain (24.5 %) were the EU countries producing most grapes for wine use, making up 81.0 % of total production (see Figure 4.1.8). They were followed by Germany (5.2 %), Portugal (3.3 %), Romania (2.9 %), Greece (2.3 %), Hungary (1.8 %), and Austria (1.1 %). Bulgaria, Croatia and Slovenia are also significant grape producers.

In 2016, the price of wine increased by 3.0 % compared to 2016 and by 7.4 % in comparison to the period 2010-2015 (see Figure 4.1.5). The median price of grapes⁽⁶⁾ for wine production was EUR 41.70 per 100 kg (see Table 4.1.2).

⁽²⁾ 13 Member States provided data on prices of tomatoes in the open (all varieties).

⁽³⁾ It includes also citrus fruits, berries and nuts.

⁽⁴⁾ 25 Member States provided data on prices of dessert apples (all varieties).

⁽⁵⁾ see https://ec.europa.eu/agriculture/sites/agriculture/files/dashboards/wine-dashboard_en.pdf

⁽⁶⁾ 11 Member States provided data on prices of grapes for wine production.



Olives

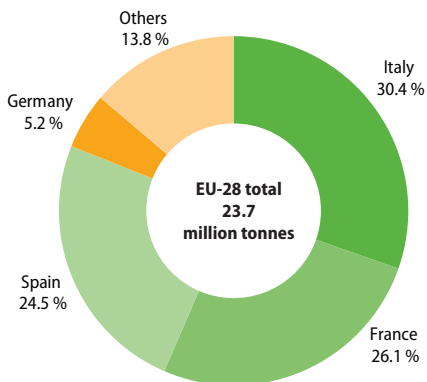
The EU is also the largest producer of olive oil in the world, accounting for almost three quarters of global production⁽¹⁰⁾. Most of global production comes from Southern Europe, North Africa and the Near East as 95 % of the olive trees in the world are cultivated in the Mediterranean region.

The total production of olives for oil was 10 million tonnes in 2016. Main European

olive producers were Spain (65.6 %), Italy (19.4 %), Greece (9.5 %) and Portugal (4.8 %) in 2016 (see Figure 4.1.9).

The olive oil price index decreased in 2016 compared to 2015 by 5.5 %. If we consider the rate of change over the period 2010-2016 the increase was 43.8 % (see Figure 4.1.5). The median price of extra virgin olive oil⁽¹¹⁾ was EUR 355.50 per 100 litres (see Table 4.1.2).

Figure 4.1.8: Production of grapes for wine, 2016
(% of EU-28 total harvested production)



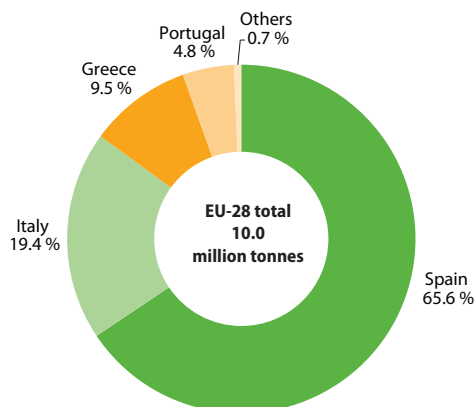
Source: Eurostat (online data code: [apro_acs_a](#))

⁽¹⁰⁾ See European Commission, Agriculture and rural development, Olive oil. https://ec.europa.eu/agriculture/olive-oil_en

⁽¹¹⁾ 5 Member States provided data on prices of extra virgin olive oil.



Figure 4.1.9: Production of olives for olive oil, 2016
(% of EU-28 total)



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

4.2 Livestock and meat

Statistics on livestock and meat production (based on the slaughter of animals fit for human consumption) give some indication of supply-side developments and adjustments, which are important to monitor the Common agricultural policy (CAP).

Back in 1959, the initial objective of the EU agriculture policy was to feed the EU population. Today's CAP has evolved substantially since these early efforts and is striving to tackle new challenges in search of a fairer and greener more competitive agriculture. The former policy need for production statistics for market monitoring by the European commission has evolved, with the Single Common Organisation of the Market, towards market transparency for all actors and EU citizens, contributing to feedback on the market signals, for meat as for the other agricultural products.

The main aims of the CAP are to improve agricultural productivity, so that consumers can benefit from a stable supply of affordable food,

while making sure that EU farmers can make a reasonable living.

Supply of affordable animal food products refers especially to meat and dairy products (but also eggs and honey). In order to limit uncertainty, EU institutions in charge of market support interpret the market signals using livestock numbers for their forecasts. The number of breeders on the one hand (for dairy or meat production), and animal stocks being grown and fattened on the other, contribute to preparing measures that will ensure a more stable — or at least more secure — market, benefitting both consumers and farmers.

The European Commission has been active in harmonising animal health measures and systems of disease surveillance, diagnosis and control; it has also developed a legal framework for trade in live animals and animal products. Ensuring the high quality of food is one of the various challenges to be met in order to secure the food supply of EU citizens.

Livestock population

In 2016, Spain, Germany, France, the United Kingdom and Italy held the largest populations of livestock in the EU-28. The highest numbers of pigs were recorded in Spain and Germany

(29.2 and 27.4 million head respectively), while the highest numbers of bovines was recorded in France (19.0 million head), sheep in the United Kingdom (23.8 million head) and goats in Greece (3.9 million head), as shown in Table 4.2.1.

Table 4.2.1: Livestock population, 2016
(million head)

	Bovine animals	Pigs	Sheep	Goats
EU-28⁽¹⁾	89.08	147.20	87.10	12.78
Belgium	2.50	6.18	:	:
Bulgaria	0.57	0.62	1.36	0.24
Czech Republic	1.34	1.48	:	:
Denmark	1.55	12.28	:	:
Germany	12.47	27.38	1.57	0.14
Estonia	0.25	0.27	:	:
Ireland	6.61	1.53	3.44	:
Greece	0.55	0.74	8.74	3.89
Spain	6.26	29.23	15.96	3.09
France	19.00	12.79	7.16	1.20
Croatia	0.46	1.16	0.62	0.08
Italy	6.31	8.48	7.28	1.03
Cyprus	0.06	0.35	:	:
Latvia	0.41	0.34	0.11	0.01
Lithuania	0.69	0.66	0.16	0.01
Luxembourg	0.20	0.10	:	:
Hungary	0.84	2.89	1.16	0.08
Malta	0.01	0.04	0.01	0.00
Netherlands	4.29	11.88	1.04	0.50
Austria	1.95	2.79	0.38	0.08
Poland	5.97	11.11	:	:
Portugal	1.64	2.15	2.07	0.35
Romania	2.05	4.71	9.88	1.48
Slovenia	0.49	0.27	:	:
Slovakia	0.45	0.59	0.37	0.04
Finland	0.89	1.20	:	:
Sweden	1.44	1.47	0.58	:
United Kingdom	9.81	4.54	23.82	0.10
Switzerland	1.56	1.44	0.00	0.00
Montenegro	0.09	0.06	0.19	0.03
Former Yugoslav Republic of Macedonia	0.26	0.20	:	:
Albania	0.50	:	1.97	0.94
Serbia	0.89	3.02	1.67	0.20
Turkey	14.22	:	30.98	10.35
Bosnia and Herzegovina	0.46	0.55	1.02	0.08
Kosovo ⁽²⁾	0.26	0.04	0.19	0.03

(¹) EU-28 for sheep and goat: Eurostat estimates.

(²) This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

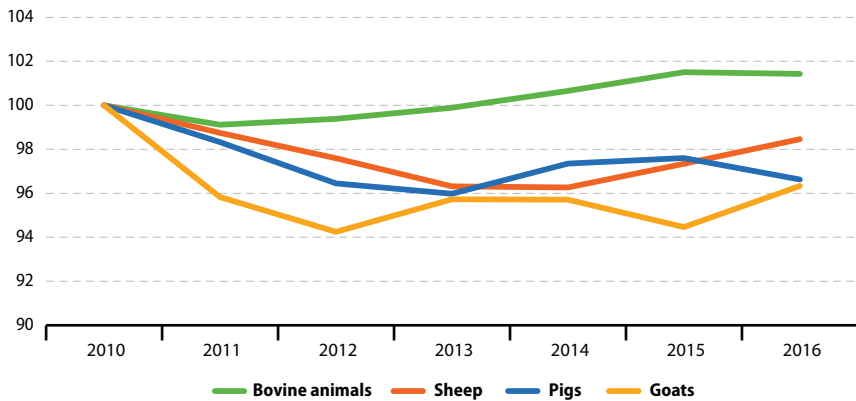
Source: Eurostat (online data codes: [apro_mt_lscat](#), [apro_mt_lspig](#), [apro_mt_lssheep](#) and [apro_mt_lsgoat](#))



As shown in Figure 4.2.1, the population of bovine animals grew by 1.4 % from 2010 to 2016, following a slow but relatively stable growth path. From 2015 to 2016, the bovine population remained stable, with a decrease of only 0.1 %. The population of pigs decreased by 3.4 % over the period 2010–2016, although with more variation year-on-year.

The population of sheep fell by 1.5 % over the period, with a slight increase of 1.1 % from 2015 to 2016. The largest relative decrease in the livestock population was reported for goats, with a fall of 3.7 % from 2010 to 2016. However, in 2016, the population of goats increased of 2.0 % compared to the year before.

Figure 4.2.1: Livestock population, EU-28, 2010-2016
(2010 = 100)



Note: The EU-28 aggregates for sheep and goats correspond to the sum of the Member States for which data are available. This includes all Member States with a significant number of animals.

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



Meat production

Veal and beef

While ‘veal’ reflects in this article slaughtering of bovine animals younger than one year (calves and young cattle), ‘beef’ reflects slaughtering of older bovine animals. Beef is mainly produced from cattle breeds grown specifically for their meat, but can also come from dairy cattle. Male calves from dairy mothers are of no use for producing milk, and their growth potential for producing beef meat is insufficient. Thus, most of them are used for veal production.

Notably, the end of milk quotas on 31 March 2015 led to increased cow slaughter (4.0 %), reflecting

the abandonment of dairy production by some of the smallest farms. In contrast, for the largest farms a strong expansion of the dairy herd was observed in both 2014 and 2015. The cow herd also grew as a result of favourable feed prices and demand for high quality beef meat. However, although the production of beef continued to rise in 2016, the total number of bovine animals in the EU-28 remained relatively stable from 2015 to 2016. Amongst the Member States, a similar dynamics leads to an apparent overall stability hiding contrasted changes. In 10 of them, the dairy herd increased by 8 % from 2013 to 2016 while it decreased by 3.1 % in the 18 other ones, the change representing in each case more than half a million dairy cows.

Table 4.2.2: Production of meat, by species, 2016
(thousand tonnes of carcass weight)

	Bovine animals	Pigs	Sheep	Goats	Poultry
EU-28 (¹)	7 799	23 440	713	45	14 400
Belgium	278	1 061	3	0	461
Bulgaria	7	66	:	:	106
Czech Republic	72	220	0	0	157
Denmark	129	1 567	2	0	144
Germany	1 148	5 579	22	0	1 525
Estonia	9	43	0	0	:
Ireland	588	283	61	0	146
Greece	40	94	54	21	213
Spain	638	4 059	117	10	1 524
France	1 462	2 206	83	6	1 669
Croatia	44	80	1	:	64
Italy	810	1 544	31	2	1 366
Cyprus	8	44	3	2	24
Latvia	18	31	0	0	30
Lithuania	42	60	0	0	104
Luxembourg	9	14	0	0	0
Hungary	28	432	1	0	508
Malta	1	5	0	0	4
Netherlands	416	1 453	13	2	:
Austria	227	511	6	1	:
Poland	501	1 963	1	:	2 268
Portugal	91	375	10	1	326
Romania	58	337	8	0	391
Slovenia	36	23	0	0	64
Slovakia	8	48	1	0	:
Finland	86	190	1	0	125
Sweden	131	234	5	0	154
United Kingdom	912	919	290	0	1 791
Iceland	7	6	10	0	9
Switzerland	145	238	4	0	88
Montenegro	4	0	1	0	1
Albania	11	8	1	1	3
Serbia	42	165	1	0	63
Turkey	77	0	60	3	1 926
Bosnia and Herzegovina	16	9	1	0	59

(¹) Eurostat estimates for sheep, goats and poultry.

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



France (18.7 %), Germany (14.7 %) and the United Kingdom (11.7 %) accounted for almost half (45.2 %) of the total EU-28 beef production in 2016. In each of these countries, production was higher in 2016 than it was a year earlier (see Table 4.2.2). The growth in beef production was highest in Cyprus (53.0 %), followed by Romania (29.4 %) and Bulgaria (25.9 %) between 2015 and 2016, distinctly above the EU-28 growth rate of 2.9 %. However, the beef production in Cyprus and Bulgaria still remained among the lowest in the EU-28.

Close to two thirds of the bovine meat produced in the EU-28 in 2016 derived from either bulls or

cows (31.4 % for each category) (see Table 4.2.3). In many EU Member States those shares were even higher. In the United Kingdom and Ireland a majority of the beef produced in 2016 (68.0 % and 66.1 % respectively) came from heifers (over one-year old females that did never calve) and bullocks (over one-year old castrated males).

The EU cattle price index fell 3.2 % from 2015 to 2016, following a stabilisation in 2015 after the fall in 2014. Nevertheless, the index increased by 7.0 % over the period 2010-2016 (see Figure 4.2.2).

Table 4.2.3: Production of bovine meat, 2016
(thousand tonnes of carcass weight)

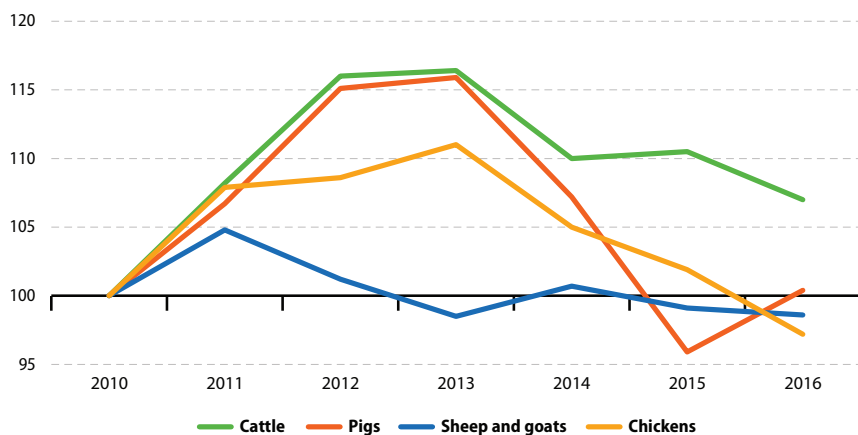
	Total	Calves and young cattle	Heifers	Cows	Bullocks	Bulls
EU-28 (¹)	7 799	1 015	1 179	2 447	720	2 450
Belgium	278	63	3	135	1	77
Bulgaria	7	1	1	4	0	2
Czech Republic	72	1	6	30	0	36
Denmark	129	29	16	58	2	24
Germany	1 148	56	163	399	9	522
Estonia	9	0	1	6	0	2
Ireland	588	1	164	113	225	86
Greece	40	8	4	7	0	20
Spain	638	232	91	117	3	196
France	1 462	211	149	649	71	382
Croatia	44	5	8	8	:	24
Italy	810	109	168	167	3	362
Cyprus	8	3	1	1	0	2
Latvia	18	1	3	10	0	4
Lithuania	42	1	6	20	0	16
Luxembourg	9	0	2	3	0	4
Hungary	28	1	2	19	0	6
Malta	1	0	0	0	0	1
Netherlands	416	238	3	147	0	27
Austria	227	6	36	67	11	107
Poland	501	4	70	155	0	273
Portugal	91	22	11	20	0	37
Romania	58	12	2	34	1	8
Slovenia	36	2	5	5	0	24
Slovakia	8	0	1	4	:	:
Finland	86	0	12	24	0	50
Sweden	131	3	17	43	11	58
United Kingdom	912	8	238	202	382	83
Iceland	7	0	0	2	0	2
Switzerland	145	49	17	50	4	24
Montenegro	4	3	0	1	0	0
Albania	11	7	2	2	0	0
Serbia	42	2	2	7	0	30
Turkey	77	:	11	60	0	6
Bosnia and Herzegovina	16	4	1	1	0	11

(¹) Estimates for bullocks and bulls.

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



Figure 4.2.2: Deflated price indices for selected animal outputs, EU-28, 2010–2016 (2010 = 100)



Note: Eurostat estimates.

Source: Eurostat (online data code: [apri_pi10_outa](#))

Pig meat

Pig meat production for the EU-28 increased by 1.3 % from 2015 to 2016, reaching 23.4 million tonnes. This increase was driven by the export surge of pig meat to China, low feed prices and a higher number of breeding sows (see Figure 4.2.1 and Table 4.2.2). Between 2015-2016 the growth in pig meat production was highest in Slovenia with 12.2 %, closely followed by Luxembourg with 12.1 %. However, it should be noted that these were two of the countries with the lowest production of pig meat in the EU-28 in 2016. In contrast, the largest declines in pig meat production was reported for Malta with – 11.2 % and Lithuania with – 8.8 %. Malta was the Member State with the lowest pig meat production in 2016 (4.9 thousand tonnes).

Germany produced around one quarter (24.0 %, or 5.6 million tonnes) of the EU-28's pig meat in 2016, while Spain produced one sixth (17.3 % or 4.1 million tonnes) of the EU-28 total (see Figure 4.2.3).

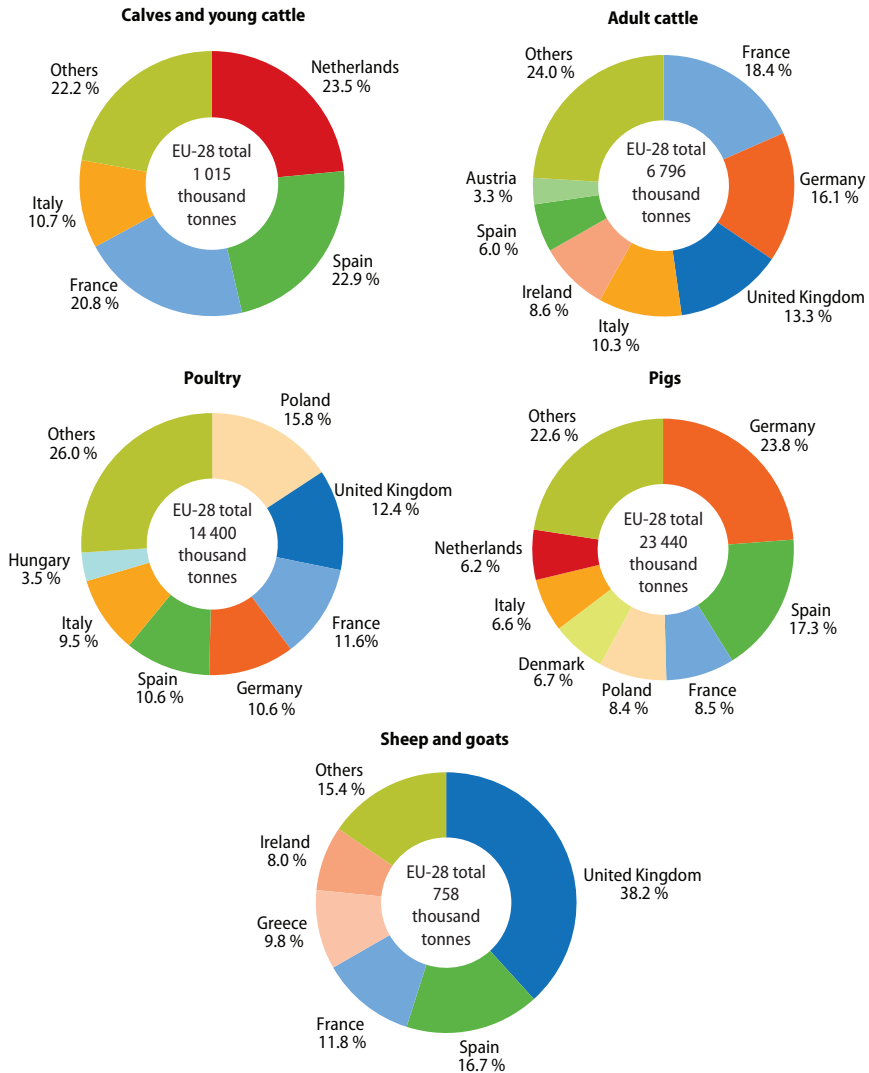
From a peak in 2013, the prices for pig meat fell continuously through 2014 and 2015, despite a private storage aid scheme for pig meat⁽¹²⁾. However, the prices recovered in 2016, increasing by 4.7 % compared to 2015. Although the pig meat price index increased by only 0.4 % over the period 2010-2016 as a whole, it fell by 13.4 % from 2013 to 2016. The median price of pigs across the Member States⁽¹³⁾ was EUR 112 per 100 kg in 2016.

⁽¹²⁾ https://ec.europa.eu/agriculture/newsroom/192_en

⁽¹³⁾ 15 Member States provided data on selling prices of pigs (EUR per 100 kg live weight).



Figure 4.2.3: Production of meat, 2016
 (% share of EU-28 total, thousand tonnes of carcass weight)



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



Sheep and goat meat

The expansion of sheep herds in the United Kingdom and Spain, combined with the Italian market’s recovery from Bluetongue disease, led to an increase in sheep meat production for the EU-28 of about 2.5 % from 2014 to 2015. However, in 2016 a decline by – 1.5 % was recorded, to a total of 713 thousand tonnes of sheep meat. Between 2015 and 2016 the goat meat production in the EU-28 was rather stable (– 0.4 %) at 45 thousand tonnes (see Table 4.2.2).

The United Kingdom (40.6 %) and Spain (16.3 %) contributed with almost 57.0 % to the total EU-28 sheep meat production in 2016. Similarly and in line with the ranking of their goat population, the largest producers of goat meat were

Greece (46.5 %), Spain (21.9 %) and France (14.4 %), together representing 82.7 % of total EU-28 production.

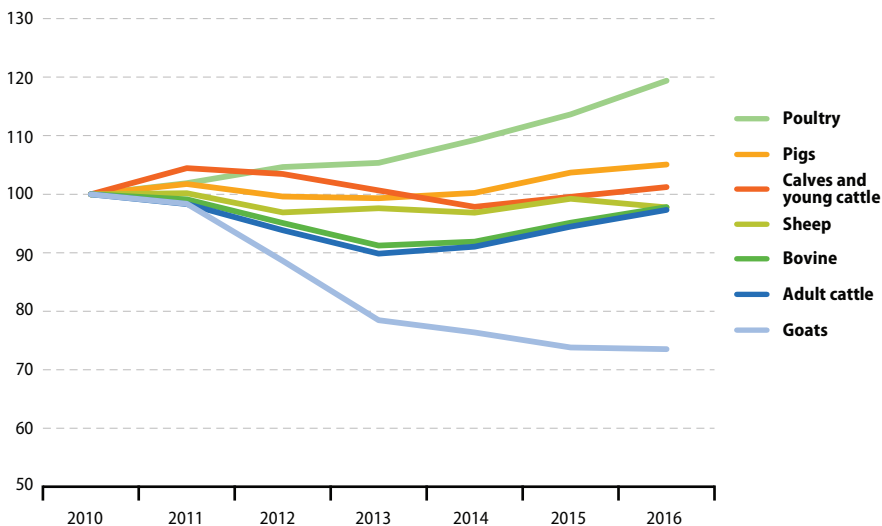
In 2016, the price index for sheep and goat meat remained roughly at the level of the previous years, decreasing by 0.5 % compared to 2015. Over the period 2010–2016, the index decreased by 1.4 %. In 2016, the median selling price of sheep⁽¹⁴⁾ was EUR 105.3 per 100 kg.

Poultry

Similar to the pig sector, low feed prices led to a surge in poultry meat production of 5.1 % between 2015 and 2016, continuing the upward trends in the production of this type of meat in recent years (see Figure 4.2.4).

⁽¹⁴⁾ 18 Member States provided data on selling prices of sheep (EUR per 100 kg live weight)

Figure 4.2.4: Production of meat, EU-28, 2010–2016
(2010 = 100)



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



Poland contributed 15.8 % to the total EU-28 production of poultry meat in 2016, while Germany, Spain, France, and the United Kingdom each contributed between 10.6 % and 12.4 %. Together, these five Member States provided 61.0 % of the total EU-28 production.

In 2016, the price index for chicken decreased by 4.6 % compared to 2015 and by 12.4 % compared to 2013. This price decrease is considered to be linked to decreased feed costs and to prices

having adjusted downwards to increased production⁽¹⁵⁾. In 2016, the median price of chickens⁽¹⁶⁾ was EUR 92.4 per 100 kg (see Table 4.2.2).

The trends of deflated price indices for energy and animal feeding stuffs in the EU-28 for the period 2010-2016 are presented in Figure 4.2.5.

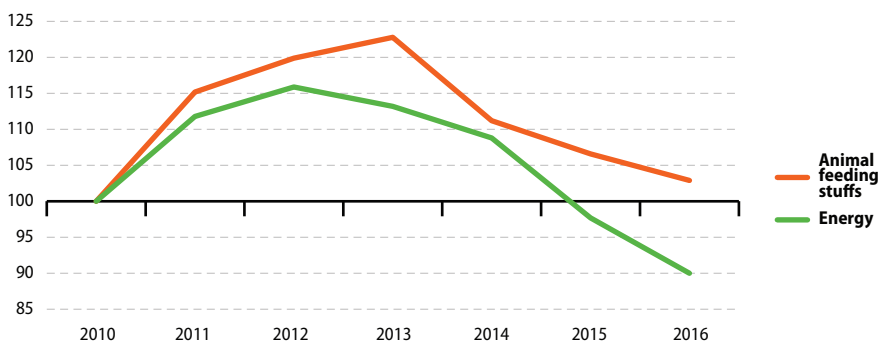
Table 4.2.4 shows the selling prices of animal products across the Member States in 2016.

⁽¹⁵⁾ Short Term Outlook for EU arable crops, dairy and meat markets: http://ec.europa.eu/agriculture/sites/agriculture/files/markets-and-prices/short-term-outlook/pdf/2016-3_en.pdf

⁽¹⁶⁾ 19 Member States provided data on selling prices of chicken (EUR per 100 kg live weight).

Figure 4.2.5: Deflated price indices for energy and animal feeding stuffs, EU-28, 2010-2016

(2010 = 100)



Source: Eurostat (online data code: [apri_pi10_ina](#))



Table 4.2.4: Selling prices of animal products, 2016
(EUR per hundred kilogrammes of live weight)

	Young cattle	Pigs (light)	Sheep	Goats	Chickens (live 1st choice)
Belgium	144.6	:	:	:	87.6
Bulgaria	114.3	84.6	105.0	78.0	96.7
Czech Republic	173.7	108.2	74.0	:	86.8
Denmark	170.3	94.4	79.8	:	83.5
Germany	:	:	:	:	:
Estonia	:	:	:	:	:
Ireland	206.9	:	:	:	:
Greece	:	200.8	136.1	170.8	141.7
Spain	239.6	114.0	52.8	112.6	103.2
France	:	:	:	:	:
Croatia	200.0	94.2	90.5	66.4	96.2
Italy	:	:	:	:	:
Cyprus	144.5	:	260.2	247.0	:
Latvia	99.0	109.7	167.9	115.9	156.4
Lithuania	128.0	107.6	143.9	:	83.6
Luxembourg	224.6	:	:	:	342.8
Hungary	:	117.0	125.8	:	81.4
Malta	:	:	:	:	120.0
Netherlands	:	106.9	167.5	:	84.0
Austria	209.7	121.2	64.0	:	107.7
Poland	135.6	:	168.0	:	76.5
Portugal	:	:	25.1	46.6	21.2
Romania	179.1	124.0	87.7	:	92.4
Slovenia	175.9	167.8	105.5	:	105.7
Slovakia	130.0	112.0	79.0	157.0	84.2
Finland	:	:	:	:	:
Sweden	:	:	:	:	:
United Kingdom	:	127.5	237.0	:	:

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



4.3 Milk

For over 30 years, the EU dairy sector has operated within the framework of milk quotas, which were introduced in 1984 to address the problem of surplus production. The quota system expired in 2015.

