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Pocketbooks

**Agricultural statistics**  
**Main results — 2008–09**



**2010 edition**



**