Milk production

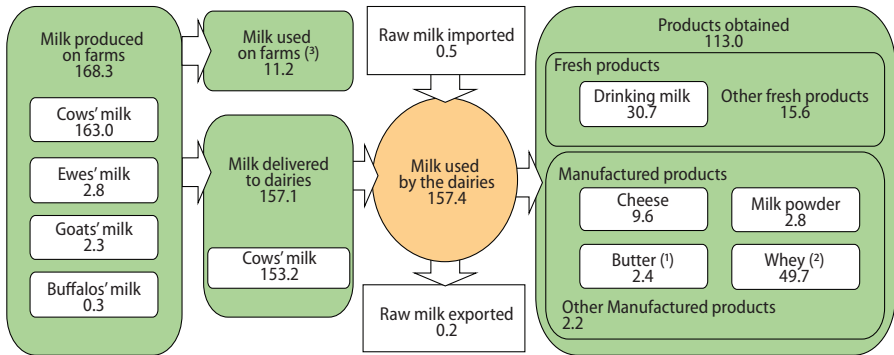
After five years of a preparatory increase in their level ('soft landing'), milk quotas disappeared on 1 April 2015⁽¹⁾. Extreme changes reported from one year to another are rare in the agricultural sector. However, the milk production grew in the EU-28 between 2015, the year when milk quotas disappeared, and 2016. This resulted from a combination of several factors: growth in the most productive dairy herds, contraction of the less productive ones, and different national dynamics.

In 2016, the production of raw cows' milk in the EU-28 remained relatively stable, with only a slight increase (+0.2 %). Similarly, a slightly decrease was observed in the number of dairy cows (-0.4 %). At the same time, the price of farm milk fell. At national level, the dairy herd grew in Cyprus (+8.7 %), Luxembourg (+5.8 %) and Ireland and the Netherlands (both +4.5 %). High decreases were reported in Latvia (-5.2 %), Estonia (-5.0 %), Lithuania (-4.9 %), Slovakia (-4.8 %) and Greece (-4.5 %). In 7 Member States, the dairy herd remained relatively stable, with increase or decrease of less than 1 %.

The production of cows' milk generally followed the trends in the national herds, with strong growth in the Netherlands (+5.9 %) and Ireland (+4.0 %). Production decreased in twelve Member States.

⁽¹⁾ Milk and milk products - 30 years of quotas: http://ec.europa.eu/eurostat/statistics-explained/index.php/Milk_and_milk_products_-_30_years_of_quotas

Figure 4.3.1: Production and use of milk, EU-28, 2016
(million tonnes)



⁽¹⁾ Includes other yellow fat dairy products; expressed in butter equivalent.

⁽²⁾ In liquid whey equivalent.

⁽³⁾ In whole milk equivalent.

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



In several countries, the reductions in the dairy herds were compensated by an increase in productivity⁽¹⁹⁾. The apparent milk yield per dairy cow in EU-28 increased by 0.6 % (40.2 kg/head), reaching 6 941 kg per dairy cow in 2016. The apparent milk yield grew strongest in Estonia (452 kg/head). Slovenia (426 kg/head), Latvia (380 kg/head) and Spain (374 kg/head). Only 7 Member States reported decreases, the largest in Greece (– 309 kg/head) and Portugal (– 229 kg/head).

In 2016, 168.3 million tonnes of milk were produced in the EU-28

In 2016, the farms in the EU-28 produced approximately 168.3 million tonnes of milk (see Figure 4.3.1). Production of cows' milk was 163.0 million tonnes (96.9 % of all milks produced) while milk from ewes, goats and buffalos represented 5.3 million tonnes (3.1 %). The main part of milk produced was delivered to the dairies (157.1 million tonnes) and the remaining amount (11.2 million tonnes) was used otherwise on the farms (see Figure 4.3.1), i.e. processed, own-consumed, sold directly to consumers, or used as feed.

The apparent milking yields per dairy cow varied considerably amongst EU regions

Table 4.3.1 presents the NUTS level 2 regions with the highest cows' milk production. Diversity in their level of productivity is reflected by the apparent yield per dairy cow (data on dairy cows are only available at NUTS level 1 in Germany and the United Kingdom).

There were stark contrasts in the apparent milk yield per dairy cow at regional level in 2016.

It was highest in Lombardia (IT) with 9 870 kg per head, followed by Midtjylland (DK) with 9 533 kg/head, Pohjois-ja Itä-Suomi (FI) with 9 009 kg/head and Småland med Öarna (SE) with 8 836 kg/head. The milk yields were lowest in the region Yuzhen tsentralen (BG) with 3 177 kg/head, Nord-Est (RO) with 3 396 kg/head and Kontinentalna Hrvatska (HR) with 4 534 kg/head.

Dairies in Germany collected over one fifth of all cows' milk collected in the EU

Over one fifth (20.9 %) of all the cows' milk collected by EU-28 dairies in 2016 was collected in Germany, while slightly more than a sixth of the total (16.0 %) was collected by dairies in France. Thereafter followed by the United Kingdom (9.6 %) and the Netherlands (9.4 %) (see Figure 4.3.2).

In 2016, the volume of sheep, goat and buffalo milk collected was 3.7 million tonnes, corresponding to 2.4 % of the total milk collected by the dairies. Spain was the country that collected the highest quantity of milk from these species (970 thousand tonnes), which represented 12.4 % of the total milk collected in Spain. In France, 777 thousand tonnes of milk from animals other than cows were collected, representing 3.1 % of the total milk locally collected. In third place was Greece with 748 thousand tonnes, representing 55.4 % of the total milk locally collected.

In EU-28, Spain (26.0 %), France (20.8 %), Greece (20.0 %) and Italy (17.6 %) collected more than 84 % of the milk collected from these other species (see Table 4.3.2).

⁽¹⁹⁾ Short-Term Outlook for EU arable crops, dairy and meat markets: http://ec.europa.eu/agriculture/markets-and-prices/short-term-outlook/pdf/2016-3_en.pdf


Table 4.3.1: Production of cows' milk on farms at national and regional level, by level of production, 2016

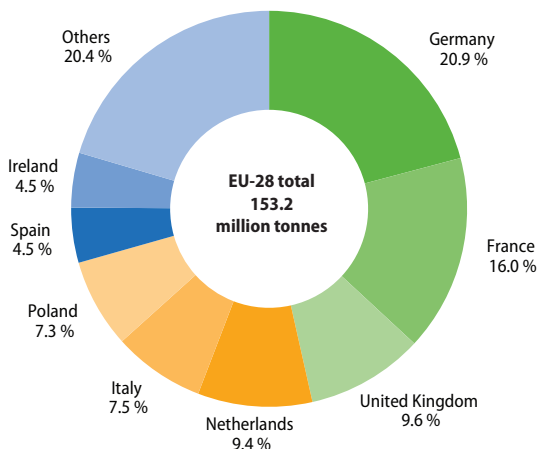
	Cows' milk production on farms		Number of dairy cows (thousand head)	Apparent yield (kg/head)	Number of NUTS 2 regions (1)	NUTS 2 region with the highest level of cows' milk production (1)	Regional cows' milk production on farms		Regional number of dairy cows (thousand head)	Regional apparent yield (kg/head)
	(thousand tonnes)	(% of nat. total)								
EU-28	162 957	23 508	6 932	248	—	—	—	—	—	—
Belgium	3 895	531	7 340	11	BE25 — Prov. West-Vlaanderen	737	19	97	7 600	
Bulgaria	1 019	279	3 653	6	BG42 — Yuzhen tsentralen	259	25	83	3 117	
Czech Republic	3 065	367	8 344	8	CZ06 — Jihovýchod	750	24	87	8 602	
Denmark	5 436	565	9 621	5	DK04 — Midjylland	1 611	30	169	9 533	
Germany	32 672	4 218	7 746	16	DE2 — Bayern	8 256	25	1 198	6 889	
Estonia	783	86	9 091	1	No regional breakdown	—	—	—	—	
Ireland	6 851	1 295	5 290	2	IE02 — Southern and Eastern	5 454	80	1 029	5 298	
Greece	703	106	6 628	22	EL52 — Kentriki/Makedonia	318	45	48	6 565	
Spain	7 124	819	8 702	19	ES11 — Galicia	2 702	38	336	8 046	
France	25 216	3 630	6 947	31	FR52 — Bretagne	5 488	22	753	7 289	
Croatia	671	146	4 583	4	HR04 — Kontinentalna Hrvatska	613	91	135	4 534	
Italy	11 886	2 060	5 769	23	ITC4 — Lombardia	4 743	40	480	9 870	
Cyprus	186	28	6 536	1	No regional breakdown	—	—	—	—	
Latvia	984	154	6 386	1	No regional breakdown	—	—	—	—	
Lithuania	1 624	286	5 682	1	No regional breakdown	—	—	—	—	
Luxembourg	376	52	7 239	1	No regional breakdown	—	—	—	—	
Hungary	1 918	244	7 862	7	HU32 — Eszak-Alföld	454	24	61	7 440	
Malta	43	7	6 635	1	No regional breakdown	—	—	—	—	
Netherlands	14 000	1 794	7 804	12	NL12 — Friesland	2 580	18	323	7 988	
Austria	3 628	540	6 719	9	AT31 — Oberösterreich	1 127	31	166	6 781	
Poland	13 244	2 130	6 218	16	PL12 — Mazowieckie	2 772	21	465	5 957	
Portugal	1 923	239	8 049	7	PT11 — Norte	731	38	85	8 614	
Romania	3 934	1 193	3 299	8	RO21 — Nord-Est	951	24	280	3 396	
Slovenia	650	108	6 024	4	SI03 — Vzhodna Slovenija	431	66	74	5 858	
Slovakia	905	133	6 826	4	SK02 — Západné Slovensko	468	52	56	8 299	
Finland	2 430	275	8 823	8	FI1D — Pohjois- ja Itä-Suomi	1 311	55	148	9 009	
Sweden	2 862	326	8 776	8	SE21 — Småland med öarna	824	29	93	8 836	
United Kingdom	14 931	1 898	7 867	12	UKK — South West	3 458	23	440	7 859	
Turkey	16 786	5 407	3 105	26	TRA2 — Agri, Kars, Iğdır, Ardahan	1 211	7	

(1) Germany and the United Kingdom: NUTS 1.

Source: Eurostat (online data codes: agr_c_milkpr and agr_r_animal)



Figure 4.3.2: Collection of cows' milk by dairies, 2016
 (% share of EU-28 total, tonnes)



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

Table 4.3.2: Collection of milk by dairies, 2016
 (thousand tonnes)

	Milk collected from cows	Milk collected from other animals
EU-28	153 195	3 730
Belgium	3 882	56
Bulgaria	524	36
Czech Republic	2 793	0
Denmark	5 364	0
Germany	31 973	15
Estonia	715	0
Ireland	6 851	0
Greece	602	748
Spain	6 881	970
France	24 553	777
Croatia	490	7
Italy	11 490	656
Cyprus	198	52
Latvia	814	0
Lithuania	1 416	0
Luxembourg	362	0
Hungary	1 547	0
Malta	43	0
Netherlands	14 324	289
Austria	3 098	16
Poland	11 140	2
Portugal	1 849	46
Romania	952	52
Slovenia	575	0
Slovakia	823	7
Finland	2 390	0
Sweden	2 862	0
United Kingdom	14 684	0
Norway	1 572	22
Switzerland	3 407	0
Serbia	845	1
Turkey	9 214	91

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



Milk products

The milk delivered to dairies is processed into a number of fresh and manufactured products. Dairy products are recorded in terms of weight. It is thus difficult to compare the various products (for example, fresh milk and milk powder). The volume of whole or skimmed milk used in the dairy processes provides more comparable figures⁽⁹⁾.

In 2016, 152.2 million tonnes (96.8 %) of the whole milk available to the dairy sector was processed (see Table 4.3.3). Some 55.8 million tonnes of whole milk (37 % of whole milk) and 16.6 million tonnes of skimmed milk were used to produce 9.6 million tonnes of cheese. The production of 2.4 million tonnes of butter and yellow products required 45.8 million tonnes of whole milk (30 % of whole milk). This process also generated 43.0 million tonnes of skimmed milk. This skimmed milk, generated mainly during the fabrication of butter and cream, was used for processing of other dairy products as displayed in Figure 4.3.3.

Some 16.7 million tonnes of whole milk and 13.6 tonnes of skimmed milk became drinking milk, with a total volume of 30.7 million tonnes. Finally, 21.0 million tonnes of raw milk were dried into 2.8 million tonnes of milk powder.

In 2016, as shown in Table 4.3.4, the United Kingdom produced more than one fifth (22.0 %) of the 30.7 million tonnes of drinking milk in the EU-28. France, Germany, Italy, the Netherlands and Poland together produced 70.0 % of the 9.6 million tonnes of cheese in the EU-28.

Strong decrease in the EU price index for milk

In 2015, the increase in milk production related to the disappearance of milk quotas, led to a marked decrease in the price index for milk. This development continued in 2016. The index went down by 5.8 % compared to 2015 and by 15.9 % compared to the average of the previous 5 years (2010-2015) (see Figure 4.3.4).

⁽⁹⁾ These three dimensions (quantity of products, quantities of whole and skimmed milk used) reflect the material balance of the valuable milk components, especially content of fat (in whole milk) and protein (in milk used).

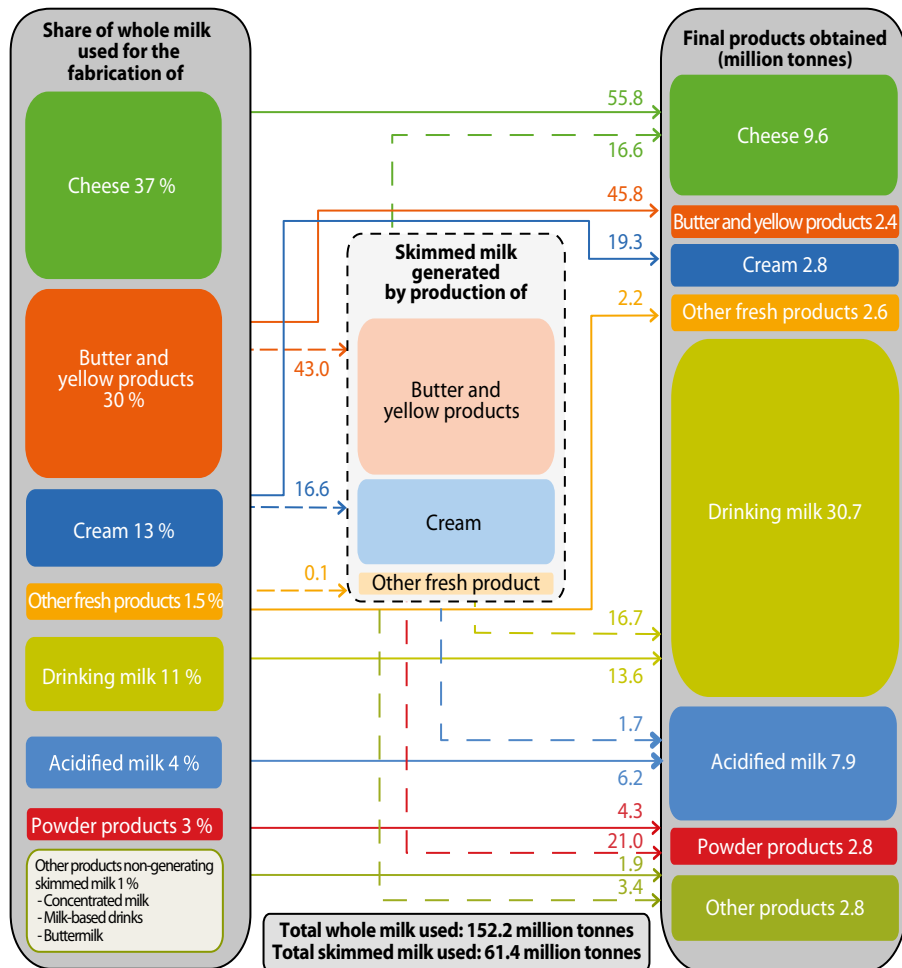
Table 4.3.3: Utilisation of milk and dairy products obtained, EU-28, 2016
(million tonnes)

	Utilisation of milk		Product obtained
	Skimmed milk	Whole milk	
Total	1.8	152.2	–
Sub-total of processes generating skimmed milk	-59.6	65.1	–
Butter and yellow products	-43.0	45.8	2.4
Cream	-16.6	19.3	2.8
Sub-total of processes consuming skimmed milk	61.4	87.1	–
Drinking milk	13.6	16.7	30.7
Powder products	21.0	4.3	2.8
Concentrated milk	0.7	1.7	0.5
Acidified milk	1.7	6.2	7.9
Buttermilk	0.5	0.0	0.5
Cheese	16.6	55.8	9.6
Milk based drinks	2.2	0.1	1.7
Caseins	5.0	0.0	0.2
Other fresh products	0.1	2.2	2.6

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



Figure 4.3.3: Utilisation of milk and dairy products obtained, EU-28, 2016
(% and million tonnes)



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



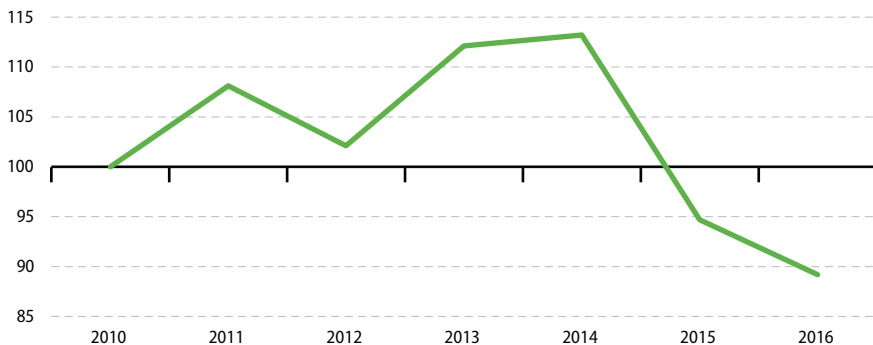
Table 4.3.4: Dairy products obtained from milk, 2016
(thousand tonnes)

	Drinking milk	Cream for direct consumption	Milk powder	Butter	Cheese
EU-28 (*)	30 700	2 770	2 800	2 400	9 616
Belgium	689	234	208	58	110
Bulgaria	67	2	0	1	80
Czech Republic	616	57	39	28	142
Denmark	519	72	129	110	369
Germany	4 843	587	694	507	1 863
Estonia	99	26	2	5	43
Ireland	543	25	:	:	205
Greece	414	13	0	1	204
Spain	3 406	107	46	46	461
France	3 395	460	508	434	1 920
Croatia	293	29	:	4	36
Italy	2 428	131	:	95	1 232
Cyprus	65	3	0	0	27
Latvia	62	36	:	7	39
Lithuania	93	23	36	18	98
Luxembourg	:	:	0	:	:
Hungary	513	6	:	8	80
Malta	:	:	0	0	:
Netherlands	557	:	355	232	911
Austria	794	75	12	34	195
Poland	1 655	258	180	204	806
Portugal	710	20	27	31	75
Romania	278	70	2	12	88
Slovenia	157	12	:	2	15
Slovakia	251	31	4	9	38
Finland	673	61	:	64	84
Sweden	785	113	82	61	87
United Kingdom	6 746	296	113	135	404
Switzerland	421	24	11	20	100
Serbia	451	87	103	48	185
Turkey	1 434	32	124	58	658

(*) Eurostat estimates.

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

Figure 4.3.4: Deflated prices indices for milk, EU-28, 2010-2016
(2010 = 100)



Note: Eurostat estimates.

Source: Eurostat (online data code: [apri_pi10_outa](#))



Data sources and availability

Crop statistics

Statistics on crop products are obtained by sample surveys, supplemented by administrative data and estimates based on expert observations. The sources vary from one EU Member State to another because of national conditions and statistical practices. National Statistical Institutes or Ministries of Agriculture are responsible for data collection in accordance with EU Regulations. The finalised data sent to Eurostat are as harmonised as possible. Eurostat is responsible for establishing EU aggregates.

The statistics that are collected on agricultural products relate to more than 100 individual crop products. Information is collected for the area under cultivation (expressed in 1 000 hectares), the quantity harvested (expressed in 1 000 tonnes) and the yield (expressed in 100 kg per hectare). For some products, data at a national level may be supplemented by regional statistics at NUTS 1 or 2 level.

Livestock and meat statistics

Livestock and meat statistics are collected by EU Member States under [Regulation \(EC\) No 1165/2008](#) of the European Parliament and of the Council of 19 November 2008, which covers bovine, pig, sheep and goat livestock; slaughtering statistics on bovine animals, pigs, sheep, goats and poultry; and production forecasts for beef, veal, pig meat, sheep meat and goat meat.

Livestock surveys cover sufficient agricultural holdings to account for at least 95 % of the national livestock population, as determined by the last survey on the structure of agricultural holdings.

Bovine and pig livestock statistics are produced twice a year, with reference to a given day in May/ June and a given day in November/ December. Those EU Member States whose bovine animal populations are below 1.5 million head or whose

pig populations are below 3.0 million head may produce these statistics only once a year, with reference to a given day in November/December. The November/ December results are available for all EU Member States and are used in this article.

Sheep livestock statistics are only produced once a year, with reference to a given day in November/December, by those EU Member States whose sheep populations are 500 000 head or above; the same criteria and thresholds apply for statistics on goat populations.

Milk and milk product statistics

Milk and milk product statistics are collected under [Decision 1997/80/EC](#), implementing [Directive 1996/16/EC](#). They cover farm production and the utilisation of milk, as well as the description (structure), collection and production activity of dairies. Due to the small number of dairy enterprises, national data are often subject to statistical confidentiality. Thus, providing EU totals in this context is a challenge and some of the information presented in the analysis is based on partial data for the Member States (which may exclude several countries); each exception is clearly footnoted under the tables and figures presented. On the one hand, statistics from these few enterprises provide early estimates on trends. On the other, a complete overview of the dairy sector requires detailed information from farms and this means that the final figures on milk production are only available at an EU level about one year after the reference year. Dairy products are recorded in terms of weight. It is thus difficult to compare the various products (for example, fresh milk and milk powder). The volume of whole or skimmed milk used in the dairy processes provides more comparable figures.



Agricultural price statistics

EU agricultural price statistics (APS) are based on voluntary agreements between EUROSTAT and the Member States. The National Statistical Institutes or Ministries of Agriculture are responsible for collecting absolute prices and calculating corresponding average prices for their country, as well as for calculating price indices and periodically updating the weights.

Price indices are reported quarterly and annually. Absolute prices are reported annually. The agricultural prices expressed in national currency are converted into EURO by EUROSTAT using the fixed exchange rates or financial market exchange rates, in order to allow comparisons between the Member States. Eurostat is responsible for calculating indices for the EU.

5

Agriculture and environment



Introduction

Agriculture depends on natural resources and therefore the state of the environment. Organic agricultural production is a way of producing food that respects natural life cycles, and one of the most dynamic sectors of EU agriculture. The total area under organic farming continues to increase, and covered in 2016 almost 12 million hectares of agricultural land. This chapter describes the situation of organic farming in the European Union (EU) until 2016.

Organic farmers do not use inorganic fertilisers. The use of fertilisers in agriculture contribute to losses of nutrients such as nitrogen and phosphorous from agricultural soils into ground and surface water bodies. This loss can occur via run-off along the soil surface or as sub-surface loss via leaching and drainflow

and cause eutrophication, which can lead to toxic algal blooms and loss of aquatic life. Nitrogenous gases emitted to air contribute to air pollution and the greenhouse effect. Legislative initiatives and sharing of best practices seek to limit nutrient losses to through more careful management of nutrients in agriculture.

Nitrogen mineral fertilisers are produced using high amounts of energy (gas), and therefore contribute to GHG emissions and fossil fuel depletion. Some environmental pollution due to the production of phosphorous mineral fertilisers are related to the contamination of phosphate rock with heavy metals. Phosphate is also a finit resource, which needs to be imported into the EU.



5.1 Organic farming statistics

Total organic area continues to increase in the EU

The total organic area in the EU-28 was 11.9 million hectares (ha) in 2016 and is still expected to grow in the coming years.

The increase in organic area between 2012 and 2016 was 18.7 % (see Table 5.1.1).

The total organic area is the sum of the 'area under conversion' and the 'fully converted area'. Before an area can be considered as 'organic', it must undergo a conversion process, which may take 2-3 years depending on the crop⁽¹⁾.

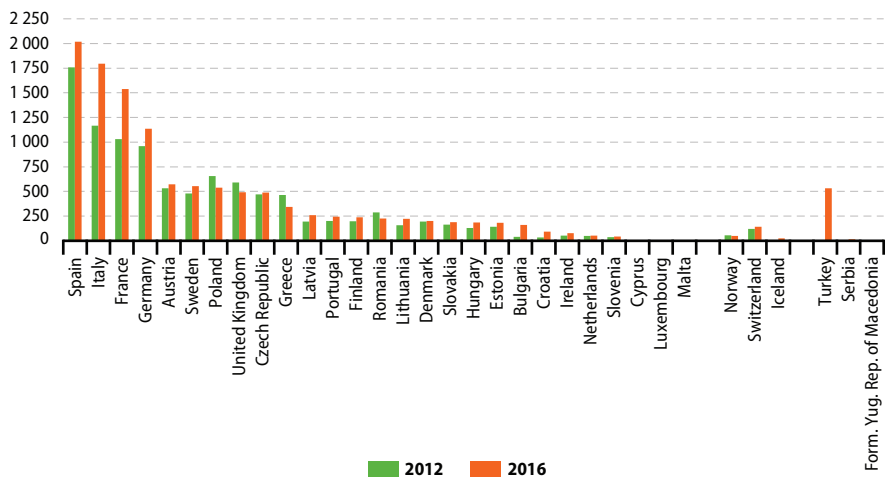
Table 5.1.1: Total organic area, 2012 and 2016

	Total organic area (hectares)		2012-16 (% change)
	2012	2016	
EU-28	10 047 896	11 931 589	18.7
Belgium	59 718	78 452	31.4
Bulgaria	39 138	160 620	310.4
Czech Republic	468 670	488 591	4.3
Denmark	194 706	201 476	3.5
Germany	959 832	1 135 941	18.3
Estonia	142 065	180 852	27.3
Ireland	52 793	76 701	45.3
Greece	462 618	342 584	-25.9
Spain	1 756 548	2 018 802	14.9
France	1 030 881	1 537 351	49.1
Croatia	31 904	93 593	193.4
Italy	1 167 362	1 796 333	53.9
Cyprus	3 923	5 550	41.5
Latvia	195 658	259 146	32.4
Lithuania	156 539	221 665	41.6
Luxembourg	4 130	4 274	3.5
Hungary	130 607	186 322	42.7
Malta	37	24	-35.1
Netherlands	48 038	52 204	8.7
Austria	533 230	571 423	7.2
Poland	655 499	536 579	-18.1
Portugal	200 833	245 052	22.0
Romania	288 261	226 309	-21.5
Slovenia	35 101	43 579	24.2
Slovakia	164 360	187 024	13.8
Finland	197 751	238 240	20.5
Sweden	477 684	552 695	15.7
United Kingdom	590 011	490 205	-16.9
Iceland	:	22 594	:
Norway	55 260	47 621	-13.8
Switzerland	121 013	141 249	16.7
Form. Yug. Rep. of Macedonia	:	3 245	:
Serbia	:	14 358	:
Turkey	:	533 218	:

Source: Eurostat (online data code: [org_croprar](https://ec.europa.eu/eurostat/tgm/table.do?tab=table))

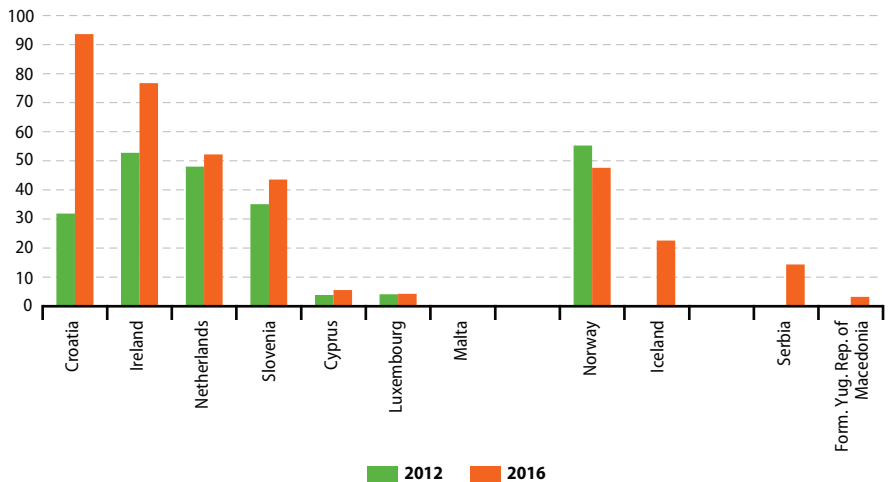
(1) For plants and plant products to be considered organic, the production rules must have been applied on the parcels of land during a conversion period of at least two years before sowing, or, in the case of grassland or perennial forage, at least two years before its use as feed from organic farming, or, in the case of perennial crops other than forage, at least three years before the first harvest of organic products.

Figure 5.1.1: Total organic area, 2012 and 2016
(thousand hectares)



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

Figure 5.1.2: Total organic area, 2012 and 2016
(thousand hectares)



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

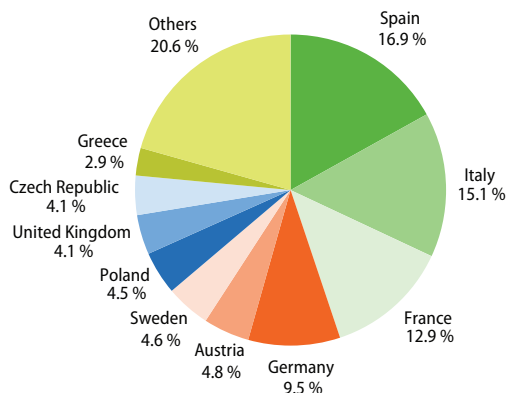


Between 2012 and 2016, Croatia and Bulgaria recorded growth in the total organic area of over 100 %. However, five EU Member States reported a downward trend: Greece (–25.9 %), Malta (–35.1 %), Poland (–18.1 %), Romania (–21.5 %) and the United Kingdom (–16.9 %). In the case of Malta however, the organic area is small and the 35 % reduction is in absolute numbers only 13 hectares. As shown in Figure 5.1.1, Spain, Italy and France had the three highest total organic areas both in 2012 and 2016. Figure 5.1.2

illustrates the countries with smaller organic crop areas, below 100 000 ha.

The size of the organic area differs considerably from one EU Member State to another. Four Member States accounted for more than half of all organically farmed land in 2016: Spain (16.9 %), Italy (15.1 %) France (12.9 %) and Germany (9.5%), together making up 54.4 % of the total EU-28 organic area (see Figure 5.1.3). In 2015, these four countries represented 52.8 %.

Figure 5.1.3: Share of total organic area, EU-28, 2016
(% of total EU-28)



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

Total organic area made up 6.7 % of total EU-28 UAA in 2016

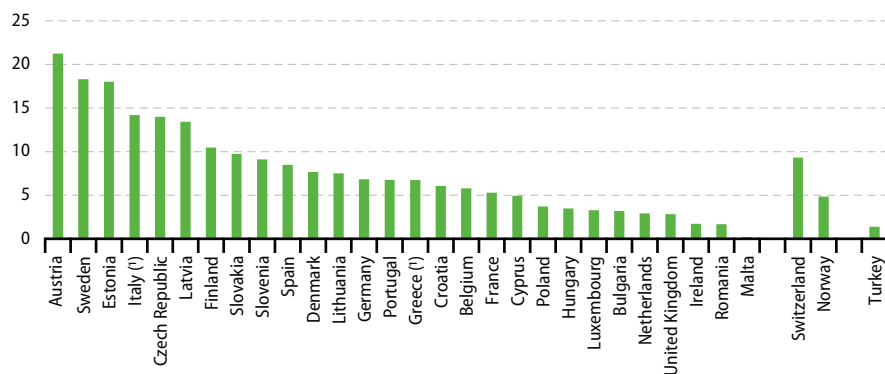
From 2012 to 2016, the share of total organic area in the total utilised agricultural area (UAA)^(?) within the EU rose from 5.6 % to 6.7 %.

Figure 5.1.4 shows the organic crop area as a percentage of the total UAA by country for

2016. In Austria, Sweden and Estonia, the share of organic area was over 18 %, while in Italy, the Czech Republic, Latvia and Finland it was over 10 % of the UAA. In the remaining EU Member States, the share of organic area ranges from 0.2 % in Malta to 9.8 % in Slovakia.

(?) Utilised agricultural area, abbreviated as UAA, is the total area taken up by arable land, permanent grassland, permanent crops and kitchen gardens used by the holding, regardless of the type of tenure or of whether it is used as a part of common land.

Figure 5.1.4: Share of total organic area in total utilised agricultural area, 2016
(%)



(*) Estimate.

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

The potential for organic production continued to rise in 2016

Organic production comes from fully converted areas. The area under conversion as a percentage of the total organic area can give an indication of the potential growth in the organic sector in the years to come. In 2016 only the United Kingdom had a share of less than 10 %, while ten EU Member States had shares between 10 % and 20 % and fifteen exceeded 20 % (see Figure 5.1.5). The largest shares were recorded for Bulgaria (77.5 %), Croatia (68.8 %) and Hungary (51.0 %).

Permanent grassland represented 45.1 % of the EU-28 total organic crop area in 2016

Organic production area is divided into three main crop types: arable land crops (mainly cereals, fresh vegetables, green fodder and industrial crops), permanent grassland (pastures and meadows), and permanent crops (fruit trees and berries, olive groves and vineyards). Pasture and meadows (mostly used for grazing organic livestock) exceeded 5 million ha, which represented 45.1 % of the EU-28 total organic

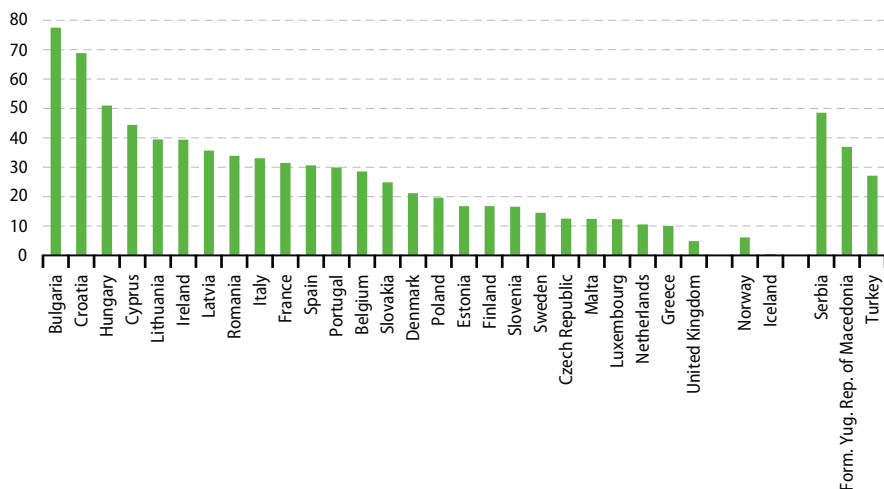
crop area. Arable crops followed closely with 44.0 %, while permanent crops made up the smallest share (10.9 %).

In 10 EU Member States arable land crops accounted for more than 50 % of the organic area, while in 15 Member States pasture and meadows predominated (> 50 % of organic area). Arable crops were highly predominant in Finland, Denmark and Sweden with shares of 99.0 %, 83.4 %, and 77.9 % respectively. Ireland (92.0 %), the Czech Republic (85.6 %) and Slovenia (81.5 %) were in the lead in terms of pasture and meadows (see Figure 5.1.6).

In most EU Member States, permanent crops accounted for the lowest share of these three main crop categories in the organic area (in 16 EU Member States it was less than 5 % of the organic area). In 2016, permanent crops accounted for between 10 % and 20 % in Croatia, Greece and Portugal, while in Bulgaria, Spain and Italy the share was over 20 %. Cyprus and Malta had the highest shares, with 46.1 % and 62.5 % respectively. Olive trees dominated in these two countries.



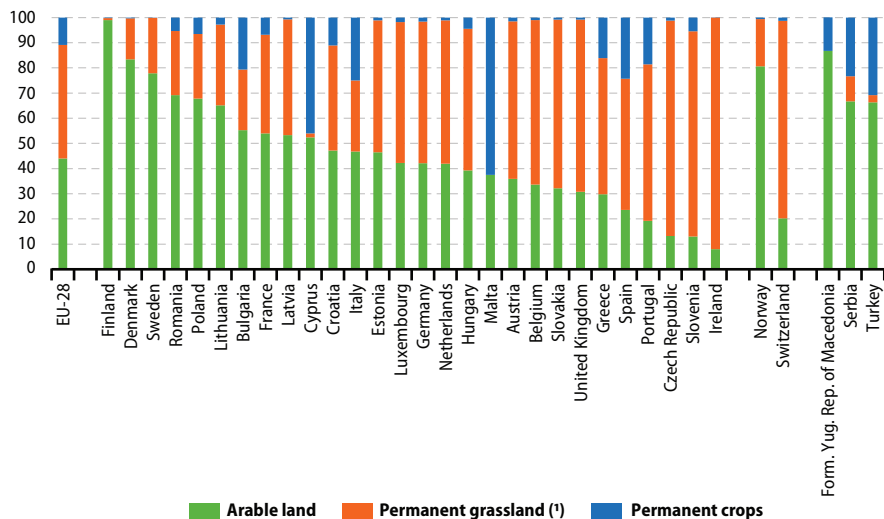
Figure 5.1.5: Share of area under conversion, 2016
(% of total organic area — fully converted and under conversion)



Note: no data available for Germany and Austria.

Source: Eurostat (online data code: [org_cropar](https://ec.europa.eu/eurostat/tgm/table.do?tab=table))

Figure 5.1.6: Arable land crops, permanent grassland and permanent crops, 2016
(% of total organic area — fully converted and under conversion)



(1) Pasture and meadow, excluding rough grazing.

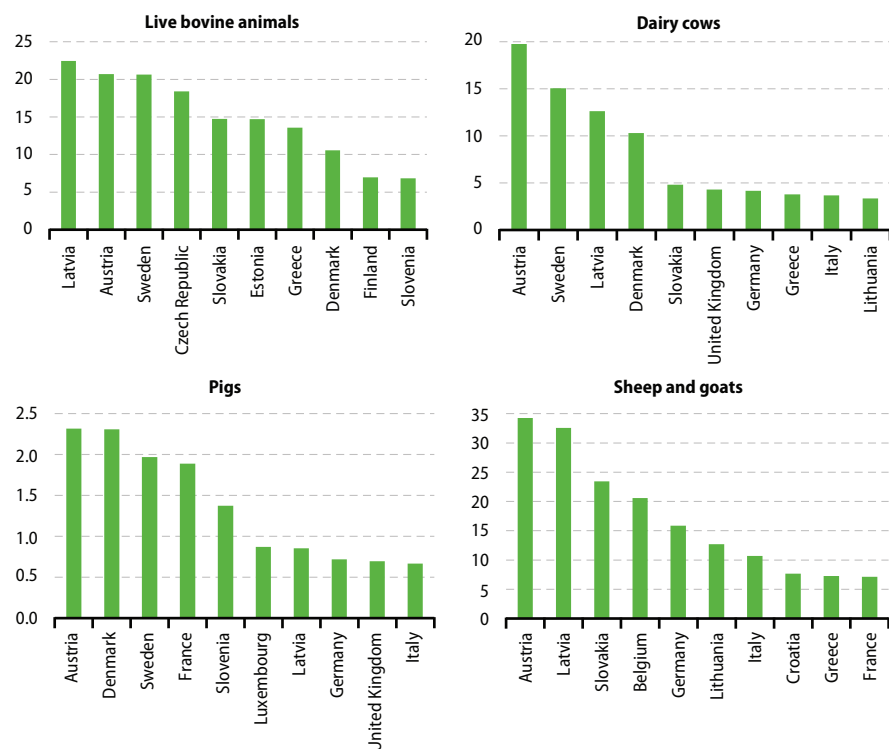
Source: Eurostat (online data code: [org_cropar](https://ec.europa.eu/eurostat/tgm/table.do?tab=table))

Bovines and sheep remained the most popular species

The 2016 figures for organic livestock as a share of all livestock showed that, with respect to bovines, pigs and sheep, in some EU Member States remarkably large shares of animals were reared using organic methods — bovines and

sheep being the most popular species. Austria had the largest shares of both organic production for 'sheep and goats' (34.3 % of total sheep and goat production) and for organic pig production (2.32 %) and the second highest share of organically reared bovines (20.7 %) of the EU-28 (see Figure 5.1.7).

Figure 5.1.7: Share of organic livestock in all livestock, by main countries, 2016
(% of number of heads)



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

Latvia was in the lead regarding organic bovines, with 22 % of the total bovine population reared organically. In total eight EU Member States had over 10 % of organic bovines, with Sweden third after the previously mentioned Latvia and

Austria. For most EU Member States organically reared pigs accounted for only a small share of the total pig population.

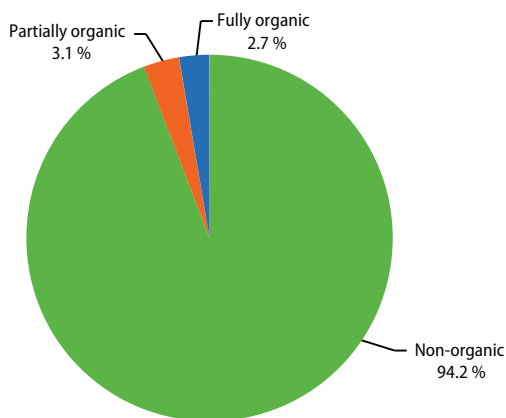


Agricultural land managed by fully organic farm holdings

The annual statistics presented above do not specify on which type of holding the organic area is located. Ideally, an organic farm should have the whole farm area certified organic.

An exception is when land is under conversion to organic. The reality is different, and there are a significant number of farms with mixed organic and non-organic production in the EU. Data from the Farm Structure Survey can be used to further describe the situation

Figure 5.1.8: Utilised agricultural area managed by fully organic farms, partially organic farms and non-organic farms, EU-28, 2013
(% of total utilised agricultural area)



Note: Malta is removed to protect confidentiality due to the low number of fully organic farms.

Source: Eurostat (Farm Structure Survey, 2013)

The share of UAA managed by fully organic farms in 2013 was 2.7 % (see Figure 5.1.8). Partially organic farms (i.e. farms with both non-organic

and organic area) managed 3.1 % of the total UAA, while farms with no organic area managed the remaining 94.2 %.

The number of fully organic farms is increasing

Table 5.1.2 shows the number of farms with no organic area, partially organic farms and fully organic farm holdings in 2010 and 2013 for the EU countries, as well as the total UAA and Annual work units (AWU) of each of these categories.

At EU level, the number of fully organic farms increased from 2010 to 2013, while the number of partially organic farms decreased.

It indicates that there is an ongoing process to create fully organic farms.

The non-organic holdings' share in total farm holdings decreased by 0.34 percentage points from 2010 to 2013, and the share of fully organic holdings increased 0.30 percentage points representing 1.05 % of all farm holdings in 2013. This varies of course between countries, see further below. The UAA managed by fully organic farms also increased by 34 % from 2010 to 2013.

Table 5.1.2: Distribution of farm holdings, utilised agricultural area and farm labour force, EU-28, 2010 and 2013

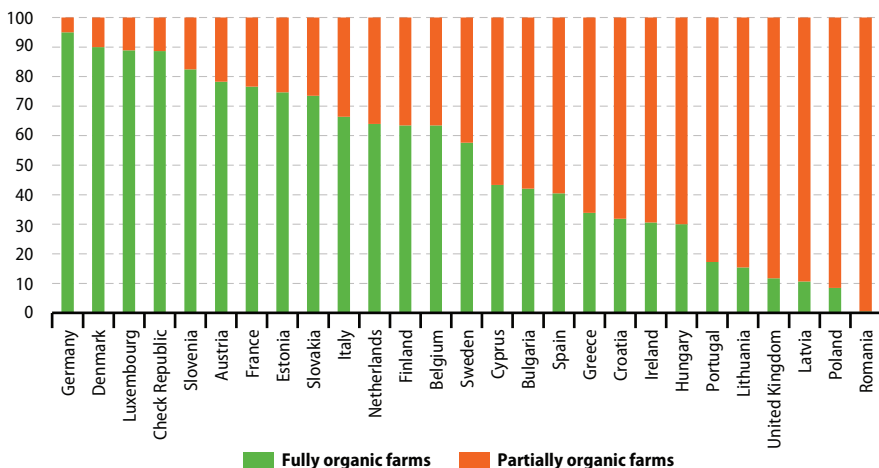
	Number of farm holdings		Utilised agricultural area (UAA) (hectares)		Farm labour force (AWU)	
	2010	2013	2010	2013	2010	2013
Total farm holdings	12 228 020	10 824 360	175 834 040	174 603 020	9 934 970	9 496 060
Farm holdings with no organic land	12 040 410	10 621 220	166 746 050	164 441 090	9 626 730	9 153 330
Farm holdings with some organic land	96 790	89 790	5 590 240	5 483 040	185 450	168 830
Farm holdings with only organic land	90 900	113 310	3 497 740	4 678 890	122 810	173 890

Note: Malta is removed to protect confidentiality due to the low number of fully organic farms; no partially organic farms reported in Luxembourg 2010.

Source: Eurostat (Farm Structure Survey, 2013)

Figure 5.1.9: Fully organic farms and partially organic farms, 2013

(% of total organic farms)



Note: Malta is removed to protect confidentiality due to the low number of fully organic farms.

Source: Eurostat (Farm Structure Survey, 2013)



The majority of organic farms in 14 EU countries fully organic farms

Figure 5.1.9 shows the farm holdings which have all their UAA under organic management as a share of all farms with any organic area, per EU Member State. The fully organic farms' share ranges from 95.0 % in Germany, to 0.5 % in Romania. The share of fully organic farms is above 50 % of farms with any organic area in Germany, Denmark, Luxembourg, the Czech Republic, Slovenia, Austria, France, Estonia, Slovakia, Italy, the Netherlands, Finland, Belgium and Sweden.

Small difference in work force on organic and non-organic farms of comparable size

The labour force, measured as annual work units (AWU), employed on fully organic farms increased by almost 42 % between 2010 and 2013, from around 123 000 to almost 174 000 (Table 5.1.2). It should however be noted that AWU is reported in bands and not in exact figures/hours. The lowest AWU allocated is 0.125 AWU. It means that on small farms, the AWU may be skewed towards a too high allocation.

At EU level (see Table 5.1.2), the average size of the labour force per farm was 0.9 annual work units for the non-organic farms, and 1.5 for the fully organic farms. However, the average size of utilised agricultural area on a non-organic holding was 16 hectares, while on a fully organic holding the average was 41 hectares. This size difference has a large influence and it is not

possible to compare the average number of hectares managed per annual work unit in this sample. To analyse a possible impact of "organic" on the annual work units it is necessary to find a comparable sample.

Excluding farms smaller than 10 hectares gives a comparable average size of fully organic farms and non-organic farms, described as average UAA per holding (Table 5.1.3). For the purpose of having a comparable sample, countries with fewer than 100 fully organic farms in the size category "10 hectares and above" are excluded. This leaves 21 Member States (Belgium, the Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Latvia, Lithuania, the Netherlands, Austria, Poland, Portugal, Slovenia, Slovakia, Finland, Sweden and the United Kingdom) in 2013. These countries had close to 99 % of all fully organic holdings "10 hectares and above" in 2013, and 92 % of the total non-organic farms "10 hectares and above".

The average UAA per holding in this sample is approximately 62 hectares in both groups (Table 5.1.3). The average UAA per AWU was slightly lower in the fully organic group, 34.2 hectares, than in the group of non-organic holdings where it was 36.7 hectares. The average AWU per fully organic holding was slightly higher, 1.82 AWU per farm, than the average of the non-organic farms, where it was 1.69. Eurostat foresees a fuller analysis of the fully organic farms once the 2016 FSS data becomes available in 2018.

Table 5.1.3: Fully organic and non-organic farms by key variables, EU-28, 2013

	Fully organic holdings	Non-organic holdings
Number of holdings	71 000	2 058 790
Labour force (AWU)	129 290	3 477 960
Utilised agricultural area (UAA) (ha)	4 421 000	127 498 780
UAA/Labour force (ha/AWU)	34.2	36.7
UAA/Number of holdings (ha/N)	62.3	61.9
Labour force/Number of holdings (AWU/N)	1.82	1.69

Note: the table shows data for the 21 Member States with at least 100 fully organic farms and for the farms with at least 10 hectares.

Source: Eurostat (Farm Structure Survey, 2013)

5.2 Agri-environmental indicator — mineral fertiliser consumption

The total volume of nitrogen fertiliser (N) used in EU-28 agriculture was 11.4 million tonnes N in 2015. This level exceeded the level in 2006 (10.8 million tonnes N), with around 5 %. There was a decrease during the years 2009-2010. The amount of nitrogen used per hectare utilised agricultural area was 64 kg in 2015, compared to 58 kg in 2006. The trend over the last couple of years is similar; the use of nitrogen fertiliser per hectare is not decreasing in EU-28, although in individual countries reductions occur.

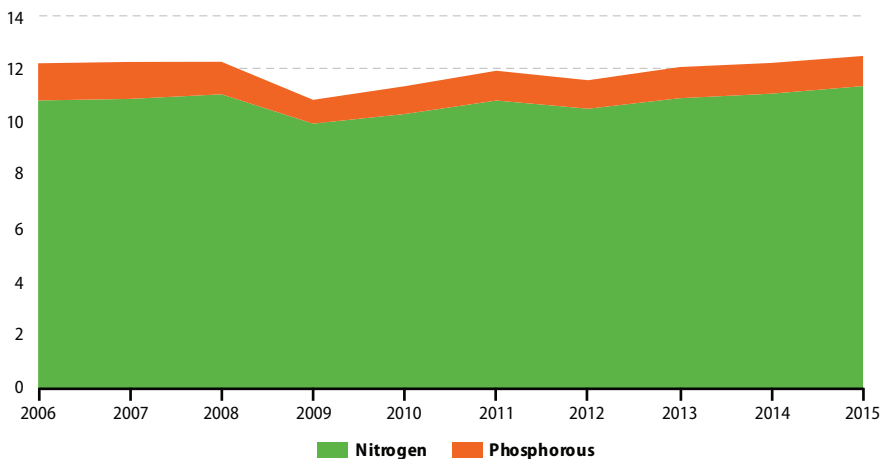
The phosphorous fertiliser (P) volume used was 1.1 million tonnes in 2015. This is a reduction of almost 20 % since 2006 (when the used volume was 1.4 million tonnes P). The levels were even lower during 2009-2010. P is a finite resource

which needs to be imported in the EU. The level of P per hectare utilised agricultural area was 7.5 kg in 2006, reduced to 6.3 kg per hectare in 2015.

Data is submitted to Eurostat by countries under a gentlemen's agreement on mineral fertiliser N and P consumption in agriculture at national level. Countries also have to estimate the use of mineral fertiliser (all consumption, including non-agricultural) for the greenhouse gas emission inventories submitted to the United Nations Framework Convention on Climate Change (UNFCCC). All EU Member States are signatories of this convention. Eurostat uses these values when countries do not submit data on fertiliser use for agriculture alone.

Figure 5.2.1: Estimated mineral fertiliser consumption by agriculture, EU-28, 2006-2015

(million tonnes)



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



Mineral fertiliser consumption

The total nitrogen fertiliser consumption volume remained high in the period 2006-2015 (Figure 5.2.1). Fluctuations occur; most notably during the years 2009-2010 when fertiliser use dipped significantly (Table 5.2.1). Fertiliser prices had at that time skyrocketed due to impact of strong demand for oil on the cost of agricultural inputs (DG AGRI, 2011). Nitrogenous fertilisers (ammonia, urea, ammonium nitrate) are produced from natural gas, the price of which is strongly linked to oil prices. Phosphates are mined outside of the EU, which results in high production and transportation costs, also linked to oil prices.

During 2004-2010, the average world agricultural prices grew by 50 % compared to the average of 1986-2003. By comparison fertiliser prices jumped by 150 % over this period and peaked in 2008.

The nitrogen fertiliser consumption per hectare of fertilised utilised agricultural area (UAA) also increased during the period 2006-2015 in EU-28, from 67.4 kg/ha in 2006 to 74.4 kg/ha in 2015 (Table 5.2.2). The highest increases in N consumption per hectare were seen in Bulgaria (+133 %), Latvia (+74 %) and Austria (+58 %). The largest reductions were in Croatia (-50 %), Italy (-30 %) and Greece (-25 %).

Table 5.2.1: Nitrogen fertiliser consumption by agriculture, 2006-2015
(thousand tonnes)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU-28	10 821.9	10 880.3	11 053.4	9 951.5	10 312.5	10 819.1	10 511.4	10 907.0	11 077.0	11 362.0
Belgium	140.7	142.6	134.6	147.4	151.3	148.6	144.7	143.6	145.4	143.6
Bulgaria	152.8	177.9	173.9	177.6	199.1	192.4	235.4	258.9	322.0	341.6
Czech Republic	309.6	335.3	341.6	253.8	270.3	352.7	349.0	331.6	325.7	397.1
Denmark	191.9	194.7	220.7	200.4	190.1	197.2	187.2	193.7	187.0	203.6
Germany	1 785.0	1 599.8	1 807.2	1 550.6	1 569.0	1 786.5	1 640.4	1 648.8	1 675.3	1 822.8
Estonia	22.6	25.0	35.5	27.3	28.6	29.8	33.0	33.7	35.8	35.8
Ireland	345.2	321.6	309.0	306.8	337.6	295.8	296.5	353.0	331.8	331.0
Greece	210.0	236.0	201.0	175.0	213.0	181.4	175.4	182.5	180.9	185.1
Spain	969.8	985.9	739.8	781.1	941.0	846.7	843.4	961.5	1 101.9	1 068.1
France	2 163.0	2 198.1	2 425.2	2 098.8	2 080.3	2 332.4	2 024.9	2 143.8	2 190.9	2 208.2
Croatia	123.9	130.4	170.2	90.8	109.3	125.0	106.9	77.9	73.7	87.4
Italy	785.3	765.5	659.9	518.8	496.6	516.0	683.6	546.5	505.1	517.9
Cyprus	11.3	8.2	7.5	7.7	9.4	7.1	8.3	7.1	6.7	7.5
Latvia	42.7	46.1	47.5	51.9	59.5	59.8	65.2	69.7	72.9	75.8
Lithuania	122.0	127.0	118.3	134.4	143.2	147.0	150.0	155.0	162.0	166.6
Luxembourg	14.0	13.3	13.3	13.4	13.8	14.4	13.7	13.4	12.7	13.0
Hungary	288.8	319.8	294.3	274.9	281.4	301.8	312.9	342.9	326.8	358.4
Malta	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7
Netherlands	270.4	240.1	220.7	211.4	205.2	200.4	199.5	216.0	213.2	244.9
Austria	97.5	110.9	108.5	89.1	104.8	98.2	107.9	110.6	121.6	125.3
Poland	996.5	1 056.2	1 142.3	1 095.4	1 027.4	1 091.1	1 094.7	1 194.8	1 098.5	1 003.6
Portugal	87.4	113.0	105.1	97.3	100.2	95.1	106.9	110.6	122.8	121.0
Romania	252.2	265.5	279.9	296.1	305.8	313.3	290.0	344.5	303.6	357.4
Slovenia	30.4	29.6	25.0	28.2	27.5	27.1	26.3	27.3	28.6	28.3
Slovakia	97.0	113.3	121.4	96.3	106.5	120.6	127.8	140.7	143.1	134.5
Finland	148.2	148.8	162.9	136.0	156.5	146.2	138.9	138.1	147.4	143.5
Sweden	160.3	167.1	186.5	142.4	168.0	169.8	148.1	161.1	181.1	190.2
United Kingdom	1 003.0	1 008.0	1 001.0	948.0	1 016.4	1 022.1	1 000.2	999.0	1 060.0	1 049.0
Norway	102.9	106.4	101.8	91.2	84.1	95.5	94.2	95.5	101.3	102.6
Switzerland	51.4	53.9	50.8	47.9	55.5	48.9	47.2	45.7	51.6	45.8

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

Table 5.2.2: Fertiliser consumption per hectare of fertilised UAA, 2006 and 2015

	2006			2015		
	Fertilised UAA	Nitrogen/ Fertilised UAA	Phosphorus/ Fertilised UAA	Fertilised UAA	Nitrogen/ Fertilised UAA	Phosphorus/ Fertilised UAA
	(thousand ha)	(kg N/ha)	(kg P/ha)	(thousand ha)	(kg N/ha)	(kg P/ha)
EU-28	160 506	67.4	8.7	152 691	74.4	7.4
Belgium	1 373	102.5	7.1	1 321	108.7	2.6
Bulgaria	4 513	33.9	2.4	4 334	78.8	6.4
Czech Republic	3 530	87.7	5.8	3 458	114.8	6.1
Denmark	2 657	72.2	5.3	2 578	79.0	5.6
Germany	16 561	107.8	7.2	16 341	111.5	8.0
Estonia	858	26.4	4.1	953	37.6	3.9
Ireland	3 373	102.3	11.0	3 541	93.5	10.3
Greece	2 599	80.8	13.8	3 073	60.2	7.2
Spain	17 646	55.0	11.2	16 799	63.6	10.7
France	30 043	72.0	8.6	26 813	82.4	7.0
Croatia	773	160.2	33.2	1 081	80.9	11.9
Italy	11 784	66.6	14.1	11 171	46.4	6.7
Cyprus	145	77.9	13.8	115	65.4	6.9
Latvia	1 396	30.6	4.5	1 425	53.2	7.5
Lithuania	2 688	45.4	6.3	2 903	57.4	6.8
Luxembourg	129	108.9	5.8	131	99.1	3.9
Hungary	5 023	57.5	6.5	4 561	78.6	7.8
Malta	10	58.9	5.5	11	59.0	3.0
Netherlands	1 840	146.9	10.8	1 787	137.1	2.1
Austria	2 766	35.2	5.3	2 247	55.8	5.8
Poland	15 480	64.4	12.5	13 921	72.1	9.5
Portugal	2 156	40.5	10.4	2 098	57.7	9.2
Romania	13 111	19.2	3.1	12 907	27.7	4.5
Slovenia	427	71.2	13.1	413	68.6	10.0
Slovakia	1 873	51.8	5.0	1 855	72.5	5.9
Finland	2 025	73.2	8.5	1 998	71.8	5.5
Sweden	2 939	54.5	4.7	2 817	67.5	4.4
United Kingdom	12 789	78.4	8.0	12 039	87.1	7.1

Note: fertilised utilised agricultural area is calculated by excluding the hectares occupied by rough grazing and fallow land from UAA.

Source: Eurostat (online data codes: [aei_fm_usefert](#), [apro_acs_a](#) and [ef_olufit](#))

The fact that nitrogen fertiliser use is increasing is in stark contrast to the period 1990-2000. Following the introduction of the Nitrates Directive (ND) in 1991 and the introduction of the National Action programmes for designated Nitrate Vulnerable Zones (NVZs), nitrogen fertiliser consumption were reduced significantly in the EU-15. The Water Framework Directive (WFD) was introduced in 2000.

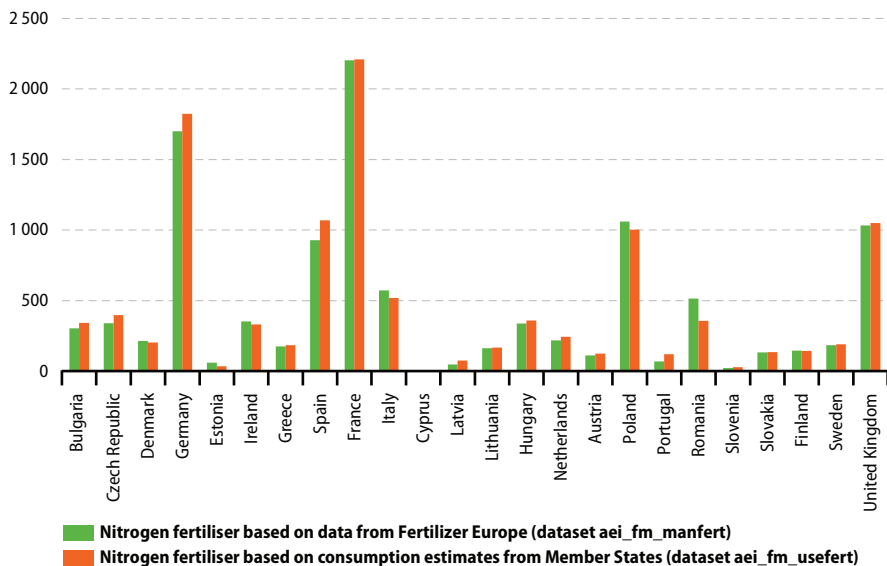
These developments contributed to a decrease in nitrogen mineral fertiliser consumption between 1990 and 2010 with 19%, according to Fertilizers Europe.

Figure 5.2.2 shows the 2015 data on nitrogen fertiliser based on data from Fertilizer Europe and on consumption estimates from Member States.

The total consumption of phosphorous has declined 19 % from 2006 levels, but also here the 2009-2010 levels were the lowest over the period 2006-2015 (Table 5.2.3). An increase has since kept the levels at around 1.1 million tonnes P per year. The use of phosphorous fertiliser per hectare UAA decreased by almost 15 % in the EU-28 from 2006-2015 (Table 5.2.2). The use levels are in 2015 estimated to be below 50 % of the amount spread per hectare in 2006 in Belgium (-63 %), Croatia (-64 %), Italy (-52 %), and Netherlands (-82 %) (Table 5.2.2). On the other hand, increases in kg P/ha are again seen in Bulgaria (+160 %) and Latvia (+65 %).



Figure 5.2.2: Statistics on nitrogen fertiliser, EU-28, 2015
(thousand tonnes)



Note: Belgium, Croatia, Luxembourg and Malta not available.

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

Fertiliser application rates

There is a broad recognition that above-optimal applications of fertiliser nutrients such as N and P lead to an enhanced risk of pollution to watercourses, and associated problems with water quality. The Member States have different application rates of N and P fertiliser

for different crops. In particular, wheat, grass, barley, grain maize, potato, sugar beet, oilseed rape, vegetables and industrial crops have high application rates of N fertiliser. To identify areas at risk of nutrient surplus, the actual area fertilised should be taken into account, but it is unfortunately not available to Eurostat.

Table 5.2.3: Phosphorous fertiliser consumption by agriculture, 2006-2015
(thousand tonnes)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU-28	1 397.4	1 389.9	1 222.3	893.5	1 044.8	1 120.0	1 071.0	1 171.1	1 156.5	1 133.4
Belgium	9.7	10.0	6.4	4.6	5.6	4.7	4.7	4.8	3.4	3.5
Bulgaria	11.0	12.9	13.3	13.4	17.0	12.9	20.8	11.7	28.1	27.6
Czech Republic	20.5	26.7	24.1	7.6	13.7	17.3	18.7	18.2	20.1	21.2
Denmark	14.0	14.0	7.0	11.0	10.0	10.0	10.0	13.6	14.0	14.4
Germany	119.6	115.5	138.3	76.1	102.7	125.0	107.9	124.1	124.0	131.5
Estonia	3.5	3.5	4.2	2.5	2.7	2.7	3.0	3.1	3.8	3.7
Ireland	37.2	32.4	26.4	20.2	28.2	28.1	27.4	37.0	35.6	36.6
Greece	36.0	33.0	28.0	33.0	29.0	23.0	24.0	25.5	22.5	22.1
Spain	197.6	242.1	118.6	115.4	147.5	158.4	164.4	189.0	174.0	179.8
France	258.4	243.3	282.4	129.1	177.0	218.4	189.6	217.2	206.8	187.1
Croatia	25.7	17.7	21.3	8.8	15.8	14.0	14.3	12.5	16.9	12.9
Italy	166.0	142.0	85.0	114.0	87.0	78.0	73.0	74.8	73.7	75.1
Cyprus	2.0	2.0	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.8
Latvia	6.3	7.3	6.6	5.8	6.8	7.6	8.6	10.7	10.2	10.6
Lithuania	17.0	17.0	10.0	14.0	15.0	16.0	17.0	18.2	19.4	19.8
Luxembourg	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Hungary	32.8	38.1	27.4	19.2	20.0	22.1	25.7	33.2	36.0	35.5
Malta	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Netherlands	19.8	14.7	10.8	4.0	12.5	6.1	4.6	4.0	5.9	3.7
Austria	14.7	18.2	13.8	7.3	12.5	9.9	12.3	14.2	14.1	13.1
Poland	192.9	179.9	193.1	163.9	154.2	178.3	161.9	168.3	148.9	132.5
Portugal	22.3	29.7	18.0	11.5	18.1	12.9	14.5	17.3	18.5	19.2
Romania	41.0	45.1	44.7	43.9	53.8	55.1	49.4	49.7	51.8	57.9
Slovenia	5.6	5.6	5.2	3.3	4.3	3.9	3.9	3.9	4.0	4.1
Slovakia	9.3	11.1	11.2	7.9	7.0	8.6	10.6	11.1	11.9	11.0
Finland	17.2	16.0	16.2	10.8	12.6	11.0	10.6	11.2	11.8	11.0
Sweden	13.8	13.7	14.6	8.1	9.8	10.3	10.4	11.8	12.1	12.5
United Kingdom	102.6	97.8	93.9	56.3	80.3	83.8	82.1	84.7	87.8	85.6
Norway	12.3	12.0	11.5	8.4	7.8	8.8	8.4	8.5	8.4	9.3
Switzerland	5.9	6.6	5.1	3.9	4.7	4.6	4.8	4.3	4.2	4.2

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



Data sources and availability

Organic farming statistics

Annual data collection. Data are provided by the EU Member States and Iceland, Norway, Switzerland, Turkey, the former Yugoslav Republic of Macedonia and Serbia on the basis of a harmonised questionnaire. Data in this annual collection originates from the administrative data of national entities in charge of the certification of operators involved in the organic sector. Up to reference year 2007, data provision was voluntary. From reference year 2008 onwards, data have to be delivered following [Commission Regulation \(EC\) No 889/2008](#), implementing [Council Regulation \(EC\) No 834/2007](#).

Statistics on the structure of agricultural holdings (FSS)

The Farm structure survey (FSS) is conducted every 10 years (full-scope Agricultural Census) and intermediate surveys (sample-based) in between. Availability of data by year and country can be found here. The statistical unit is the agricultural holding. In the FSS organic data has been collected since the 2000 Census.

Livestock statistics

The Livestock survey data is used for comparing the organic livestock data with the data on total livestock production. It is an annual data collection. The statistical unit is agricultural holding, in the case of the data used in this article, the reference period is a given day in the month of December.

Crop statistics

The annual crop statistics data is used for comparing the organic crop area with the total

utilised agriculture area, "main area" which corresponds to the area of the land parcels. The statistical unit is parcel cultivated for the production of a crop. The reference period used for this article is the final data for 2016.

Agri-environmental indicator - mineral fertiliser consumption

Eurostat publishes two data sets on inorganic fertilisers: [aei_fm_usefert](#) and [aei_fm_manfert](#).

The first one is collected from Member States and is an estimate of the nitrogen (N) and phosphorous (P) use in agriculture.

The other data set is estimated consumption based on the sales of mineral fertiliser in the EU-28 from Fertilizers Europe. The figures estimated by the trade association Fertilizers Europe based on sales of mineral fertiliser mostly correspond with the estimates of N and P use reported by countries (Figure 2) although they can not be directly compared due to methodological differences.

Data on UAA was taken from the annual crop statistics data collection. Since not all agricultural area is fertilised, but there is no data collection covering this issue, the areas covered by rough grazing and fallow land, that are usually not fertilised, were removed from the calculations. The rough grazing and fallow land areas collected in the Farm Structure Survey (FSS) 2013 were used for calculating both 2006 and 2015 "fertilised UAA", since FSS was not carried out in 2006 or 2015. The size of these areas do not vary to such a high degree that this would be misleading.

6

Forestry



Introduction

Apart from the traditional production of wood and other products, forests are increasingly valued for their environmental functions, such as protecting the water quality of headwaters and rivers, preventing soil erosion, protecting human settlements from avalanches, filtering air-borne pollutants, protecting biodiversity and providing space for recreation. More recently, the absorption of carbon and its storage in trees and forest soils is recognised as essential for mitigating climate change, while at the same time, timber is still the most used source of renewable energy in the EU. Both facts have led to an array of EU policies and initiatives⁽¹⁾ with a bearing on forests.

With the intention of protecting all forests, the European Community and its Member States have been members of the International Tropical Timber Agreement (ITTA) since 1994. A new ITTA was concluded in 2006⁽²⁾. The European Commission presented a new EU forest strategy (COM(2013) 659) in 2013, in response to the increasing demands on forests and to significant societal and political changes that have affected forests over the last 15 years. The strategy is used to coordinate EU initiatives with the forest policies of the Member States.

Forestry, along with farming, remains crucial for land use and the management of natural

resources in the EU's rural areas, and as a basis for economic diversification in rural communities. Rural development policy is part of the EU's Common Agricultural Policy (CAP), which is the main instrument for implementing forestry measures. It is estimated that spending on forest-related measures — through the European Agricultural Fund for Rural Development — amounted to EUR 9–10 billion during the period 2007–2013. In the same period, an additional EUR 2.7 billion in state aid for forestry was spent by the Member States and the EU combined, while this joint spending amounts to EUR 1.4 billion⁽³⁾ just for the years 2014 and 2015.

The European Union (EU) holds approximately 5 % of the world's forests and, contrary to what is happening in many other parts of the world, its forest area is slowly increasing. Socio-economically, forests vary from small family holdings to state forests or to large estates owned by companies.

This chapter provides data on the EU's forest area, forest ownership and timber resources as well as economic and employment figures of the forestry sector. Indicators combining both the physical and the economic data, on the volume of roundwood⁽⁴⁾ and sawnwood⁽⁵⁾ production as well on the performance and employment of the EU's wood-based industries are presented.

(1) Proposal for a Regulation of the European Parliament and of the Council on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry into the 2030 climate and energy framework and amending Regulation No 525/2013 of the European Parliament and the Council on a mechanism for monitoring and reporting greenhouse gas emissions and other information relevant to climate change

(2) Council Decision 2007/648/EC of 26 September 2007 on the signing, on behalf of the European Community, and provisional application of the International Tropical Timber Agreement

(3) See Agriculture aid by objective, table [comp_ag_03](#)

(4) Roundwood production (the term is also used as a synonym for removals in the context of forestry) comprises all quantities of wood removed from the forest and other wooded land, or other tree felling site during a defined period of time.

(5) Sawnwood is wood that has been produced either by sawing lengthways or by a profile-chipping process and, with a few exceptions, is greater than 6 millimetres (mm) in thickness.



6.1 Forests and other wooded land

The EU-28 had close to 182 million hectares of forests and other wooded land, corresponding to 43 % of its land area (excluding lakes and large rivers; see Table 6.1.1). Wooded land covers a slightly greater proportion of the land than is used for agriculture (some 41 %). In seven EU Member States, more than half of the land area was wooded in 2015. Just over three quarters of the land area was wooded in Finland and Sweden, while Slovenia reported 63 %; the remaining four EU Member States, each with shares in the range of 54–56 %, were Estonia, Latvia, Spain and Portugal, and in Greece the share of wooded area was 50 %.

Sweden reported the largest wooded area in 2015 (30.5 million hectares), followed by Spain (27.6 million hectares), Finland (23.0 million hectares), France (17.6 million hectares), Germany (11.4 million hectares) and Italy (11.1 million hectares). Of the total area of the EU-28 covered by wooded land in 2015, Sweden accounted for 16.8 %. Spain (15.2 %) and Finland (12.7 %) were the only other EU Member States to record double-digit shares.

Not all data are available for both forests and other wooded land; ownership is one example.

Just 60.3 % of the EU-28's forests were privately owned in 2010. There were 10 EU Member States where the share of privately owned forests was above the EU-28 average, peaking at 97.0 % in Portugal. By contrast, the share of privately owned forests was below 20 % in Poland and Bulgaria (where the lowest proportion was recorded, at 12.1 %).

The growing stock of timber in forests and other wooded land in the EU-28 totalled some 26.0 billion m³ (over bark) in 2015: Germany had the highest share (14.1 %), followed by Sweden (11.5 %) and France (10.0 %) (see Table 6.1.2). Germany also had the largest growing stock in forests available for wood supply in 2015, some 3.5 billion m³, while Finland, Poland, France and Sweden each reported between 2.0 and 2.7 billion m³. The net annual increment — i.e. the average growth in volume of the stock of living trees available at the start of the year minus the average natural mortality of this stock — in forests available for wood supply was also highest in Germany, amounting to 119 million m³ in 2015 (16.5 % of the total increase for the EU-28), while Sweden, France and Finland each accounted for between 11 % and 13 % of the net annual increment in the EU.

Table 6.1.1: Forest area and ownership, 2015 and 2010

	Land area, without inland water, 2015 (1)	Forest and other wooded land, 2015	Forest, 2015	Forest available for wood supply, 2015	Forest ownership, 2010	
					Public	Private (2)
	(thousand hectares)				(%)	
EU-28	424 694	181 918	161 082	134 486	39.7	60.3
Belgium	3 033	719	683	670	46.5	53.5
Bulgaria	10 840	3 845	3 823	2 213	87.9	12.1
Czech Republic	7 722	2 667	2 667	2 301	76.6	23.4
Denmark	4 292	658	612	572	23.7	76.3
Germany	34 877	11 419	11 419	10 888	52.0	48.0
Estonia	4 343	2 456	2 232	1 994	41.3	58.7
Ireland	6 839	801	754	632	53.2	46.8
Greece	13 082	6 539	3 903	3 595	77.5	22.5
Spain	50 229	27 627	18 418	14 711	29.2	70.8
France	55 010	17 579	16 989	16 018	24.7	75.3
Croatia	5 659	2 491	1 922	1 740	71.7	28.3
Italy	29 511	11 110	9 297	8 216	33.6	66.4
Cyprus	921	386	173	41	68.8	31.2
Latvia	6 221	3 468	3 356	3 151	52.3	47.7
Lithuania	6 265	2 284	2 180	1 924	61.4	38.6
Luxembourg	259	88	87	86	47.1	52.9
Hungary	8 961	2 190	2 069	1 779	57.6	42.4
Malta	32	0	0	:	:	:
Netherlands	3 369	376	376	301	48.5	51.5
Austria	8 241	4 022	3 869	3 339	25.8	74.2
Poland	30 619	9 435	9 435	8 234	81.9	18.1
Portugal	9 068	4 907	3 182	2 088	3.0	97.0
Romania	23 008	6 951	6 861	4 627	67.0	33.0
Slovenia	2 014	1 271	1 248	1 139	25.3	74.7
Slovakia	4 904	1 940	1 940	1 785	50.2	49.8
Finland	30 389	23 019	22 218	19 465	30.4	69.6
Sweden	40 734	30 505	28 073	19 832	24.3	75.7
United Kingdom	24 251	3 164	3 144	3 144	28.4	71.6
Iceland	10 024	193	49	26	33.3	66.7
Liechtenstein	16	7	6	4	85.7	14.3
Norway	30 423	14 124	12 112	8 259	12.3	87.7
Switzerland	3 999	1 324	1 254	1 208	86.1	13.9
Montenegro	1 345	964	827	675	52.4	47.6
Form. Yug. Rep. of Macedonia	2 491	1 131	988	804	91.6	8.4
Serbia	8 746	3 228	2 720	:	50.9	49.1
Turkey	76 960	21 862	11 943	8 183	99.9	0.1

(1) Latest available year; France: only covers the mainland.

(2) Includes any other form of ownership.

Source: Eurostat (online data codes: [demo_r_d3area](#) and [for_area](#)); Food and Agriculture Organization of the United Nations:

— Global Forest Resources Assessment, 2015.

— Forest Europe 2015, as published on UNECE database (http://w3.unece.org/PXWeb2015/pxweb/en/STAT/STAT__26-TMSTAT1/)



Table 6.1.2: Timber resources, 2015 and 2010
(thousand m3 over bark)

	Forest and other wooded land		Forest available for wood supply	
	Growing stock		Net annual increment	
	2015		2010	
EU-28	26 035 561	23 148 685	719 950	
Belgium (1)	168 121	170 060	4 610	
Bulgaria	699 000	492 000	14 361	
Czech Republic	791 244	670 898	20 463	
Denmark	125 697	115 701	6 263	
Germany	3 663 000	3 492 665	118 590	
Estonia	483 500	425 500	11 514	
Ireland (1)	74 698	104 000	6 678	
Greece (1)(2)	205 771	170 385	4 511	
Spain	1 214 079	943 981	35 479	
France (1)	2 596 749	2 697 000	82 871	
Croatia	420 790	388 770	8 144	
Italy (1)	1 448 300	1 285 958	32 543	
Cyprus (1)	10 514	3 556	47	
Latvia	666 900	616 100	19 680	
Lithuania	518 100	418 000	11 030	
Luxembourg (1)	25 961	25 756	650	
Hungary (1)	355 709	330 680	9 775	
Malta (1)(2)	80	0	0	
Netherlands	80 900	64 700	2 738	
Austria	1 155 000	1 121 000	25 136	
Poland	2 540 000	2 190 000	62 300	
Portugal (1)(2)	187 800	154 000	19 087	
Romania	1 935 300	1 293 368	29 260	
Slovenia	433 000	393 900	9 165	
Slovakia	532 100	439 600	13 465	
Finland	2 327 748	2 099 415	93 379	
Sweden	2 995 500	2 389 692	79 347	
United Kingdom (1)	380 000	652 000	23 113	
Iceland	535	329	24	
Liechtenstein (1)	1 754	1 399	25	
Norway	1 164 980	1 033 000	25 750	
Switzerland	442 690	426 000	9 001	
Montenegro	964 000	105 000	2 192	
For. Yug. Rep. of Macedonia	1 131 000	76 000	4 566	
Serbia	3 228 000	353 000	:	
Turkey	21 862 000	1 032 000	41 536	

(1) Growing stock in forests and on other wooded land: 2010 data.

(2) Growing stock: 2010 data.

Source: Eurostat (online data codes: [for_vol](#)); Food and Agriculture Organization of the United Nations:

— Global Forest Resources Assessment, 2015.

— Forest Europe 2015, as published on UNECE database (http://w3.unece.org/PXWeb2015/pxweb/en/STAT/STAT__26-TMSTAT1/)

6.2 Primary wood products

Among the EU Member States, Sweden produced the most roundwood (74 million m³) in 2015, followed by Finland, Germany and France (each producing between 51 and 59 million m³) (see Tables 6.2.1 and 6.2.2). Slightly more

than one fifth (21.9%) of the EU-28's roundwood production in 2015 was used as fuelwood, while the remainder was industrial roundwood used for sawnwood and veneers, or for pulp and paper production.

Table 6.2.1: Roundwood production, 2015
(thousand m3 under bark)

	Roundwood production		
	Total	Fuelwood	Industrial
EU-28	446 819	97 745	349 074
Belgium	:	:	:
Bulgaria	6 372	2 848	3 524
Czech Republic	16 163	2 336	13 827
Denmark (¹)	3 180	1 950	1 230
Germany	55 613	10 494	45 119
Estonia	7 736	2 179	5 558
Ireland	2 908	203	2 705
Greece (¹)	1 217	894	323
Spain	16 719	3 709	13 010
France	51 005	25 962	25 043
Croatia	5 178	1 769	3 410
Italy	5 052	3 004	2 048
Cyprus	11	7	3
Latvia	12 294	1 200	11 094
Lithuania	6 414	2 110	4 304
Luxembourg	381	70	311
Hungary	:	:	:
Malta (¹)	0	0	0
Netherlands	1 173	357	816
Austria	17 550	4 979	12 570
Poland	41 375	5 152	36 223
Portugal	11 533	600	10 933
Romania	15 315	5 079	10 235
Slovenia	5 054	1 242	3 812
Slovakia	8 995	560	8 435
Finland	59 411	7 964	51 446
Sweden	74 300	7 000	67 300
United Kingdom	10 550	1 921	8 629
Liechtenstein	8	4	4
Norway	11 876	1 718	10 159
Switzerland	4 357	1 584	2 772
Montenegro (¹)	915	707	208
Form. Yug. Rep. of Macedonia (¹)	691	577	114
Turkey (¹)	22 835	4 300	18 535

(¹) 2014 data used instead of 2015

Source: Eurostat (online data codes: for_remove)



Table 6.2.2: Roundwood production, 2000-2015
(thousand m³)

	2000	2005	2010	2011	2012	2013	2014	2015
EU-28	411 764	447 502	428 785	435 668	433 173	432 975	436 843	446 819
EA-19	236 540	232 925	243 366	239 602	237 347	235 341	231 980	241 939
Belgium	4 510	4 950	4 827	5 128	6 663	:	:	:
Bulgaria	4 784	5 862	5 668	6 205	6 092	6 155	5 570	6 372
Czech Republic	14 441	15 510	16 736	15 381	15 061	15 331	15 476	16 163
Denmark	2 952	2 962	2 669	2 583	:	3 180	3 180	:
Germany	53 710	56 946	54 418	56 142	52 338	53 207	54 356	55 613
Estonia	8 910	5 500	7 200	7 110	7 290	7 655	8 000	7 736
Ireland	2 673	2 648	2 618	2 635	2 580	2 760	2 828	2 908
Greece	2 245	1 523	1 048	1 196	:	1 092	1 217	:
Spain	14 321	15 531	16 089	15 428	14 657	15 560	16 395	16 719
France	65 865	52 499	55 808	55 041	51 495	51 304	51 866	51 005
Croatia	3 669	4 018	4 477	5 258	5 714	5 436	5 926	5 178
Italy	9 329	8 691	7 844	7 744	7 744	:	5 759	5 052
Cyprus	21	10	9	8	11	9	9	11
Latvia	14 304	12 843	12 534	12 833	12 530	12 708	12 885	12 294
Lithuania	5 500	6 045	7 097	7 004	6 921	7 053	7 351	6 414
Luxembourg	260	249	275	261	:	:	:	381
Hungary	5 902	5 940	5 740	6 232	5 946	6 027	x5 798	:
Malta	0	0	0	0	0	0	0	:
Netherlands	1 039	1 110	1 081	982	8 063	1 108	8	1 173
Austria	13 276	16 471	17 831	18 696	18 021	17 390	17 089	17 550
Poland	26 025	31 945	35 467	37 180	38 015	38 940	40 862	41 375
Portugal	10 831	10 746	9 648	10 961	10 711	10 610	11 152	11 533
Romania	13 148	14 501	13 112	14 359	16 088	15 195	15 330	15 315
Slovenia	2 253	2 733	2 945	3 388	3 341	3 415	5 099	5 054
Slovakia	6 163	9 302	9 599	9 213	8 063	8 063	9 168	8 995
Finland	54 542	52 250	52 125	52 778	49 967	56 992	57 033	59 411
Sweden	63 300	98 200	72 200	71 900	69 499	69 600	73 300	74 300
United Kingdom	7 791	8 519	9 718	10 020	10 120	10 821	11 184	10 550
Iceland	0	0	:	:	4	:	:	:
Liechtenstein	:	:	25	26	23	19	12	8
Norway	8 156	9 667	10 443	10 291	10 572	11 598	11 376	11 876
Switzerland	9 238	5 285	4 938	4 861	4 466	4 577	4 709	4 357
Montenegro	:	:	915	915	915	915	915	:
Form. Yug. Rep. of Macedonia	1 052	822	631	597	779	691	691	:
Turkey	15 939	16 185	20 597	21 039	21 959	20 858	22 835	:
Brazil	235 402	231 570	235 432	253 144	266 769	264 443	264 443	:
Canada	201 845	203 121	142 013	148 178	148 183	152 076	154 259	:
China	323 646	302 037	350 633	346 359	341 662	347 512	347 512	:
Indonesia	137 830	123 791	113 849	117 994	117 523	115 232	115 232	:
India	318 553	350 451	358 066	358 293	357 761	357 226	357 226	:
Russia	158 101	182 000	175 499	191 225	192 055	194 461	203 000	:
United States	466 549	467 347	376 572	395 141	387 512	396 818	398 693	:

Note: data not available have been estimated by Eurostat for the purpose of calculating EU-28 aggregates.

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

In 2015, four EU Member States (Ireland, Latvia, Portugal, Slovakia and Sweden) reported that over 90 % of their total roundwood production was industrial roundwood. In Denmark, Greece, France, Italy and Cyprus, over half of the roundwood produced in 2015 was fuelwood. For Bulgaria, Croatia, Lithuania and Romania, the share of fuelwood varied between 33 and 45 % of the roundwood production. In many EU Member States, however, no estimates of fuelwood consumption by households are included in the numbers reported in the Joint Forest Sector Questionnaire (JFSQ). Separate studies would be needed to produce such estimates, because this wood may be acquired informally, including from forests owned by households.

The numbers are probably under-reported in several EU Member States, given the recent increases in the EU's production of woodpellets and other agglomerates used for energy and the share of wood in gross inland energy consumption, most of which should come from harvested fuelwood (see the Statistics explained article '[Wood as a source of energy](#)').

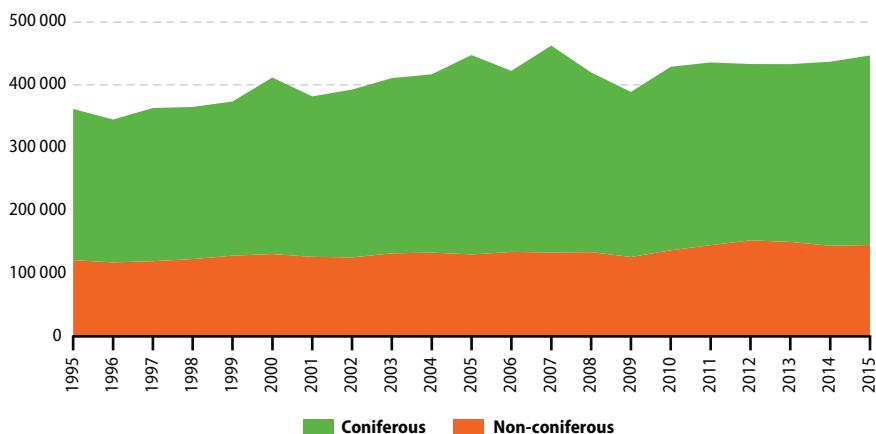
The overall level of EU-28 roundwood production reached an estimated 447 million m³ in 2015, only

15 million m³ (3.4 %) less than the peak output level recorded in 2007. Note that some of the peaks (most recently 2000, 2005 and 2007) in roundwood production were due to forestry and logging having to cope with unplanned numbers of trees that were felled by severe storms.

From 1996 to 2007, there was a steady increase in the level of roundwood production in the EU-28. While the output of non-coniferous (broadleaved or hardwood) species remained relatively stable, there were greater year-on-year differences for coniferous (softwood) species (see Figure 6.2.1).

The effects of the financial and economic crisis led to a drop of the level of EU-28 coniferous production in 2008, a finding confirmed by a further reduction in 2009. The output has since returned to pre-crisis levels of approximately 302 million m³ per annum. Non-coniferous production increased relative to coniferous production ever since the crisis years. In 2010, EU-28 total roundwood production rebounded strongly by 10 % and continued to rise in 2011, levelled out in 2012 and 2013, and increased by 2 % in 2015.

Figure 6.2.1: Annual production of roundwood, EU-28, 1995–2015
(thousand m³)



Note: data estimated by Eurostat.

Source: Eurostat (online data code: for_remov)



The total output of sawnwood across the EU-28 was approximately 100 (103 in 2015) million m³ per year from 2010 to 2015, some 5 % lower than in 2005. The situation has now returned to the average production level of the years

preceding the crisis. Germany and Sweden were the EU's leading sawnwood producers, regularly accounting for approximately 21 % and 17 % of the EU-28 total output over the past few years (see Table 6.2.3).

Table 6.2.3: Sawnwood production, 2000-2015
(thousand m³)

	2000	2005	2010	2011	2012	2013	2014	2015
EU-28	100 706	108 706	100 815	101 994	100 058	99 695	102 288	102 890
EA-19	61 337	66 777	59 673	60 627	57 947	57 644	57 253	57 035
Belgium	1 150	1 285	1 383	1 388	1 342	:	:	:
Bulgaria	312	569	554	728	698	803	838	908
Czech Republic	4 106	4 003	4 744	4 454	4 259	4 037	3 861	4 150
Denmark	364	196	448	372	:	358	358	:
Germany	16 340	21 931	22 059	22 628	21 081	21 459	21 772	21 490
Estonia	1 436	2 063	1 771	1 503	1 491	1 558	1 554	1 650
Ireland	888	1 015	772	761	782	825	907	905
Greece	123	191	118	106	:	109	108	:
Spain	3 760	3 660	2 038	2 162	1 971	2 047	2 245	2 453
France	10 536	9 715	8 316	8 675	8 067	7 901	7 697	7 514
Croatia	642	624	677	754	851	1 192	1 294	1 488
Italy	1 630	1 590	1 200	1 250	1 370	1 360	1 430	1 470
Cyprus	9	4	4	3	3	2	2	2
Latvia	3 900	4 227	3 150	3 432	3 316	3 367	3 657	3 479
Lithuania	1 300	1 445	1 272	1 260	1 150	1 120	1 345	1 248
Luxembourg	133	133	94	78	:	:	:	:
Hungary	291	215	133	:	302	109	121	:
Malta	0	0	0	0	0	0	0	:
Netherlands	389	279	231	238	1 430	216	228	185
Austria	10 390	11 074	9 603	9 636	8 952	8 534	8 460	8 807
Poland	4 262	3 360	4 220	4 422	4 249	4 321	4 725	4 835
Portugal	1 427	1 010	1 045	1 044	1 097	854	1 035	1 134
Romania	3 396	4 321	4 323	4 442	5 500	5 532	6 019	5 936
Slovenia	439	527	760	703	660	660	700	725
Slovakia	1 265	2 621	2 576	2 204	1 430	1 430	1 750	1 600
Finland	13 420	12 269	9 473	9 750	9 440	10 440	10 920	10 640
Sweden	16 176	17 600	16 750	16 500	16 492	16 074	17 500	18 174
United Kingdom	2 622	2 780	3 101	3 279	3 409	3 581	3 764	3 493
Iceland	0	0	:	:	0	:	:	:
Liechtenstein	:	:	4	8	:	0	0	:
Norway	2 280	2 326	2 118	2 271	2 289	2 206	2 407	2 444
Switzerland	1 625	1 591	1 457	1 313	1 135	1 044	1 140	1 122
Montenegro	:	:	52	58	53	53	53	:
Form. Yug. Rep. of Macedonia	36	18	5	3	8	4	4	:
Turkey	5 528	6 445	6 243	6 461	6 682	6 405	6 635	:
Brazil	21 300	23 557	17 452	16 201	15 167	15 397	15 397	:
Canada	50 465	60 187	38 667	38 880	40 564	42 813	43 351	:
China	6 675	17 960	37 231	44 638	55 740	63 040	68 440	:
India	7 900	14 789	6 889	6 889	6 889	6 889	6 889	:
Indonesia	6 500	4 330	4 169	4 169	4 169	4 169	4 169	:
Russia	20 000	23 913	28 870	31 215	32 230	33 500	33 900	:
United States	91 076	97 020	60 013	63 174	67 474	71 115	74 803	:

Source: Eurostat (online data code: for_swpan)

6.3 Forestry and logging: economic indicators and employment

A range of economic indicators are presented for forestry and logging activities across EU Member States in Table 6.3.1. The data come from EU forest accounts.

The most important forestry and logging activities on the basis of gross value added generated in 2014 were found in Sweden, Finland and France.

Table 6.3.1: Economic indicators for forestry and logging, 2005 and 2014

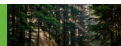
	Gross output		Gross value added at basic prices		Gross fixed capital formation		Gross value added/forest area available for wood supply	
	(million EUR)							
	2005	2014	2005	2014	2005	2014 (1)	2005	2014 (2)
EU-28	:	48 392	:	25 156	:	:	:	187
Belgium	:	429	:	89	:	:	:	133
Bulgaria	266	681	84	248	11	18	33	112
Czech Republic	1 424	2 264	496	883	63	110	197	384
Denmark	:	757	:	322	:	:	:	563
Germany	4 141	8 603	1 738	3 053	168	263	160	280
Estonia	:	604	:	239	:	:	:	120
Ireland	:	539	:	145	:	:	:	229
Greece	71	82	54	63	4	16	16	18
Spain	1 582	1 273	787	1 042	:	:	57	71
France	5 531	6 811	2 968	3 285	472	231	195	205
Croatia	:	310	:	184	:	19	:	106
Italy	456	1 517	365	1 217	83	222	47	148
Cyprus	2	5	2	3	2	1	38	63
Latvia	:	1 045	:	393	:	:	:	125
Lithuania	172	1 609	102	696	10	133	55	362
Luxembourg	9	26	6	20	1	3	69	231
Hungary	339	449	132	196	24	:	79	110
Malta	:	:	:	:	:	:	:	:
Netherlands	133	252	46	113	10	7	157	375
Austria	1 786	2 461	873	1 215	155	155	261	364
Poland	1 991	5 205	1 110	2 376	137	205	132	289
Portugal	1 066	1 191	810	845	93	92	367	404
Romania	531	331	314	128	:	47	62	28
Slovenia	195	374	115	231	8	14	99	203
Slovakia	624	795	259	330	33	37	148	185
Finland	3 235	4 741	2 422	3 396	388	442	121	174
Sweden	:	4 622	:	3 781	:	648	:	191
United Kingdom	791	1 416	357	662	20	453	118	211
Norway	:	1 173	:	585	:	66	:	71
Switzerland	525	882	186	337	83	130	158	279

Note: values at current basic prices.

(1) 2013 data used instead of 2014 for Greece, Italy, the Netherlands, Romania, Slovenia, Finland and Norway.

(2) 2015 forest area used for the calculation.

Source: Eurostat (online data codes: [for_eco_cp](#) and [for_area](#))

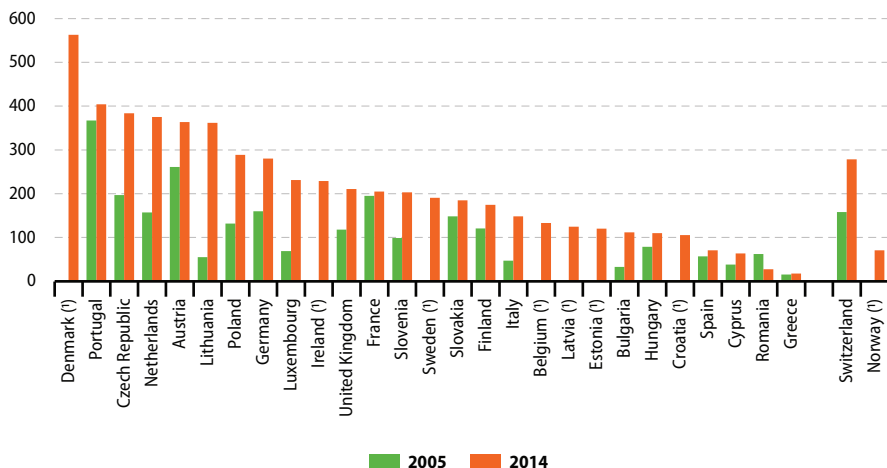


Gross fixed capital formation is an indicator of the level of investment in an industry and as such may show how competitive the industry is, in relation to its total gross value added. On the basis of the information that is available for 20 EU Member States, EUR 3.19 billion was invested in forestry and logging in 2014, amounting to 12.4 % of gross value added (EU-28 total). Almost half of the investment that took place in 2014 comes from Sweden, Finland and the United Kingdom. The highest proportions of gross fixed capital formation (using 2013 data for several countries) compared with value added were recorded in the United Kingdom (68.4 %), Romania (36.8 %), Cyprus (26.4 %) and Greece (25.8 %), although in the case of Cyprus

and Greece these figures tended to reflect low levels of added value rather than high levels of investment. They were followed by Lithuania (19.1 %), Italy (18.2 %) and Sweden (17.1 %).

The ratio of value added generated within the forestry and logging sector compared with the forest area available for wood supply is an indicator that can be used to analyse the productivity of forestry activities across the EU (see Table 6.3.1 and Figure 6.3.1). The indicator shows that in 2014, the highest amounts of value added per forest area in the EU were in Denmark, Portugal, the Czech Republic, the Netherlands and Austria.

Figure 6.3.1: Forestry and logging value added per forest area available for wood supply, 2005 and 2014
(EUR/hectare)



Note: ranked on 2014. Malta: not applicable. Forest area: 2015 data used for the calculation. Values at current basic prices.
(*) 2005: not available.

Source: Eurostat (online data codes: for_emp_ifs, for_emp_ifs1, for_area, for_remove, for_awu and for_eco_cp)

Table 6.3.2 provides information on employment within the EU's forestry and logging sector, based mostly on the EU Labour Force Survey, completed with some data from EU forest accounts. The largest workforce was recorded in Poland, with 72 700 persons employed in 2015. There were also relatively large workforces in Romania (51 600), Italy (50 500), Germany (36 500) and France (31 900).

The ratio of labour input per area of exploited forest provides information on the labour intensity of the sector across the EU Member

States. This indicator varies considerably between countries, ranging from a high of around 19.5 employed persons per 1 000 hectares in Cyprus to less than 2 employed persons per 1 000 hectares in Spain, Sweden, Greece and Finland (see Figure 6.3.2). Some of the differences across EU Member States may, at least in part, be explained by factors such as the density of the growing stock, the tree species and the local terrain in areas where forestry and logging takes place.

Table 6.3.2: Employment in forestry and logging, 2005 and 2015

	Persons employed		Persons employed/ forest area available for wood supply		Apparent labour productivity			
	2008	2015 ⁽¹⁾	2005 ⁽²⁾	2015	2005	2015 ⁽³⁾	2005 ⁽²⁾	2015 ⁽⁴⁾
	(thousand)		(persons employed/ thousand hectares)		(thousand m ³ removals/ person employed)		(thousand EUR gross value added/person employed)	
Belgium	3.1	2.3	4.7	3.4	1.6	2.9	:	38.8
Bulgaria	25.0	28.6	9.8	12.9	0.2	0.2	3.4	8.7
Czech Republic	30.9	30.1	12.3	13.1	0.5	0.5	16.0	29.3
Denmark	2.7	3.7	5.1	6.5	1.1	0.9	:	87.1
Germany	44.2	36.5	4.1	3.4	1.3	1.5	39.3	83.7
Estonia	7.1	7.4	3.4	3.7	0.8	1.0	:	32.4
Ireland	1.9	2.8	3.3	4.4	1.4	1.0	:	51.7
Greece	7.1	6.0	2.1	1.7	0.2	0.2	7.6	10.6
Spain	32.0	26.1	2.3	1.8	0.5	0.6	24.6	39.9
France	48.5	31.9	3.2	2.0	1.1	1.6	61.2	103.0
Croatia	13.0	15.1	7.4	8.7	0.3	0.3	:	12.2
Italy	41.7	50.5	5.4	6.1	0.2	0.1	8.8	24.1
Cyprus	0.9	0.8	21.7	19.5	0.0	0.0	1.8	3.3
Latvia	15.1	18.6	4.9	5.9	0.9	0.7	:	21.2
Lithuania	14.2	13.8	7.7	7.2	0.4	0.5	7.2	50.4
Luxembourg	:	:	:	:	:	:	:	:
Hungary	12.6	25.3	7.5	14.2	0.5	0.2	10.5	7.7
Malta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Netherlands	2.2	2.0	7.5	6.6	0.5	0.6	21.0	56.5
Austria	11.7	8.4	3.5	2.5	1.4	2.1	74.6	144.6
Poland	60.5	72.7	7.2	8.8	0.5	0.6	18.3	32.7
Portugal	16.0	12.9	7.3	6.2	0.7	0.9	50.6	65.5
Romania	49.1	51.6	9.7	11.2	0.3	0.3	6.4	2.5
Slovenia	4.5	4.0	3.9	3.5	0.6	1.3	25.6	57.8
Slovakia	25.4	18.4	14.5	10.3	0.4	0.5	10.2	17.9
Finland	22.7	21.0	1.1	1.1	2.3	2.8	106.7	161.7
Sweden	24.9	21.9	1.2	1.1	3.9	3.4	:	172.7
United Kingdom	21.1	26.5	7.0	8.4	0.4	0.4	16.9	25.0
Norway	4.3	3.3	0.5	0.4	2.2	3.6	:	177.3
Switzerland	7.2	14.8	6.1	12.3	0.7	0.3	25.9	22.7

Note: Values at current basic prices.

(1) 2013 data used for Belgium, 2014 data used for Ireland and Netherlands.

(2) 2008 LFS employment data used for the calculation.

(3) 2012 data used for Belgium, 2014 data used for Denmark, Greece and Hungary for removals.

(4) 2014 Gross value added used for the calculation.

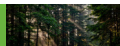
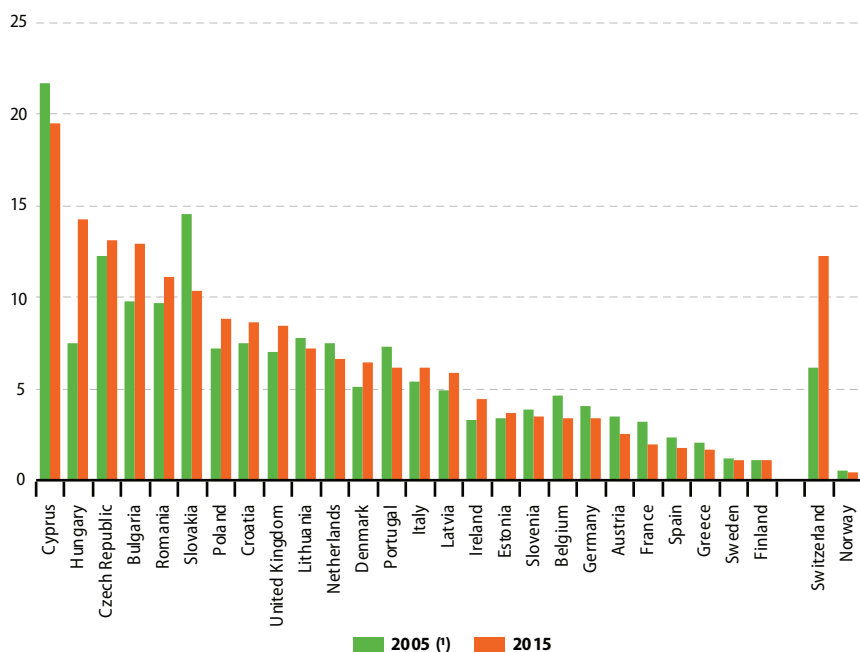


Figure 6.3.2: Employment per area of forest available for wood supply, 2005 and 2015
(persons employed/thousand hectares)



Note: ranked on 2015. EU Member States that are not shown are not available or not applicable.

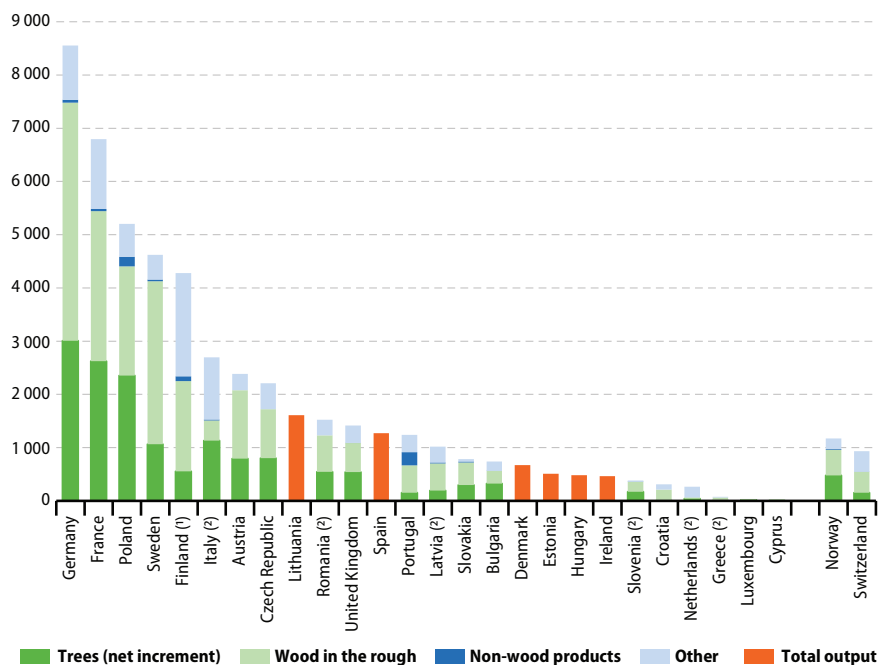
(¹) 2008 LFS employment data used for the calculation.

Source: Eurostat (online data codes: [for_emp_lfs](#), [for_emp_lfs1](#), [for_area](#), [for_remove](#), [for_auw](#) and [for_eco_cp](#))

The labour productivity of the forestry and logging sector (calculated as gross value added per person employed) also varied substantially across EU Member States in 2015 (2014 data used for gross value added). Using this measure, the highest levels of labour productivity were

recorded in Sweden (EUR 172 700 per person employed) and Finland (EUR 161 700 per person employed), while at the other end of the range, Bulgaria, Cyprus, Hungary and Romania recorded productivity levels that were below EUR 10 000 per person employed.

Figure 6.3.3: Output of forestry and logging by type, 2014
(million EUR)



Note: Values at current basic prices.

(*) 2012 data used instead of 2014.

(†) 2013 data used instead of 2014.

Source: Eurostat (online data codes: [for_sup_cp](#))

Figure 6.3.3 shows the output of the forestry and logging activity by type of output among the EU-28, Norway and Switzerland in 2014. For countries where the breakdown is missing, the breakdown for 2012 or 2013 is used. From the data available, we see that the output of wood in the rough (logs) is highest in Germany, France and Sweden with respectively 4 470, 2 820 and 3 070 million Euro. The net increment of forest trees in managed forests is also highest in

Germany (3 000), followed by France (2 620) and Poland (2 350). On the other hand, the output on non-wood products varies from 254 million Euro in Portugal (the main producer of cork), 180 in Poland, 55 in Germany to 0.6 million Euro in Slovenia. The category "Other", which includes services, secondary activities and other products, shows the highest output in Finland (1 930) followed by France (1 310) and Italy (1 170).



6.4 Wood-based industries

The EU's wood-based industries cover a range of downstream activities, including woodworking industries, large parts of the furniture industry, pulp and paper manufacturing and converting industries, and the printing industry. Together, some 415 000 enterprises were active in wood-based industries across the EU-28; they represented nearly than one in five (19.7 %) manufacturing enterprises across the EU-28, highlighting that - with the exception of pulp and paper manufacturing that is characterised by economies of scale - many wood-based industries had a relatively high number of small or medium-sized enterprises.

The economic weight of the wood-based industries in the EU-28 as measured by gross value added was equivalent to EUR 107 billion or 6.2 % of the manufacturing total in 2014. The distribution of value added across each of the four wood-based activities in 2014 is presented in Table 6.4.1. Within the EU-28's wood-based industries, the highest share was recorded for pulp, paper and paper products manufacturing (40.7 % or EUR 43 billion), while the other three sectors had nearly equal shares — printing and service activities related to printing and the manufacture of furniture each amounted to 27 % of the gross value added of wood based

industries, while the manufacturing of wood and wood products made up 29 %.

Between 2005 and 2014 the overall added value generated within the EU-28's manufacturing industries increased nominally by 11 %, while the wood-based industries experienced a strong decrease in activity as gross value added fell by 30 %. Reductions in activity were recorded by three wood-based industries, with the largest decline in output recorded for printing and service activities related to printing (– 27.70 %). The added value generated by the EU-28's wood and wood products manufacturing enterprises fell by 13.7 % and for manufacture of furniture by 19.0 % between 2005 and 2014. Only the added value of pulp and paper production increased, by 8.6 %.

The wood-based industries employed 3.3 million persons across the EU-28 in 2014 or 11 % of the manufacturing total. There were 1.9 million persons employed within both the manufacture of wood and wood products and the manufacture of furniture, while 641 000 persons were recorded for the activity of pulp, paper and paper products manufacturing, the lowest employment of the four activities.

Table 6.4.1: Main indicators for wood-based industries, EU-28, 2005 and 2014

Activity (NACE Rev. 2)	Number of enterprises (1 000)		Gross value added at factor cost (billion EUR)		Number of persons employed (1 000)	
	2005	2014	2005	2014	2005	2014
Manufacturing (C)	2 322	2 110	1 630	1 710	34 644	29 900
Wood-based industries (16+17+18.1+31)	500	415	152	107	4 388	3 297
Manufacture of wood and wood products (16)	198	173	35	31	1 280	984
Manufacture of pulp, paper and paper products (17)	20	20	40	43	730	641
Printing and service activities related to printing (18.1)	133	120	41	29	978	716
Manufacture of furniture (31)	150	120	36	29	1 400	956

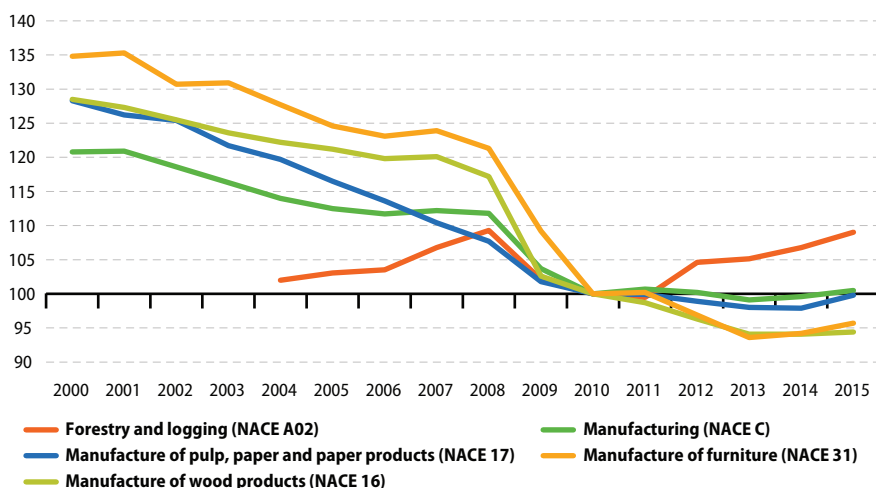
Note: 2005: EU-27 and data based on NACE rev. 1.1. Gross value added: current prices.

Source: Eurostat (online data code: sbs_na_ind_r2, sbs_na_2a_dade and sbs_na_2a_dfdn)

A longer time series and fresher data are available for employment within three of the wood-based industries. Across the EU-28, manufacturing employment fell by 16.8 % during the period 2000–2015, while the largest losses among the three wood-based industries shown in Figure 6.4.1 were recorded for furniture manufacturing (29.0 % fewer persons employed). Pulp, paper

and paper products was less affected (22.2 % reduction in employment during the 2000–2015 period), while employment in manufacturing of wood products dropped by 26.5 %. The forestry and logging industry had an employment increase of 6.9 % from 2004 to 2015. This may be explained by the ever-present need to manage forests and the increasing demand for fuelwood.

Figure 6.4.1: Employment in wood-based industries compared with total manufacturing, EU-28, 2000–2015
(2010 = 100)



Source: Eurostat (online data codes: sts_inlb_a_for_emp_ifs1 and for_emp_ifs)

Each of the wood-based industries, in keeping with most manufacturing sectors, experienced a reduction in the number of persons employed during the 2000–2015 period. The development of EU-28 employment for wood and wood products and furniture manufacturing closely followed the overall pattern for total manufacturing during the period 2000–2008.

Thereafter, with the onset of the global financial and economic crisis, job losses for these two wood-based industries accelerated at a faster pace than the manufacturing average. In contrast, employment in the upstream supply of timber to the wood-based industries presented a peak in 2008 (following the 2007 storms) and an increase from 2011 onward.



Data sources and availability

Eurostat, the Timber Committee of the United Nations Economic Commission for Europe (UNECE), Forestry Section of the United Nations Food and Agriculture Organisation (FAO) and the International Tropical Timber Organisation (ITTO) collect and collate statistics on the production and trade of wood through their Joint Forest Sector Questionnaire (JFSQ). Each partner collects data from a different part of the world; Eurostat is responsible for the data collection exercise pertaining to the EU Member States and EFTA countries.

Eurostat produces annual data on forestry using two questionnaires:

- The Joint Forest Sector Questionnaire (JFSQ) on production and trade in wood and wood products;
- European Forest Accounts (EFA), forming part of an environmental satellite accounts initiative that started in the late 1990s.

The JFSQ provides data for supply balances of timber used for wood products and for energy, and for estimating the carbon contained in harvested wood products.

The collection of forest accounts re-started in 2008 after a break of several years. As in the 1990s, it was known as Integrated Environmental and Economic Accounting for Forests (IEEAF). In 2016, the questionnaire was reviewed and adapted to new needs, such as timber from all sources for material use, energy and the bio-economy, while continuing the time series on the economic viability of forestry and employment. The questionnaire was re-named European Forest Accounts (EFA). Note that the monetary values concern current basic prices (in other words, the analysis of time series is not adjusted for inflation).

7

Fisheries





Introduction

Fish are a natural, biological, mobile (sometimes over long distances) and renewable resource. Aside from fish farming, fish are generally not owned until they have been caught. As such, fish stocks continue to be regarded as a common resource which needs to be managed collectively. This has led to a range of policies that regulate the amount of fishing at the European level, as well as the types of fishing techniques and gear that can be used in fish capture.

The current common fisheries policy (CFP⁽¹⁾) aims at an environmentally, economically and socially sustainable use of the common resource including aquaculture production.

The CFP is a set of rules for managing European fishing fleets and for conserving fish stocks. Designed to manage a common resource, it gives all European fishing fleets equal access to EU waters and fishing grounds and allows fishermen to compete fairly. The current policy stipulates that between 2015 and 2020 catch limits should be set that are sustainable and maintain fish stocks in the long term. Based on EU legislation, Eurostat produces data on catches and landings of fishery products, aquaculture and the EU fishing fleet.

(1) http://ec.europa.eu/fisheries/cfp/index_en.htm



7.1 Total production

Total fishery production covers total catches in the seven regions⁽²⁾ covered by EU Statistical Regulations: as well as aquaculture production for human consumption. The monitoring of catches and aquaculture production is an essential tool for securing fish stocks and sustaining the common resources available in Europe's large and rich fishing area.

As shown in Table 7.1.1, the total production of fishery products in 2015 was estimated to be about 6.4 million tonnes of live weight equivalent (the mass or weight when removed from water).

This is 3.4 % less than in 2014, making the decrease registered over the whole 2000-2015 period reach 19.4 % (Figure 7.1.1). A moderate upward trend was however observed in the most recent period, illustrated by a 3.6 % rise of the EU total fishery production between 2008 and 2015. Variations were uneven at national level: total production expanded in Spain (+8.1 %), the United Kingdom (+19.0 %), Denmark (+24.3 %) and Poland (+44.8 %), while a decline was registered in Portugal (– 15.8 %), Greece (– 14.3 %), Italy (– 12.9 %) and France (– 9.2 %).

⁽²⁾ Food and Agriculture Organization of the United Nations (FAO) major areas 21, 27, 34, 37, 41, 47, 51 (see Map 7.3.1).

Table 7.1.1: Total production of fishery products, 2008 and 2015

	Total production (thousand tonnes live weight)		Share of EU-28 (%)
	2008	2015	2015
EU-28	6 182	6 404	100.0
Belgium	22	24	0.4
Bulgaria	15	19	0.3
Czech Republic	20	20	0.3
Denmark	728	905	14.1
Germany	251	278	4.3
Estonia	99	72	1.1
Ireland	250	272	4.3
Greece	199	170	2.7
Spain	1 106	1 195	18.7
France	728	661	10.3
Croatia	65	89	1.4
Italy	390	340	5.3
Cyprus	6	7	0.1
Latvia	158	82	1.3
Lithuania	160	77	1.2
Luxembourg	:	:	:
Hungary	15	17	0.3
Malta	8	13	0.2
Netherlands	422	427	6.7
Austria	2	4	0.1
Poland	152	221	3.4
Portugal	231	195	3.0
Romania	13	16	0.2
Slovenia	2	2	0.0
Slovakia	1	1	0.0
Finland	133	168	2.6
Sweden	237	215	3.4
United Kingdom	768	913	14.3
Iceland	1 311	1 326	-
Norway	3 215	3 527	-
Turkey	603	636	-

Note: Total production includes catches and aquaculture. Total catches are calculated as the sum of the seven regions: 21 - Atlantic, Northwest; 27 - Atlantic, Northeast; 34 - Atlantic, Eastern Central; 37 - Mediterranean and Black Sea; 41 - Atlantic, Southwest; 47 - Atlantic, Southeast and 51 - Indian Ocean, Western. Aquaculture excludes production from hatcheries and nurseries, fish eggs for human consumption, ornamental and aquarium species.

Source: Eurostat (online data codes: [fish_ca_main](#), [fish_aq_q](#) and [fish_aq2a](#))



Within the EU, the four largest fishery producers in terms of volume in 2015 were Spain (1.2 million live weight tonnes), the United Kingdom and Denmark (0.9 million live weight tonnes each) and France (0.7 million live weight tonnes) (see Table 7.1.1). As in previous years, these four countries accounted for more than half of the total EU production in 2015.

It is also worth noting that the total fisheries production in Norway (3.5 million tonnes of live weight) was larger than any of the EU Member States in 2015, followed by Iceland (1.3 million tonnes of live weight). Total production volume of both countries as a whole in 2015 was equivalent to three quarters of the total EU-28 production.

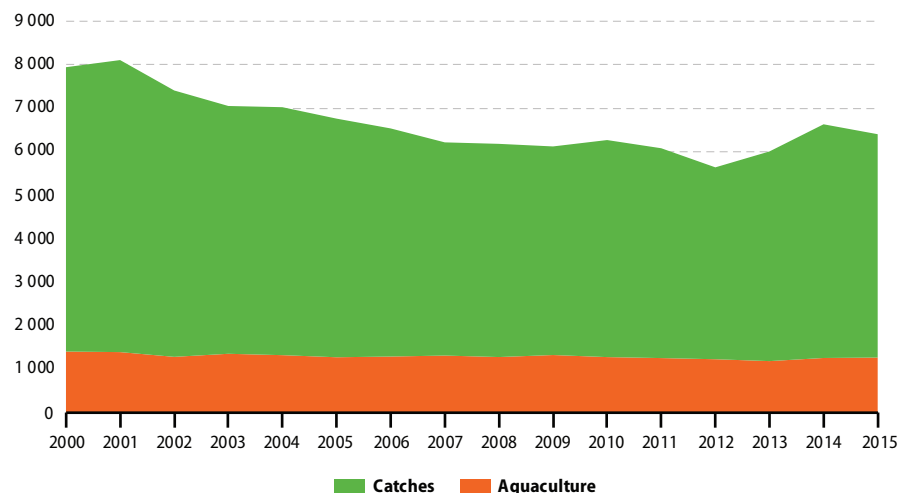
The respective evolution of catches and aquaculture between 2000 and 2015 is visualised in Figure 7.1.1. Catches declined by 21.4 % or 1.4 million tonnes of live weight since 2000. Having peaked in 2000 at 6.5 million tonnes, the total

EU-28 catch (calculated as the sum of catches in the seven regions) fell almost every year until 2012 to reach 4.4 million tonnes of live weight. A positive trend was observed in the following two years and the EU-28 catches totalled 5.4 million tonnes in 2014 (+21.8% compared to 2012). A slight reduction followed in 2015 (–4.4 %), with the total EU-28 catches amounting to 5.1 million tonnes.

By contrast, the volume of aquaculture production in the EU was fairly stable over the 2000-2015 period. In 2015, it was estimated at 1.3 million tonnes of live weight, compared to the 1.1 million tonnes peak production in 2000 (–8.7 %). As for the share of aquaculture in the EU total fishery production, it fluctuated from 17.1% in 2001 to a maximum of 21.7% in 2012.

In 2015, 80.3 % of total EU production originated from marine catches, while the remaining 19.7 % came from aquaculture (see figure 7.2.1).

Figure 7.1.1: Evolution of total production of fishery products, EU-28, 2000-2015
(1 000 tonnes of live weight)



Source: Eurostat (online data codes: fish_ca_main, fish_aq_q and fish_aq2a)



7.2 Aquaculture

Aquaculture covers the farming of aquatic organisms (finfish, molluscs, crustaceans, algae, etc.) and takes place in both inland and marine areas. Aquaculture is a key component of both the Common Fisheries Policy (CFP) and the Blue Growth⁽²⁾ agenda.

Five EU Member States (Spain, the United Kingdom, France, Italy and Greece) account

for three quarters of both production value and production volume, while 10 species make up 90 % of the production, in value and volume terms alike. Nevertheless, the sector shows a high diversity and specialisation of species and producing countries.

⁽²⁾ Blue Growth is the long term strategy to support sustainable growth in the marine and maritime sectors as a whole. See: https://ec.europa.eu/maritimeaffairs/policy/blue_growth_en.

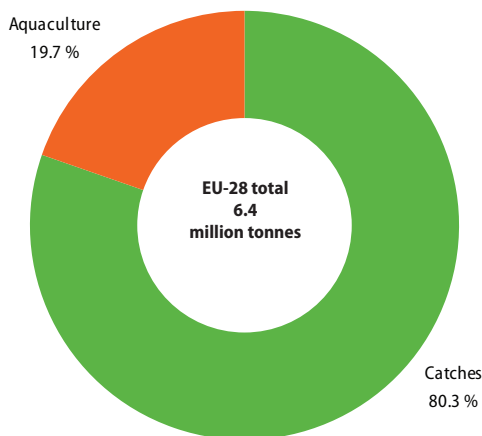
Table 7.2.1: Aquaculture production by volume, 2008 and 2015

	2008		2015	
	Aquaculture production (tonnes of live weight)	Share of national fisheries production (%)	Aquaculture production (tonnes of live weight)	Share of national fisheries production (%)
EU-28	1 271 671	20.6	1 259 833	19.7
Belgium	126	0.6	32	0.1
Bulgaria	7 251	48.6	10 652	54.9
Czech Republic	20 395	100.0	20 200	100.0
Denmark	37 216	5.1	35 990	4.0
Germany	43 977	17.5	26 867	9.7
Estonia	475	0.5	798	1.1
Ireland	44 871	17.9	37 581	13.8
Greece	114 888	57.8	105 934	62.2
Spain	252 238	22.8	293 510	24.6
France	238 249	32.7	163 304	24.7
Croatia	16 387	25.1	16 875	18.9
Italy	157 865	40.5	148 139	43.6
Cyprus	3 776	65.5	5 459	78.7
Latvia	583	0.4	863	1.1
Lithuania	3 008	1.9	4 083	5.3
Luxembourg	0	0.0	0	0.0
Hungary	15 000	100.0	17 337	100.0
Malta	6 727	84.0	10 800	81.6
Netherlands	46 621	11.0	62 204	14.6
Austria	2 087	100.0	3 503	100.0
Poland	36 813	24.2	33 560	15.2
Portugal	7 352	3.2	9 563	4.9
Romania	12 496	96.6	11 016	69.5
Slovenia	1 315	64.4	1 590	89.3
Slovakia	1 078	100.0	1 248	100.0
Finland	13 439	10.1	14 879	8.8
Sweden	7 596	3.2	12 277	5.7
United Kingdom	179 843	23.4	211 568	23.2
Iceland	5 088	0.4	8 382	0.6
Norway	848 406	26.4	1 380 838	39.2
Turkey	:	:	238 624	37.5

Source: Eurostat (online data codes: fish_aq2a and fish_ca_main)



Figure 7.2.1: Aquaculture production and fish catches, EU-28, 2015
(% of total fisheries production, tonnes of live weight)



Source: Eurostat (online data codes: fish_aq2a and fish_ca_main)

EU aquaculture produces 1.3 million tonnes worth EUR 4 billion.

The volume of aquaculture production in the EU was estimated at 1.3 million tonnes in 2015, equating to one fifth of total EU fisheries production. Worldwide the EU aquaculture sector ranked ninth, with a 1.2 % share in volume^(*).

The value of aquaculture production amounted to EUR 4 billion. This equates to 1 % of the output value of agricultural production. However, fish products are a very important source of proteins and healthy fish oils; indeed, the EU is the world's largest importer of fisheries and aquaculture products⁵.

In 2015, Spain, the United Kingdom and France were responsible for more than half of the EU's

aquaculture production in terms of volume (with shares of 23.3 %, 16.8 % and 13.0 % respectively).

The other major producers were Italy (11.8 %) and Greece (8.4 %). In terms of economic value, the United Kingdom led with a 24.1 % share, followed by France (15.0 %), Spain (12.4 %), Greece (11.2 %) and Italy (10.6 %). Therefore, just five EU countries were responsible for almost three quarters of the aquaculture production volume and value (see Table 7.2.1 and Table 7.2.2).

Norway was by far the biggest aquaculture producer in Europe, exceeding the EU in volume and value alike. It produced 1.4 million tonnes, worth EUR 5.2 billion, in 2015, making it the world's eighth largest producer in farmed fisheries, with a 1.3 % share.

(*) <http://www.fao.org/fishery/statistics/en>

(5) EUMOFA, The EU Fish Market – 2016 edition, <http://www.eumofa.eu/the-eu-fish-market>



Table 7.2.2: Aquaculture production by value, 2008 and 2015
(EUR million)

	2008	2015
EU-28	3 437	4 128
Belgium	0.7	0.3
Bulgaria	16.5	22.8
Czech Republic	41.5	35.0
Denmark	98.3	109.5
Germany	97.1	109.3
Estonia	1.8	3.4
Ireland	92.4	136.5
Greece	369.9	463.4
Spain	410.8	513.4
France	691.6	620.0
Croatia	:	102.7
Italy	465.6	437.2
Cyprus	33.1	32.3
Latvia	1.5	2.4
Lithuania	6.6	9.3
Luxembourg	0.0	0.0
Hungary	30.4	30.6
Malta	93.8	127.9
Netherlands	96.6	94.7
Austria	12.7	19.8
Poland	73.3	86.6
Portugal	40.2	54.2
Romania	18.1	21.8
Slovenia	3.5	4.0
Slovakia	2.7	3.6
Finland	36.8	49.4
Sweden	23.2	43.1
United Kingdom	678.5	995.3
Iceland	15.6	0.0
Norway	2 123.3	5 236.4
Turkey	:	824.6

Source: Eurostat (online data code fish_aq2a)

All fisheries production in the EU's landlocked countries (the Czech Republic, Hungary, Austria and Slovakia) comes from aquaculture. In the other EU countries it ranges from 89.3 % of total fisheries in Slovenia to 0.1 % in Belgium (see Table 7.2.1). In general, aquaculture plays a major role in the countries around the Mediterranean and the Black Sea: Slovenia, Malta, Cyprus, Romania, Greece, Bulgaria and Italy. Those Member States tend to fish mostly along their coast using small-scale vessels with an average capacity lower than the EU average (equal to 18.9 gross tonnes in 2015). As a counterbalance, their aquaculture activity plays a major role, representing 81.6 % (Malta), 78.7 % (Cyprus), 69.5 % (Romania), 62.2 % (Greece), 54.9 % (Bulgaria) and 43.6 % (Italy) of their respective total fisheries production.

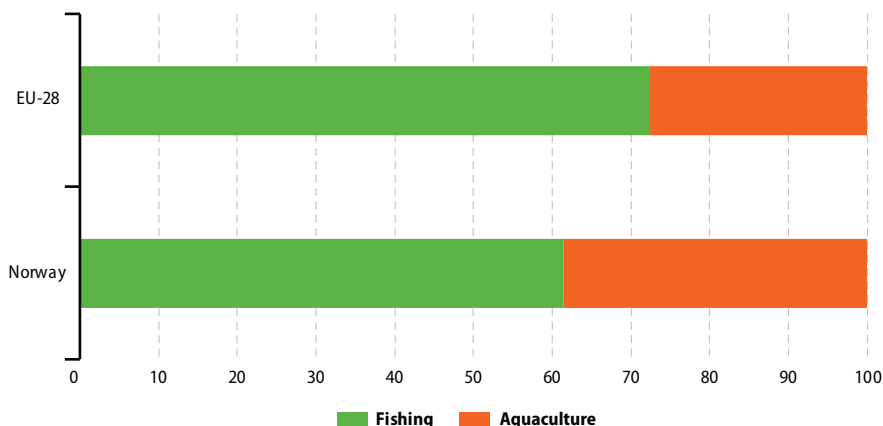
EU aquaculture provides jobs for 39 000 people

In 2015, almost 39 000 people were working in the EU aquaculture sector. They accounted for 28 % of total employment in fisheries (fishing and aquaculture) and 0.02 % of all jobs in the EU. More than a quarter (27.8 %) of them were registered in France. In Norway 4 600 people were employed in aquaculture, corresponding to 39 % of all jobs in the fishing and aquaculture sector and 0.18 % of the country's total employment^(e) (see Figure 7.2.2).

^(e) In Norway the average productivity per capita was equal to 300 tonnes live weight while the corresponding value for the EU was 33 tonnes live weight (see also FAO, 2017 "Regional review on status and trends in aquaculture development in Europe – 2015")



Figure 7.2.2: Employment in fishing and aquaculture sectors, EU-28 and Norway, 2015 (%)



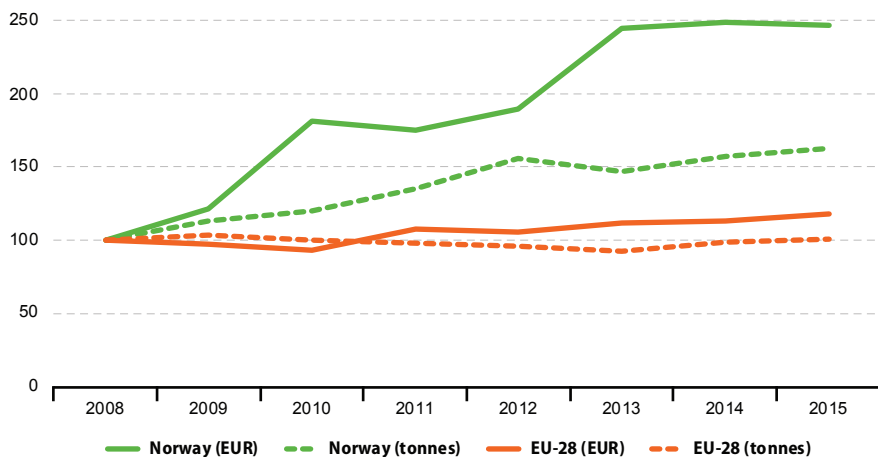
Source: Eurostat (online data code: lfsa_egdn2 ad hoc extraction).

Trends: volume stable, but value slowly increasing

EU aquaculture production remained relatively stable from 2008 to 2015: having peaked in 2009 (up 3.9 % compared to the 2008 base year), by

2013 it had fallen by 4 %, before recovering to 2008 levels in 2015 (see Figure 7.2.3). In terms of value, EU aquaculture has been growing since 2011. During the same period, Norwegian aquaculture has enjoyed significant increases in both volume (62 %) and value (147 %).

Figure 7.2.3: Trends of aquaculture, EU-28 and Norway, 2008-2015 (2008=100)



Source: Eurostat (online data code: fish_aq2a)



Table 7.2.3: Aquaculture production by main subgroup, 2014
(tonnes of live weight)

	All aquatic organisms	Molluscs	Diadromous fish	Marine fish	Freshwater fish
EU-28	1 250 207	587 608	370 776	179 354	89 493
Belgium	214	:	:	:	:
Bulgaria	6 883	:	3 117	:	3 766
Czech Republic	20 163	:	707	:	19 456
Denmark	33 624	1 730	31 795	:	88
Germany	26 223	5 280	:	:	:
Estonia	865	:	:	:	:
Ireland	29 327	18 969	10 176	:	78
Greece	104 452	16 678	1 941	85 789	31
Spain	284 977	222 543	15 500	46 749	22
France	180 344	135 567	31 851	4 804	8 000
Croatia	13 768	746	391	9 201	3 429
Italy	148 730	100 374	34 204	13 447	690
Cyprus	4 835	:	43	4 769	:
Latvia	686	:	93	:	594
Lithuania	3 350	:	111	:	3 240
Luxembourg	0	:	:	:	:
Hungary	15 366	:	109	:	15 257
Malta	8 606	:	0	8 606	:
Netherlands	63 089	57 364	2 335	490	2 900
Austria	3 393	:	2 397	:	997
Poland	36 336	:	15 520	:	20 816
Portugal	10 795	4 852	789	5 149	:
Romania	10 677	21	1 160	16	9 480
Slovenia	1 441	:	779	:	166
Slovakia	1 214	:	871	:	343
Finland	13 324	:	13 305	18	:
Sweden	12 899	1 746	11 152	:	:
United Kingdom	214 627	21 738	192 431	316	142
Iceland	8 387	38	8 039	310	:
Norway	1 332 497	2 016	1 327 627	2 855	:
Turkey	233 997	:	113 610	120 148	189

Source: Eurostat (online data code: fish_aq2a)

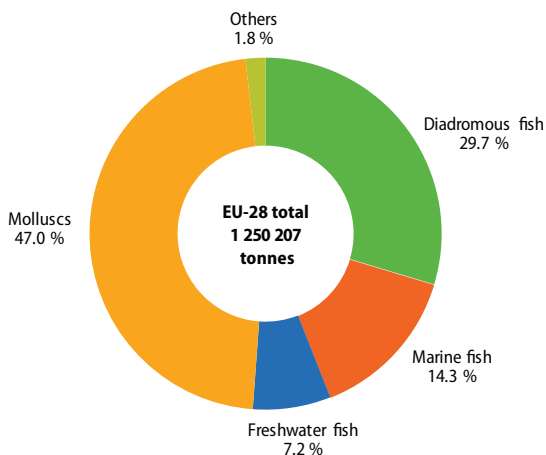
Structure of aquaculture production

Aquaculture is the farming, under controlled conditions, of aquatic (freshwater or saltwater) organisms such as finfish (e.g. salmon, trout, seabass, carp and tuna), molluscs (e.g. mussels, oysters and clams), crustaceans (e.g. shrimp, crab and lobster), plants (e.g. algae) and other

organisms (e.g. frogs, pearls and aquatic mammals). These organisms are grouped together using a taxonomic approach. In 2014, finfish and molluscs made up 98.2 % of all aquaculture production (by weight) in the EU. The production of crustaceans, algae and other organisms was very small (see Table 7.2.3).



Figure 7.2.4: Aquaculture production by main subgroup, EU-28, 2014
(% of total aquaculture production, tonnes of live weight)



Source: Eurostat (online data code: fish_aq2a)

Finfish species are organised into three subgroups, based on their living environment:

- marine fish (species that live solely in saltwater, such as seabass, tuna and seabream);
- freshwater fish (species that live solely in freshwater, such as carp); and
- diadromous fish⁽⁷⁾ (species that migrate between oceans and rivers, such as salmon, trout and eels).

In 2014, finfish made up over half (51.2 %) of the EU aquaculture production⁽⁸⁾ and more than two thirds (70.4 %) of its value. Among finfish, the diadromous subgroup (mostly Atlantic salmon and rainbow trout) accounted for 29.7 % of the overall aquaculture production and 37.8 % of total aquaculture value.

⁽⁷⁾ A fish that undertakes spawning migration from ocean to river or vice versa (e.g. salmon, trout, eels, etc.).

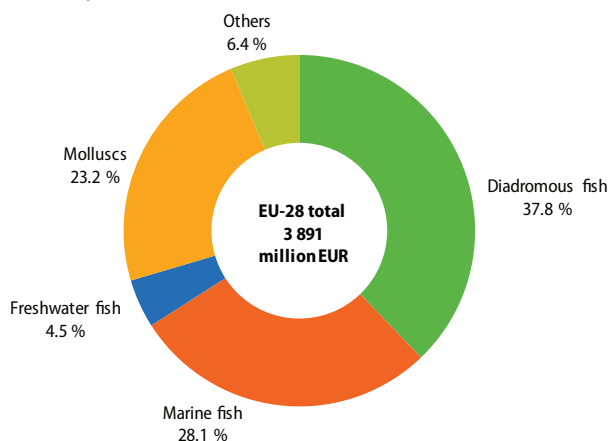
⁽⁸⁾ The data for each species and group of species refer to public figures. Confidential figures are excluded from the analysis. All totals are therefore simply the sum of public data and may differ from the real totals. However, the share of production figures flagged as confidential for 2014 was equal to 0.13 % of the total production volume of 'all aquatic organisms' and 0.31% for total production value of all aquatic organisms.

Molluscs (mussels, oysters and clams) accounted for 47.0 % of the overall EU aquaculture production, but only 23.2 % of value (see Figure 7.2.4 and Figure 7.2.5). It should be noted that the production weight corresponds to live weight including all shells and bones.

The geography of the countries and the natural habitat of the species strongly influence the aquaculture sector, which in the EU reflects a high degree of specialisation at country level. The Scottish salmon farms made the United Kingdom the main producer of diadromous fish (51.9%). Rafts in the estuaries of Northern Spain produced 68% of the total EU production of Mediterranean mussel. Greece produced 47.8% of the total EU-production of marine fish. With shares of 23.3 % and 21.7 % respectively, Poland and the Czech Republic were the leading producers of freshwater fish.



Figure 7.2.5: Aquaculture production value by main subgroup, EU-28, 2014
(% of total aquaculture production value, million EUR)



Source: Eurostat (online data code: fish_aq2a)

European aquaculture, a highly specialised sector

Although more than 130 species were farmed in the EU in 2014, the three most common — the Mediterranean mussel (*Mytilus galloprovincialis*), Atlantic salmon (*Salmo salar*) and rainbow trout (*Oncorhynchus mykiss*) — accounted for over half of all production (53.5 %) and two fifths (42.4 %) of the value. The 10 most common species made up 90 % of production and 87 % of value (see Figure 7.2.6 and Figure 7.2.7).

The Atlantic salmon was the leading species in European aquaculture. Although it ranked second for volume (15.1 %), it accounted for a quarter of the sector's overall value (24.4 %). However, the Mediterranean mussel ranked first for volume (25.1 %) but lagged far behind for value (4.8 %).

Aquaculture is a highly specialised sector. With the exception of rainbow trout, for each of the 10 major species in the EU at least a quarter of the total volume was farmed in one EU country, and each was farmed mainly using one specific

method in one specific fishing region (see Table 7.2.4).

Among the 10 major species, rainbow trout was the most widespread: it was grown in 24 EU countries, either in inland freshwaters (84.2 %) or in the saltwater of the North East Atlantic (15.8 %), and mainly in tanks (64.9 %). Three countries together accounted for more than half of the total weight: Italy (17.9 %), Denmark (17.3 %) and France (16.8 %).

Common carp (*Cyprinus carpio*), too, was a popular species in the EU: it was farmed in inland freshwaters in 18 Member States. However, two thirds of total production originated in only three countries: Poland (26.9 %), the Czech Republic (26.1 %) and Hungary (15.1 %).

Atlantic salmon was raised almost exclusively in cages^(*) in the North East Atlantic, in the United Kingdom (94.8 % of total production) and Ireland (5.0 %).

(*) Open or covered enclosed structures constructed with netting, mesh or any porous materials that allow water to flow freely in and out. These structures may be floating, suspended or fixed to the substrate but still allow water to flow in and out from below.

Table 7.2.4: Ten major species by main production method, fishing region and production country, EU-28, 2014

(% of total species production, tonnes of live weight)

Species	Main production method	share (%)	Main fishing region	share (%)	Main production country	share (%)
Mediterranean mussel (MSM)	Off Bottom	99.6	Northeast Atlantic (area 27)	68.9	Spain	70.3
Atlantic salmon (SAL)	Cages	99.8	Northeast Atlantic (area 27)	99.8	United Kingdom	94.8
Rainbow trout (TRR)	Tanks	64.9	European inland waters (area 05)	85.0	Italy	17.9
Blue mussel (MUS)	Off Bottom	50.7	Northeast Atlantic (area 27)	99.6	Netherlands	45.1
Gilthead seabream (SBG)	Cages	93.1	Mediterranean and Black Sea (area 37)	93.2	Greece	58.8
Pacific cupped oyster (OYG)	Off Bottom	54.6	Northeast Atlantic (area 27)	94.2	France	87.4
European seabass (BSS)	Cages	89.5	Mediterranean and Black Sea (area 37)	86.1	Greece	51.1
Common carp (FCP)	Ponds	96.6	European inland waters (area 05)	100.0	Poland	26.9
Japanese carpet shell (CLJ)	On Bottom	100.0	Mediterranean and Black Sea (area 37)	95.8	Italy	95.6
Atlantic bluefin tuna (BFT)	Cages	100.0	Mediterranean and Black Sea (area 37)	95.3	Malta	50.6

Source: Eurostat (online data code: fish_aq2a)

Greece farmed most gilthead seabream (*Sparus aurata*) and European seabass (*Dicentrarchus labrax*) (with 58.8 % and 51.1 % shares respectively), followed by Spain (19.6 % and 26.7 %) and Italy (7.9 % and 9.1 %). Both species were grown mainly in cages in the Mediterranean Sea.

Atlantic tuna (*Thunnus thynnus*) was farmed in cages in only three EU countries: Malta (50.6 %), Spain (24 %) and Croatia (20.7 %). While Malta and Croatia farmed Atlantic tuna in the Mediterranean Sea only, Spain also farmed 16.2 % of its overall tuna production in the North East Atlantic.

As for molluscs, Mediterranean mussels were mainly produced in Spain (70.3 %) and Italy (20.3 %) and were almost exclusively raised using the off-bottom⁽¹⁰⁾ method.

⁽¹⁰⁾ Off-bottom systems are structures like trestles and long lines installed on stakes impaled in the seabed or inter-tidal zone. Culture nets, lantern nets, growth ropes, pearl nets, net bags or trays are usually used in these structures to farm seaweed and molluscs.

Despite their name, they came primarily from Spanish farms in the North East Atlantic.

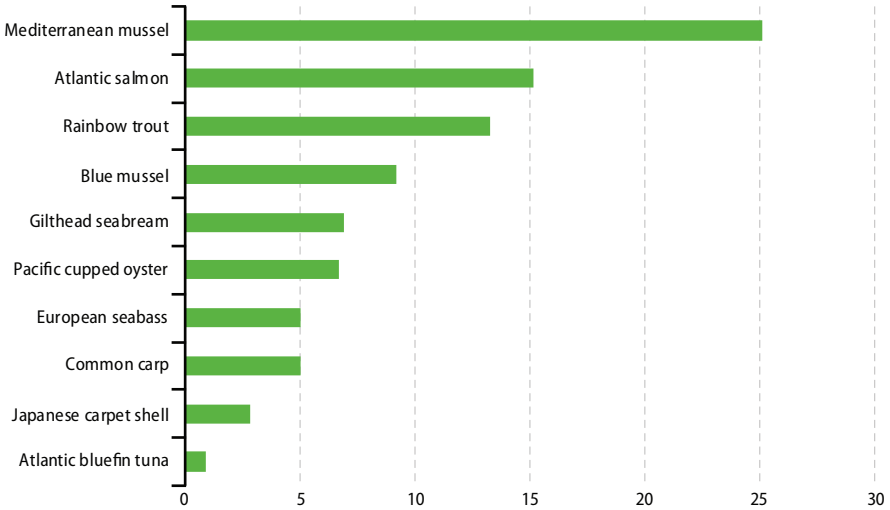
Blue mussels (*Mytilus edulis*) were farmed in the North East Atlantic by the Netherlands (45.1 %), France (37.6 %) and Ireland (9.5 %). Both off-bottom and on-bottom⁽¹¹⁾ methods were used (50.7 % versus 47.8 %). The off-bottom method was used in France and preferred in Ireland (71.8 % of Irish production). By contrast, 90 % of Dutch production used the on-bottom method.

Pacific cupped oysters (*Crassostrea gigas*) were produced mainly in France (87.4 %) and Ireland (8.4 %). The Japanese carpet shell (*Ruditapes philippinarum*) was grown mostly in Italy (95.6 %).

⁽¹¹⁾ On-bottom systems refer to the farming of molluscs such as clams and oysters, and sea weeds, and holothurians directly seeded on muddy or sandy areas in the inter-tidal zone or on the seabed.

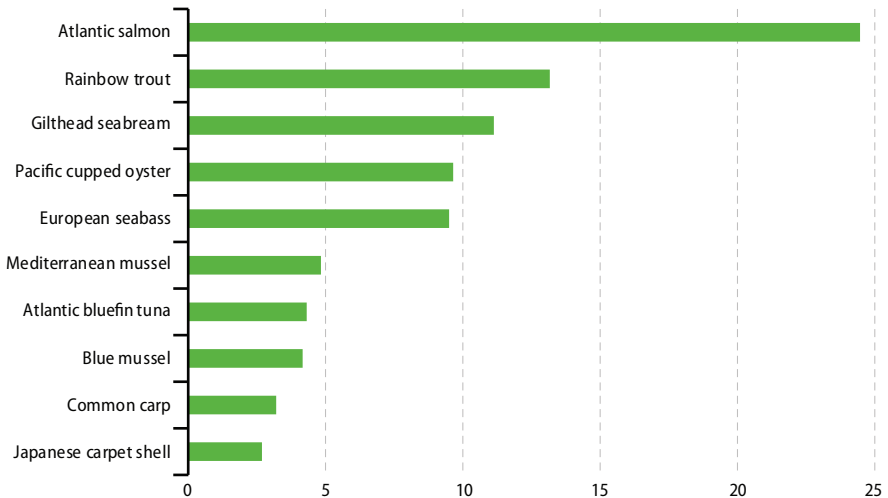


Figure 7.2.6: Ten major species in aquaculture production, EU-28, 2014
 (% of total aquaculture production, tonnes of live weight)



Source: Eurostat (online data code: fish_aq2a)

Figure 7.2.7: Ten major species in aquaculture production, EU-28, 2014
 (% of total aquaculture production value, EUR)



Source: Eurostat (online data code: fish_aq2a)

7.3 Catches

In 2016, the total EU catches amounted to 5.0 million tonnes live weight, 2.6 % less than in 2015. Contrasting with the overall decline observed since 2000 (1.5 million tonnes live weight less, or –22.7%) a slight 2.1 % rise was registered between 2008 and 2016, as shown in Table 7.3.1. Variations over this period were diverse at country level, with significant increases in Poland (70.5 %),

Croatia (46.6 %) and Finland (36.2 %) as opposed to drops in Lithuania (–32.7 %), Latvia (–27.2 %) and Estonia (–26.3 %).

Catches by the fishing fleets of Spain, the United Kingdom, Denmark and France accounted for a bit more than half (55.0 %) of the total EU catches in 2016 (see Table 7.3.1 and Figure 7.3.2).

Table 7.3.1: Total catches, 2008 and 2016

	Total catches (thousand tonnes of live weight)		Share of EU-28 (%)
	2008	2016	2016
EU-28	4 910	5 011	100.0
Belgium	22	27	0.5
Bulgaria	8	9	0.2
Denmark	691	670	13.4
Germany	207	241	4.8
Estonia	98	72	1.4
Ireland	205	230	4.6
Greece (¹)	84	75	1.5
Spain	853	860	17.2
France	490	525	10.5
Croatia	49	72	1.4
Italy	232	193	3.8
Cyprus	2	1	0.0
Latvia	158	115	2.3
Lithuania	157	106	2.1
Malta	1	2	0.0
Netherlands	376	368	7.4
Poland	116	197	3.9
Portugal	224	181	3.6
Romania	0	7	0.1
Slovenia	1	0	0.0
Finland	119	163	3.2
Sweden	230	198	4.0
United Kingdom	588	700	14.0
Iceland	1 306	1 070	-
Norway	2 367	1 873	-
Turkey	463	301	-

Note: Landlocked countries without a marine fishing fleet are not shown in this table (Czech Republic, Luxembourg, Hungary, Austria and Slovakia).

(¹) 2015 data instead of 2016 for catches in Eastern Central Atlantic.

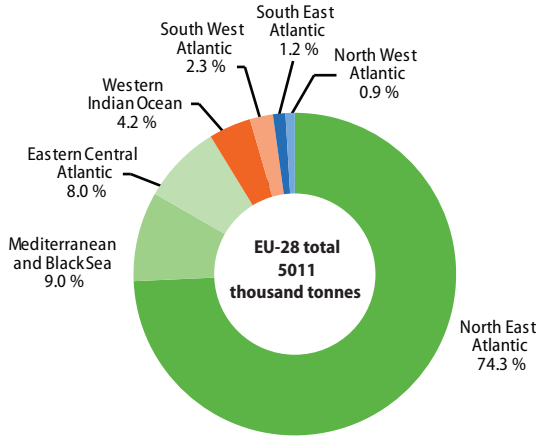
Source: Eurostat (online data code: fish_ca_main)

Although the European fishing fleet operates worldwide, EU catches were taken primarily from the Eastern Atlantic and the Mediterranean and Black Sea (see Figure 7.3.1). In 2016, 74.3 % of EU-28 catches were made in the North East Atlantic, with another 9 % from the Mediterranean and Black Sea and 8 % coming from the Eastern

Central Atlantic (see Figure 7.3.1 and Map 7.3.1). Spain was the only Member State catching significant quantities in all seven fishing areas, whereas the fishing fleets of the United Kingdom, Denmark and France were active mostly in the North East Atlantic and made almost half (47.7 %) of the EU catches in this region.



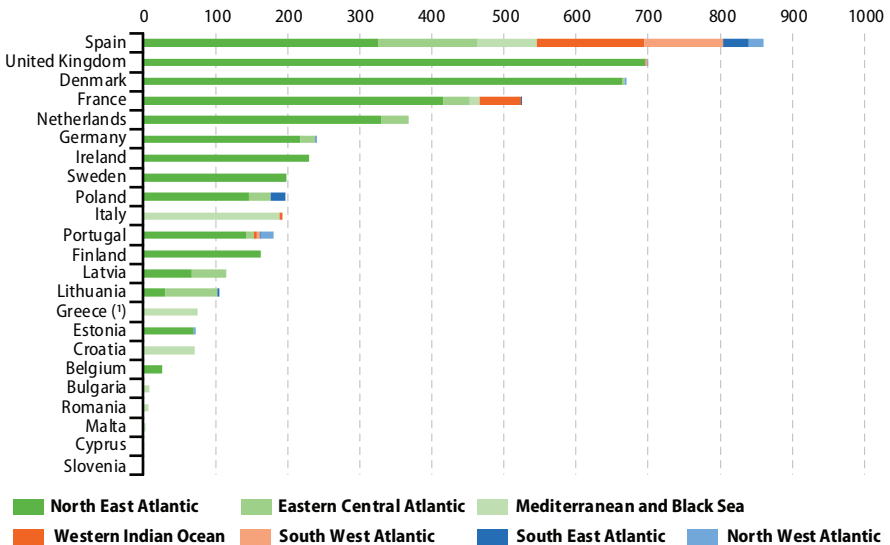
Figure 7.3.1: Catches by fishing area, EU-28, 2016
 (% of total catches, thousand tonnes of live weight)



Note: EU-28: estimate.

Source: Eurostat (online data code: fish_ca_main)

Figure 7.3.2: Catches by fishing area, 2016
 (thousand tonnes live weight)

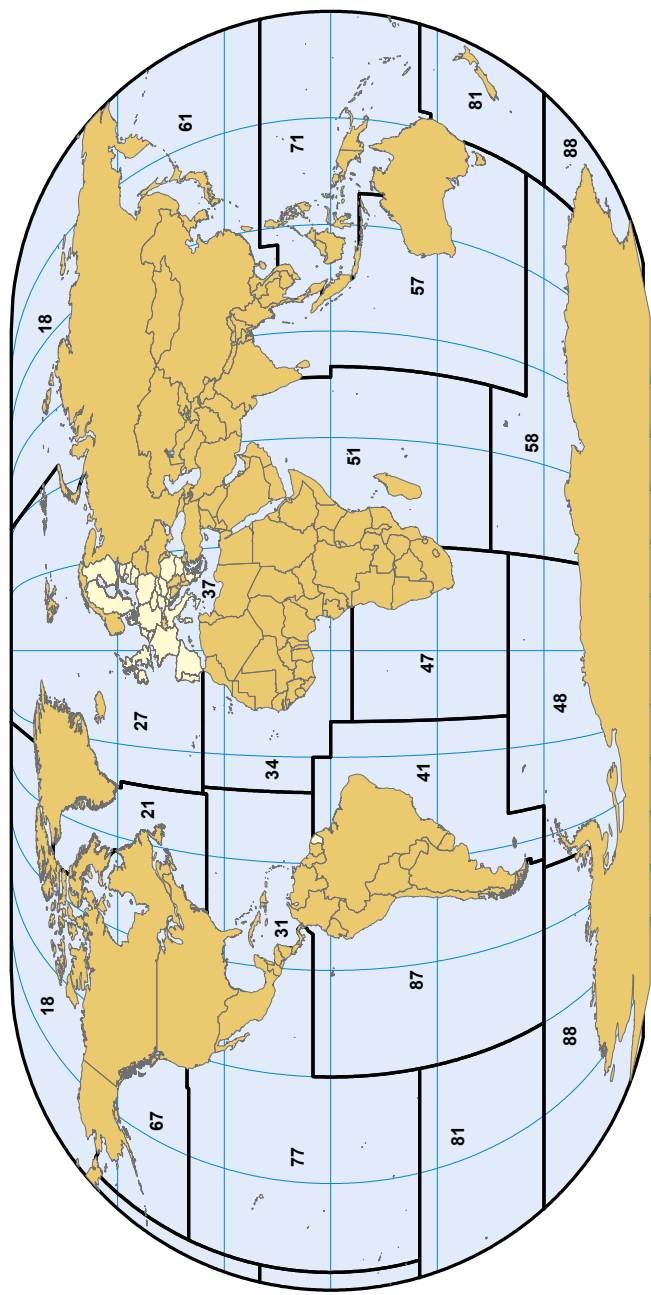


(*) 2015 data instead of 2016 for Eastern Central Atlantic.

Source: Eurostat (online data code: fish_ca_main)



Map 7.3.1: Fishing areas of the world



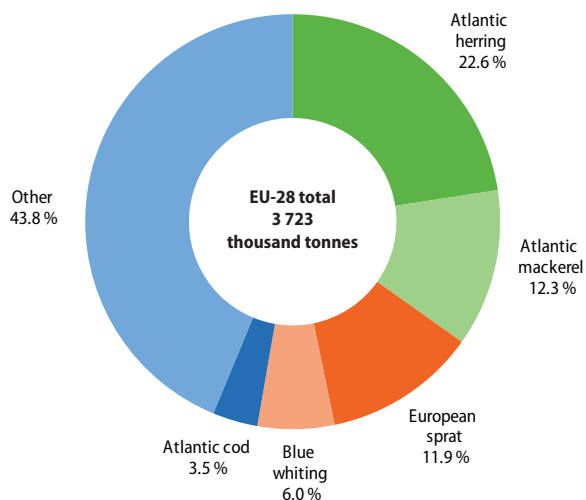
Source: UN FAO, VLIZ, DG MARE.



Figure 7.3.3 shows the five most popular species that were caught by EU Member States in 2016 in the North East Atlantic which is their most important fishing area. Atlantic herring was by far the most caught species representing more than one fifth (22.6 %) of the total EU-28 catches.

It was followed by Atlantic mackerel (12.3 %) and European sprat (11.9 %), then Blue whiting (6 %) and Atlantic cod (3.5 %). These top five species made up 56.2 % of the EU North East Atlantic catches in 2016.

Figure 7.3.3: Top 5 species caught in the North East Atlantic, EU-28, 2016
(% of total catches, tonnes of live weight)



Source: Eurostat (online data code: fish_ca_atl27)



7.4 Landings

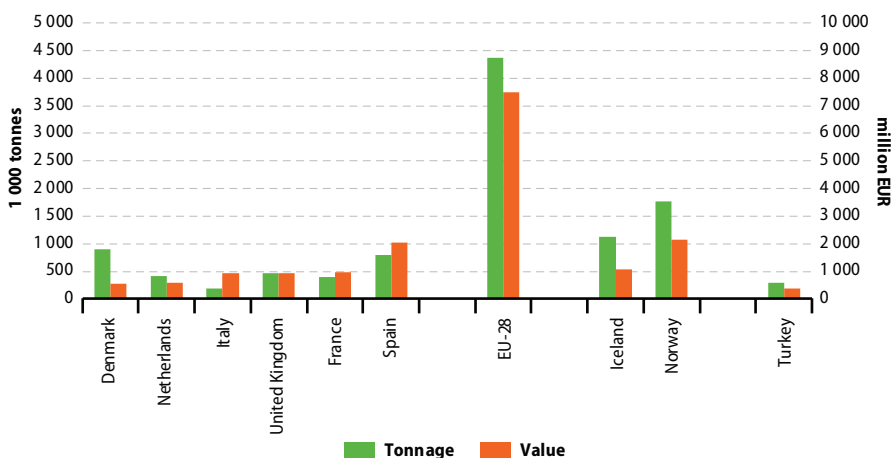
Landings data relate to fishery products (product weight and value) landed in a country regardless of the nationality of the vessel making the landings, but also to fishery products landed by the country's vessels in non-EU ports and then imported into the EU. Landlocked EU countries without a marine fishing fleet are not included (Czech Republic, Luxembourg, Hungary, Austria and Slovakia).

The tonnage of fish landed in the EU decreased by 6.6% between 2015 and 2016 to reach 4.4 million tonnes product weight. Although limited, this reduction contrasts with the upward trend observed in the three preceding years and making 2015 landed quantities 19.1% higher with respect to 2012. The overall 2.5% decrease registered by the EU since 2008 resulted from opposite variations at national level: while landed quantities declined in most countries, they expanded in Germany (+17.2%), France (+40.5%) and Poland (85.4%). In 2016, 20.5 % or 0.9 million

tonnes of product weight of the EU landings were made in Denmark, the highest share among EU Member States. Only landings to Spanish ports (18.3 % or 0.8 million tonnes of product weight) came close to the Danish levels. In contrast, landings to ports in Iceland (1.1 million tonnes) and Norway (1.8 million tonnes) were much higher (see Table 7.4.1).

The value of landings for the whole EU rose by 7.7% between 2015 and 2016 amounting to EUR 7.5 billion. While landings expressed in tonnage slightly reduced over the period under scrutiny, their value rose by 12% between 2008 and 2016. This upward trend was observed in a majority of countries though two noticeable exceptions were Greece (-22.3%) and Italy (-16.6%). More than one fourth of the value for the EU-28 was generated by landings into Spanish ports (27.1 % or EUR 2.0 billion in 2016), reflecting the high value attached to its landings of species like tuna, hake, swordfish, squid and pilchards.

Figure 7.4.1: Main landing countries, EU-28, Iceland and Norway, Turkey, 2016



Source: Eurostat (online data codes: fish_ld_main)



Landings in France had the next highest value (12.8 % or EUR 1 billion in 2016), closely followed by the United Kingdom (12.5 % or EUR 0.9 billion) and Italy (12.3 % or EUR 0.9 billion). Denmark only accounted for a relatively small share (7.5 % in 2016) of EU-28 landings in terms of value (EUR 0.6 billion).

The values of landings to ports in Iceland (EUR 1.1 billion) and Norway (EUR 2.2 billion) were closer to the values of France and Spain respectively, reflecting the lower average price of the species landed in each of these countries (see Table 7.4.1 and Figure 7.4.1).

Table 7.4.1: Landings, 2008 and 2016

	Weight			Value		
	(thousand tonnes product weight)		Share of EU-28 (%)	(million EUR)		Share of EU-28 (%)
	2008	2016	2016	2008	2016	2016
EU-28	4 485	4 375	100.0	6 692	7 498	100.0
Belgium	17	17	0.4	67	66	0.9
Bulgaria	8	9	0.2	3	8	0.1
Denmark	985	897	20.5	433	560	7.5
Germany	101	119	2.7	113	157	2.1
Estonia	82	60	1.4	15	14	0.2
Ireland	210	264	6.0	250	486	6.5
Greece	84	75	1.7	319	248	3.3
Spain	891	800	18.3	1 916	2 034	27.1
France	286	401	9.2	706	957	12.8
Croatia	:	72	1.7	:	58	0.8
Italy	227	193	4.4	1 107	923	12.3
Cyprus	2	1	0.0	13	8	0.1
Latvia	86	60	1.4	20	16	0.2
Lithuania	8	2	0.1	6	2	0.0
Malta	1	2	0.1	8	10	0.1
Netherlands	464	413	9.5	560	586	7.8
Poland	66	122	2.8	34	51	0.7
Portugal	185	126	2.9	257	243	3.2
Romania	0	7	0.2	1	4	0.1
Slovenia	1	0	0.0	1	1	0.0
Finland	91	105	2.4	19	28	0.4
Sweden	227	169	3.9	105	103	1.4
United Kingdom	464	460	10.5	740	935	12.5
Iceland	1 258	1 128	-	751	1 058	-
Norway	2 217	1 761	-	1 663	2 154	-
Turkey	:	301	-	:	364	-

Note: Landlocked countries without a marine fishing fleet are not shown in this table (Czech Republic, Luxembourg, Hungary, Austria and Slovakia).

Source: Eurostat (online data code: fish_ld_main)

7.5 Fishing fleet

Under the Common fisheries policy (CFP), reducing fleet capacity is an essential tool for achieving a sustainable exploitation of fisheries resources. The EU fleet is very diverse, with the vast majority of boats being no more than 12 metres long, and a small number of vessels exceeding 40 metres in length.

The EU's fishing fleet has declined fairly steadily since the early 1990's, in terms of both tonnage (an indicator of fish-holding capacity) and engine power (an indicator of the power available for

fishing gear). Table 7.5.1 shows 2008 and 2016 data for fishing fleet by number of vessels, total gross tonnage and engine power. In 2016, the EU fishing fleet numbered 83 734 vessels with a combined capacity of 1.6 million gross tonnes and a total engine power of 6.3 million kilowatts. Compared to 2008, the number of vessels reduced by 1 707 (–2.0 %) in 2016 while the overall gross tonnage and engine power decreased by –0.3 million gross tonnes (–15.1 %) and –0.5 million kilowatts (–7.1 %) respectively.

Table 7.5.1: Fishing fleet, 2008 and 2016

	Vessels			Total gross tonnage			Engine power		
	(number)		Share of EU-28 (%)	(thousand tonnes)		Share of EU-28 (%)	(thousand kW)		Share of EU-28 (%)
	2008	2016	2016	2008	2016	2016	2008	2016	2016
EU-28	85 441	83 734	100.0	1 872	1 590	100.0	6 824	6 342	100.0
Belgium	100	72	0.1	19	14	0.9	61	45	0.7
Bulgaria	2 548	1 910	2.3	8	6	0.4	66	56	0.9
Denmark	2 886	2 265	2.7	73	68	4.3	263	211	3.3
Germany	1 825	1 414	1.7	69	64	4.0	161	140	2.2
Estonia	965	1 557	1.9	18	14	0.9	46	45	0.7
Ireland	2 022	2 117	2.5	70	63	4.0	193	191	3.0
Greece	17 138	15 182	18.1	89	72	4.5	507	431	6.8
Spain	11 424	9 312	11.1	460	338	21.2	1 030	791	12.5
France	7 373	6 833	8.2	193	173	10.9	1 027	1 003	15.8
Croatia	:	7 627	9.1	:	48	3.0	:	379	6.0
Italy	13 613	12 271	14.7	196	157	9.9	1 142	983	15.5
Cyprus	1 179	842	1.0	5	3	0.2	50	39	0.6
Latvia	841	679	0.8	38	29	1.8	61	47	0.7
Lithuania	218	142	0.2	50	41	2.6	60	48	0.8
Malta	1 125	918	1.1	11	6	0.4	85	68	1.1
Netherlands	822	843	1.0	156	132	8.3	351	311	4.9
Poland	832	843	1.0	41	35	2.2	99	83	1.3
Portugal	8 571	7 970	9.5	106	94	5.9	385	355	5.6
Romania	437	147	0.2	2	1	0.1	6	6	0.1
Slovenia	181	182	0.2	1	1	0.0	11	10	0.2
Finland	3 242	3 093	3.7	16	16	1.0	170	169	2.7
Sweden	1 471	1 277	1.5	42	29	1.8	208	161	2.5
United Kingdom	6 628	6 238	7.4	208	186	11.7	842	770	12.1
Iceland	1 529	1 647	-	160	151	-	471	454	-
Norway	6 785	5 946	-	363	391	-	1 240	1 273	-

Note: Landlocked countries without a marine fishing fleet are not shown in this table (Czech Republic, Luxembourg, Hungary, Austria and Slovakia).

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



In 2016, almost one fifth (18.1 %) of the EU-28's fishing fleet was registered in Greece, followed by Italy (14.7 %) and Spain (11.1 %). On average, however, these Greek vessels are small, with an average size of 4.7 gross tonnes (much less than the EU-28 average of 19.0 gross tonnes) and an average engine power of 28.4 kilowatts in 2016 (compared with an EU-28 average of 75.7 kilowatts). In terms of capacity Spain, France, Italy and the United Kingdom had the largest fishing fleets, accounting for 53.8 % of total gross tonnage and 55.9 % of engine power in 2016. In Finland, the number of vessels has grown by 13.6 % in 2016 compared to 2015 but has decreased by 4.6 % between 2008 and 2016.

In terms of gross tonnage, the Spanish fishing fleet was by far the largest (338 thousand gross tonnes in 2016 or 21.2 % of the EU-28 total gross tonnage); this was close to twice as high as the

next largest fleet, that of the United Kingdom (186 thousand gross tonnes or 11.7 % of the EU-28), which was followed by France (173 thousand gross tonnes or 10.9 % of the EU-28), Italy (157 thousand gross tonnes or 9.9 % of the EU-28) and the Netherlands (132 thousand gross tonnes or 8.3 % of the EU-28).

In Norway, the overall holding capacity (391 thousand gross tonnes in 2016) was the largest in Europe and similar to Spain's in terms of overall tonnage, although Norway's 65.7 gross tonnes average per vessel was considerably higher than Spain's (36.3 gross tonnes average). The Norwegian fishing fleet was also considerably more powerful than that of any EU Member State. In the case of Iceland, despite having a much smaller fleet than France and Italy in terms of number of vessels, the overall holding capacity (gross tonnage) was very similar.



Data sources and availability

Fishery statistics are collected by Eurostat from official national sources for the members of the European Economic Area (EEA). The data are collected using internationally agreed concepts and definitions developed by the Coordinating Working Party (CWP), comprising Eurostat and several other international organisations with responsibilities in fishery statistics.

The European fisheries production statistics include production from catches and aquaculture. Catches refer to fishery products taken for all purposes (commercial, industrial, recreational and subsistence) by all types and classes of fishing units (including fishermen, vessels, gear, etc.). The flag of the fishing vessel is used as the primary indication of the nationality of the catch. In addition to catches, Eurostat also collects data on landings which relate to all fishery products (expressed as product weight) landed in the reporting country, regardless of the nationality of the vessel making the landings. Landings by vessels of the reporting country in non-EU ports and imported into the EU are to be included as well. Aquaculture production refers to the farming of aquatic (freshwater or saltwater) organisms for human use or consumption, under controlled conditions. Aquaculture implies some form of intervention in the natural rearing process such as regular stocking, feeding and protection from predators. Farming also implies individual or corporate ownership of the stock being cultivated.

Catch statistics are submitted to Eurostat by EEA member countries in compliance with the following EU legislation:

- [Regulation \(EC\) No 217/2009](#) of the European Parliament and of the Council of 11 March 2009 on the submission of catch and activity statistics by Member States fishing in the North-West Atlantic (OJ L87 of 31.03.2009);
 - [Regulation \(EC\) No 216/2009](#) of the European Parliament and of the Council of 11 March 2009 on the submission of nominal catch statistics by Member States fishing in certain areas other than those of the North Atlantic (OJ L87 of 31.03.2009, p.1).
- The data are reported as the live weight equivalent of the landings (in other words, the landed weight of a product to which an appropriate conversion factor has been applied). The data therefore exclude quantities of fishery products which are caught but not landed. For example, fish caught but rejected at sea or fish consumed on board of the vessel. The amount of fish caught but not landed is bound to shrink in the near future due to the landing obligation in the new common fisheries policy (CFP). For the landings statistics, each EEA member country reports annual data on the quantities and values of fishery products landed in its ports under the terms of [Regulation \(EC\) No 1921/2006](#) of 18 December 2006 on the submission of statistical data on landings of fishery products in EU Member States and repealing [Council Regulation \(EEC\) No 1382/91](#) (OJ L403 of 30 December 2006). For aquaculture statistics, the national authorities of EEA countries submit aquaculture production data to Eurostat under the terms of [Regulation \(EC\) No 762/2008](#) of 9 July 2008 on the submission by Member States of statistics on aquaculture and repealing [Council Regulation \(EC\) No 788/96](#) (OJ L218 of 13.08.2008).
- [Regulation \(EC\) No 218/2009](#) of the European Parliament and of the Council of 11 March 2009 on the submission of nominal catch statistics by Member States fishing in the North East Atlantic (OJ L87 of 31.03.2009);



Concerning the fishing fleet, data for the EU Member States are derived from the Community Fishing Fleet Register maintained by the European Commission's Directorate-General for Maritime Affairs and Fisheries. Data for Iceland and Norway are compiled from fleet files submitted by the national authorities. Gross tonnage (GT) under the London convention (1969) was adopted as the unit of tonnage measurement in the 1990s. This was a change

from the previously used gross registered tonnage (GRT) under the Oslo convention (1946). Implementation of the change involved re-measurement of vessels over time. This was carried out at different rates in different countries and was largely complete by 2003. However, care should be taken when comparing data between countries and over time since the GT of a vessel is generally significantly greater than the GRT.

Annexes



Data coverage

Eurostat online databases contain a large amount of metadata that provides information on the status of particular values or data series. In order to improve readability of this statistical book, only the most significant meta-information has been included under the tables and figures. The following symbols are used, where necessary:

- Italic* data value is forecasted, provisional or estimated and is likely to change;
- : Data not available, confidential or unreliable value;
- not applicable.

This publication generally presents information for the EU-28 (the 28 Member States of the EU), as well as the individual EU Member States. The order of the Member States in tables and figures generally follows their order of protocol; in other words, the alphabetical order of the countries' names in their respective original languages;

in some of the figures the data are ranked according to the values of a particular indicator.

The EU-28 aggregate is provided when information for all of the countries is available, or if an estimate has been made for missing information. Any incomplete totals that are created are systematically footnoted.

When available, information is also presented for EFTA countries, candidate and potential candidate countries. In the event that data for any of these non-member countries are not available, they have been excluded from the tables and figures presented.

If data are not available for a particular country, then efforts have been made to fill tables and figures with data for previous reference periods (these exceptions are footnoted); generally, an effort has been made to go back at least two years, for example showing data for 2014 and 2015 if data for 2016 are not yet available.



Glossary

Agricultural holding

This is a single unit, in both technical and economic terms, operating under a single management, which undertakes agricultural activities within the economic territory of the European Union (EU), either as its primary or secondary activity. Other supplementary (non-agricultural) products and services may also be provided by the holding.

Agricultural income

The main indicator for agricultural income is 'factor income per labour input', where labour input is expressed in annual work units (AWUs).

Agri-environmental indicators

A set of 28 agri-environmental indicators has been proposed for monitoring the integration of environmental concerns into the Common Agricultural Policy (CAP). In the context of the 'Renewed EU Sustainable Development Strategy', these indicators serve to:

- provide information on the farmed environment;
- track the impact of agriculture on the environment;
- assess the impact of agricultural and environmental policies on environmental management of farms;
- inform agricultural and environmental policy decisions;
- illustrate agri-environmental relationships to the broader public.

Animal output

Animal output comprises the sales, changes in stock levels, and the products used for processing and own final use by producers.

Annual work unit (AWU)

One annual work unit corresponds to the work performed by one person who is occupied on an agricultural holding on a fulltime basis. Full-time means the minimum hours required by the relevant national provisions governing contracts of employment. If the national provisions do not indicate the number of hours, then 1 800 hours are taken to be the minimum annual working hours: equivalent to 225 working days of eight hours each.

Aquaculture

Aquaculture, also known as aquafarming, refers to the farming of aquatic (freshwater or saltwater) organisms, such as fish, molluscs, crustaceans and plants for human use or consumption, under controlled conditions. Aquaculture implies some form of intervention in the natural rearing process to enhance production, including regular stocking, feeding and protection from predators. Farming also implies individual or corporate ownership of, or contractual rights to, the stock being cultivated.

Arable land

Arable land is land worked (ploughed or tilled) regularly, generally under a system of crop rotation.

Area under vines

Area under vines includes areas:

- in production;
- not yet in production;
- area producing material for vegetative propagation of vines.

The area does not include abandoned areas which are no longer in production and have not been harvested for at least eight years.

Basic price

The basic price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, by the producer as a consequence of its production or sale.

Bovine

A bovine refers to a domestic animal of the species *Bos taurus* (cattle) or *Bubalus bubalis* (water buffalo), and also includes hybrids like Beefalo.

A distinction can be made by the age of the animal (less than one year old, aged between one and two years, and two years and over), with a further division between male and female bovines.

Carcass weight

The definition of carcass weight depends on the animal species under consideration:

- for pigs, it is the weight of the slaughtered pig's cold body, either whole or divided in half along the mid-line, after being bled and eviscerated and after removal of the tongue, bristles, hooves, genitalia, flare fat, kidneys and diaphragm;

- for cattle, it is the weight of the slaughtered animal's cold body after being skinned, bled and eviscerated, and after removal of the external genitalia, the limbs, the head, the tail, the kidneys and kidney fats, and the udder;
- for sheep and goats, it is the weight of the slaughtered animal's cold body after having been bled, skinned and eviscerated, and after removal of the head, feet, tail and genital organs. Kidneys and kidney fats are included in the carcass weight;
- for poultry, it is the weight of the cold body of the slaughtered farmyard poultry after being bled, plucked and eviscerated; the weight includes poultry offal, with the exception of foie gras.

For other species, 'carcass weight' is considered to be the weight of the slaughtered animal's cold body.

Cattle

Cattle refer to domestic animals of the species *Bos taurus* (cattle) and *Bubalus bubalis* (water buffalo); together are called bovines.

Cereals

Cereals include wheat (common wheat and spelt and durum wheat), rye, maslin, barley, oats, mixed grain other than maslin, grain maize and corn cob mix, sorghum, triticale, rice and other cereal crops such as buckwheat, millet and canary seed.

Climate change

Climate change refers to man-made (anthropogenic) climate change that is thought to be causing an increase in global temperatures driven by emissions of gases such as carbon dioxide and methane, known as greenhouse gases.



Common agricultural policy

The Common agricultural policy (CAP) is the EU's agricultural policy. CAP is an area in which competence is shared between the EU and its Member States. Under Article 33 of the Treaty establishing the European Community, its aims are to 'ensure reasonable prices for Europe's consumers and fair incomes for farmers, in particular through the common organisation of agricultural markets and by enforcing compliance with the principles adopted at the Stresa Conference in 1958, namely single prices, financial solidarity and Community preference'.

The CAP is one of the most important EU policies from a budget point of view. Qualified majority voting in the Council and consultation with the European Parliament decide policy. The CAP has fulfilled its main goal of food self-sufficiency in the EU. Major policy changes, however, proved necessary in order to correct imbalances and overproduction resulting from the CAP. Therefore, its aims have changed in the course of time, and the instruments used have also evolved as a result of successive reforms.

Common fisheries policy

The Common fisheries policy (CFP) is the EU's policy for managing fisheries in the waters of the EU Member States. Its objectives are to:

- increase productivity;
- stabilise markets;
- ensure security of supply and reasonable prices to the consumer.

Although a CFP was already provided for in the Treaty of Rome in 1957, it did not become a common policy in the full sense of the term until 1983. The CFP has the same legal basis (Articles 32 to 38 of the EC Treaty) as the Common agricultural policy and shares the same aims mentioned above. Like the CAP, the CFP is a shared responsibility of the EU and its Member States. Successive reforms of the CFP

have added new aims to its initial goals, namely:

- sustainable exploitation of resources;
- protection of the environment;
- safeguards for a high level of human health protection;
- contributing to economic and social cohesion.

Protection of fish stocks and the marine environment are key issues for the CFP given the threat posed by resource depletion.

Common land

Common land is the land that does not directly belong to any agricultural holding but on which common rights apply. It can consist of pasture, horticultural or other land.

Cow

A cow is a female bovine that has calved (including any aged less than 2 years). A dairy cow is a cow kept exclusively or principally for the production of milk for human consumption and/or other dairy produce.

Crop output

Crop output comprises sales, changes in stock levels, and crop products used as animal feedstuffs, or for processing and own final use by the producers.

Eutrophication

Eutrophication is a process by which a body of water acquires a high concentration of nutrients, especially phosphates and nitrates. It may occur naturally but can also be the result of human activity (fertiliser run-off, sewage discharge). These nutrients typically promote excessive growth of algae. As the algae die and decompose, high levels of organic matter and the decomposing organisms deplete the water of available oxygen, causing the death of other organisms, such as fish.

Family labour force

The family labour force of the agricultural holding in the context of the farm structure survey (FSS) refers to persons who carry out farm work on the holding and are classified either as a holder or the members of the sole holder's family. The term family workers is also used with the same meaning.

Farm labour force

The farm labour force of the holding includes all persons having completed their compulsory education (having reached school-leaving age) who carried out farm work on the holding during the 12 months ending on the reference day of the survey. All persons of retirement age who continue to work on the holding are included in the farm labour force.

Farm manager

A farm manager or manager of the agricultural holding is the natural person responsible for the normal daily financial and production routines of running the holding concerned. There can be only one manager on the holding.

Farm structure survey

The Farm structure survey (FSS), also known as Survey on the structure of agricultural holdings, is carried out by all EU Member States. The FSS are conducted consistently throughout the EU with a common methodology at a regular base and provides therefore comparable and representative statistics across countries and time, at regional levels (down to NUTS 3 level). Every 3 or 4 years the FSS is carried out as a sample survey, and once in ten years as a census.

Feed

Feed (or feeding stuff) is any substance or product, including additives, whether processed,

partially processed or unprocessed, intended to be used for oral feeding to animals.

Fertiliser

A fertiliser is a substance used in agriculture to provide crops with vital nutrients to grow (such as nitrogen (N), phosphorus (P) and potassium (K)). Fertilisers can be divided into inorganic fertilisers (also called mineral, synthetic or manufactured) and organic fertilisers. Organic fertilisers include manure, compost, sewage sludge and industrial waste.

Fishing area

Geographical fishing areas in the EU's Common Fisheries Policy are defined for a number of specific areas of water, including:

- the North East Atlantic, which is roughly the area to the east of 42°W longitude and north of 36°N latitude, including the waters of the Baltic Sea;
- the North West Atlantic, which is the region that is roughly the area to the west of 42°W longitude and north of 35°N latitude;
- the Eastern Central Atlantic, which is the region to the east of 40°W longitude between latitudes 36°N and 6°S;
- the Mediterranean, which is also known as the Food and Agriculture Organization Major Fishing Area 37, comprises the Mediterranean Sea and the adjacent Black Sea.

Fish catch

Fish catch (or simply catch) refers to catches of fishery products including fish, molluscs, crustaceans and other aquatic animals, residues and aquatic plants that are:

- taken for all purposes (commercial, industrial, recreational and subsistence);



- taken by all types and classes of fishing units (including fishermen, vessels, gear, and so on);
- operated in fresh and brackish water areas, and in inshore, offshore and high-seas fishing areas.

The catch is normally expressed in live weight and derived by the application of conversion factors to the actual landed or product weight. Up to 2014, catch statistics exclude quantities of fishery products which are caught but which, for a variety of reasons, are not landed. As a result of the landing obligation foreseen in the renewed CFP and to be gradually introduced as from 2015, all catches should be kept on board, landed and counted. Production from aquaculture is excluded from catch statistics.

Fishing fleet

The data on the number of fishing vessels, the fishing fleet, in general refer to the fleet size as recorded on 31 December of the specified reference year. The data are derived from the national registers of fishing vessels which are maintained according to [Commission Regulation \(EC\) No 26/2004](#) which specifies the information on vessel characteristics to be recorded in the registers.

Forest

Forest is defined as land with tree crown cover (meaning all parts of the tree above ground level including its leaves, branches and so on), or equivalent stocking level, of more than 10 % and with an area of more than 0.5 hectares (ha). The trees should be able to reach a minimum height of five metres at maturity in situ.

Fossil fuel

Fossil fuel is a generic term for non-renewable natural energy sources such as coal, natural gas and oil that were formed from plants and animals (biomass) that existed in the geological

past (for example, hundreds of millions of years ago). Fossil fuels are carbon-based and currently supply most human energy requirements.

Goats

A goat is a domestic animal of the subspecies *Capra aegagrus hircus*.

Grazed area

The grazed area is the total area of pastures owned, rented or otherwise allocated to the agricultural holding on which animals are kept for grazing during the reference year. The grazed area can also be harvested by mowing or other means. It includes all grasslands that are grazed, independent of whether they are temporary or permanent in nature. Permanent grasslands no longer used for production purposes are however excluded, as well as common lands not allotted to individual holdings.

Greenhouse gas

Greenhouse gases constitute a group of gases contributing to global warming and climate change. The Kyoto Protocol, an environmental agreement adopted by many of the parties to the United Nations Framework Convention on Climate Change (UNFCCC) in 1997 to curb global warming, covers six greenhouse gases:

A. the non-fluorinated gases:

- carbon dioxide (CO₂);
- methane (CH₄);
- nitrous oxide (N₂O).

B. the fluorinated gases:

- hydrofluorocarbons (HFCs);
- perfluorocarbons (PFCs);
- sulphur hexafluoride (SF₆).

Gross value added (GVA)

Gross value added (GVA) is output at market prices minus intermediate consumption at purchaser prices; it is a balancing item of the national accounts' production account:

- GVA at producer prices is output at producer prices minus intermediate consumption at purchaser prices — the producer price is the amount receivable by the producer from the purchaser for a unit of a product minus value added tax (VAT), or similar deductible tax, invoiced to the purchaser.
- GVA at basic prices is output at basic prices minus intermediate consumption at purchaser prices — the basic price is the amount receivable by the producer from the purchaser for a unit of a product minus any tax on the product plus any subsidy on the product.
- GVA at factor cost is not a concept explicitly used in national accounts. It can be derived by subtracting other taxes on production from GVA at basic prices and adding other subsidies on production.

Joint forest sector questionnaire

The joint forest sector questionnaire (JFSQ) is an initiative of the International Tropical Timber Organisation (ITTO), the United Nations Economic Commission for Europe (UNECE), the Food and Agriculture Organisation of the United Nations (FAO) and Eurostat to collect statistics on the world timber situation. Each agency collects data from the countries for which it is responsible, with Eurostat compiling information from the EU Member States and EFTA countries.

Kitchen gardens

Kitchen gardens are areas of an agricultural holding devoted to the cultivation of agricultural products not intended for selling but for consumption by the farm holder and his household.

Land use

Land use refers to the socioeconomic purpose of the land. Areas of land can be used for residential, industrial, agricultural, forestry, recreational, transport purposes and so on.

Live weight of fishery products

Live weight of fishery products is derived from the landed or product weight by the application of certain factors and is designed to represent the actual weight of the fishery product as it was taken from the water and before being subjected to any processing or other operations.

Livestock survey

The livestock survey provides information about the livestock population in the EU, as well as information at a national and regional level — it is more detailed than the farm structure survey (FSS), proving more animal categories in its classification of livestock. It is conducted once a year, in December, in all of the EU Member States and in May/June for bovine animals and pigs in the Member States with the largest herds.

Livestock unit (LSU)

The livestock unit is a reference unit which facilitates the aggregation of livestock from various species and age as per convention, via the use of specific coefficients established initially on the basis of the nutritional or feed requirement of each type of animal. The reference unit used for the calculation of livestock units (= 1 LSU) is the grazing equivalent of one adult dairy cow producing 3 000 kg of milk annually, without additional concentrated foodstuffs.

Meat production

Meat production refers to the slaughter, in agreed slaughterhouses, of animals whose carcass weight is declared fit for human consumption; the definition applies to bovine animals, pigs, sheep, goats and poultry.



Milk

Milk is produced by the secretion of the mammary glands of one or more cows, ewes, goats or buffaloes. Farms produce milk for two distinct purposes: to distribute to dairies as well as for domestic consumption, direct sale and cattle feed.

Non-family labour

The non-family labour force of the agricultural holding in the context of the farm structure survey (FSS) refers to persons directly employed by the holding. They can be classified as:

- non-family labour regularly employed — all persons other than the holder and members of his family doing farm work and receiving any kind of remuneration (salary, wages, profits or other payments including payment in kind) from the agricultural holding;
- non-family labour employed on a non-regular basis — all persons other than the holder and members of his family doing farm work and receiving any kind of remuneration from the agricultural holding who did not work each week on the agricultural holding in the 12 months ending on the reference day of the survey; this category usually covers seasonal workers.

Organic area

Organic area covers land fully converted to organic farming and areas under conversion.

Organic farming

Organic farming is a way of agricultural production which uses organic production methods and places the highest emphasis on environmental and wildlife protection and, with regard to livestock production, on animal welfare considerations. Organic production involves holistic production management systems for

crops and livestock, emphasizing on-farm management practices over off-farm inputs.

Permanent crops

Permanent crops are tree/shrub crops not grown in rotation, but occupying the soil and yielding harvests for several (usually more than five) consecutive years. Permanent crops mainly consist of fruit and berry trees, bushes, vines and olive trees.

Permanent grassland and meadow

Permanent grassland and meadow is land used permanently (for several — usually more than five — consecutive years) to grow herbaceous forage crops, through cultivation (sown) or naturally (self-seeded); it is not, therefore, included in the crop rotation scheme on the agricultural holding. Permanent grassland and meadow can be either used for grazing by livestock, or mowed for hay or silage (stocking in a silo).

Pig

A pig is a domesticated animal of the species *Sus*. A distinction is made between pigs, piglets, fattening pigs and breeding pigs.

Poultry

Poultry refers to domestic birds of the following species: *Gallus gallus* (hens and chickens); *Meleagris* spp. (turkeys); *Anas* spp. and *Cairina moschata* (ducks); *Anser anser* dom. (geese); *Coturnix* spp. (quail); *Phasianus* spp. (pheasants); *Numida meleagris* dom. (guineafowl); *Columbinae* spp. (pigeons); *Struthio camelus* (ostriches). It excludes, however, birds raised in confinement for hunting purposes and not for meat production.

Protected designation of origin

Protected designation of origin (PDO) designates the name of a product which must be produced within a determined geographical area using recognised and recorded know-how. All products with PDO status must be produced exclusively with grapes from the area in question.

Protected geographical indication

Protected geographical indication (PGI) designates a product with a quality, reputation or other specific features that can be attributed to a determined geographical area. All products with PGI status must be produced with at least 85 % of the grapes coming from the area in question.

Regular agricultural labour force

A regularly employed labour force of the agricultural holding in the context of the farm structure survey (FSS) refers to the directly employed persons who carried out farm work every week on the holding during the 12 months ending on the reference day of the survey, irrespective of length of the working week. Regularly employed labour force may be classified either as a family labour or the nonfamily labour regularly employed.

Roundwood production

Roundwood production (the term is also used as a synonym for removals in the context of

forestry) comprises all quantities of wood removed from the forest and other wooded land, or other tree felling site during a defined period of time.

Sawnwood

Sawnwood is wood that has been produced either by sawing lengthways or by a profile-chipping process and, with a few exceptions, is greater than 6 millimetres (mm) in thickness.

Sheep

Sheep are domesticated animals of the species *Ovis aries* kept in flocks mainly for their wool or meat.

Slaughterhouse

A slaughterhouse is an officially registered and approved establishment used for slaughtering and dressing animals whose meat is intended for human consumption.

Slaughtering and meat production

Data on slaughtering and meat production are collected on a monthly basis. They refer to the activity of slaughterhouses, while the share of domestic slaughtering (in other words, outside officially recognised slaughterhouses) is explicitly left out of the statistics in order to improve comparability of the results across EU Member States.



Standard output (SO)

The standard output of an agricultural product (crop or livestock) is the average monetary value of the agricultural output at farm-gate price, in euro per hectare or per head of livestock. A regional coefficient for each product is applied, as an average value over a reference period (five years). The sum of all the standard outputs per hectare of crop and per head of livestock for a farm is a measure of its overall economic size, expressed in euro.

Utilised agricultural area (UAA)

The utilised agricultural area (UAA) describes the area used for farming. It includes the land categories: arable land; permanent grassland; permanent crops, and; other agricultural land such as kitchen gardens (even if they only represent small share of the total UAA). The term does not include unused agricultural land, woodland and land occupied by buildings, farmyards, tracks, ponds, and so on.

Abbreviations

GEOGRAPHICAL AGGREGATES AND COUNTRY CODES

EU-28	The 28 Member States of the European Union from 1 July 2013 (EU-27 and Croatia)	LT	Lithuania
EU-27	The 27 Member States of the European Union from 1 January 2007 to 30 June 2013 (EU-15, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, Bulgaria and Romania)	LU	Luxembourg
EU-15	The 15 Member States of the European Union from 1 January 1995 to 30 April 2004 (Belgium, France, Italy, Luxembourg, the Netherlands, the Federal Republic of Germany [West Germany], Denmark, Ireland, the United Kingdom, Greece, Spain, Portugal, Austria, Finland and Sweden)	HU	Hungary
EU	European Union	MT	Malta
BE	Belgium	NL	Netherlands
BG	Bulgaria	AT	Austria
CZ	Czech Republic	PL	Poland
DK	Denmark	PT	Portugal
DE	Germany	RO	Romania
EE	Estonia	SI	Slovenia
IE	Ireland	SK	Slovakia
EL	Greece	FI	Finland
ES	Spain	SE	Sweden
FR	France	UK	United Kingdom
HR	Croatia	EFTA	European Free Trade Association
IT	Italy	IS	Iceland
CY	Cyprus	LI	Liechtenstein
LV	Latvia	NO	Norway
		CH	Switzerland

EU CANDIDATE COUNTRIES

AL	Albania
ME	Montenegro
MK ⁽¹⁾	The former Yugoslav Republic of Macedonia
RS	Serbia
TR	Turkey

⁽¹⁾ Provisional ISO code which does not prejudice in any way the definitive nomenclature for this country, which is to be agreed following the conclusion of negotiations currently taking place on this subject at the United Nations.



POTENTIAL CANDIDATES

BA	Bosnia and Herzegovina
XK ^(?)	Kosovo

UNITS OF MEASUREMENT

%	per cent
AWU	annual work unit
EUR	euro
ha	hectare
kg	kilogram
km ²	square kilometre
kW	kilowatt
LSU	livestock unit
m ³	cubic metre
toe	tonne of oil equivalent
tonne	1 000 kg
TLW	tonnes live weight

OTHER ABBREVIATIONS

AEI	agri-environmental indicators
CAP	Common agricultural policy
CFP	Common fisheries policy
CLRTAP	Convention on Long-range transboundary air pollutants
COM	Communication
CO ₂	carbon dioxide
CMO	Common Market Organisation
EAA	economic accounts for agriculture
EC	1. European Community 2. European Commission
EEA	European Environment Agency
EEC	European Economic Community

EMEP	European Monitoring and Evaluation Programme
Eurostat	statistical office of the European Union
FLEGT	forest law enforcement, governance and trade
FSS	farm structure survey
HICP	harmonised index of consumer prices
ICT	information and communication technologies
IPCC	Intergovernmental panel on climate change
ISCED	International standard classification of education
K	potassium
LFS	labour force survey
LULUCF	land-use, land change and forestry
N	nitrogen
NUTS	classification of territorial units for statistics (NUTS levels 1, 2 and 3)
P	phosphorus
PDO	protected designation of origin
PGI	protected geographical indication
SILC	statistics on income and living conditions
UAA	utilised agricultural area
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change

(?) This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

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Open data from the EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en/data>) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

Agriculture, forestry and fishery statistics

This publication presents a selection of topical data. Most data cover the European Union and its Member States, while some indicators are provided for other countries, such as members of EFTA, and candidate countries and potential candidates to the European Union.

This publication may be viewed as an introduction to European statistics and provides a starting point for those who wish to explore the wide range of data that is freely available on Eurostat's website at

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

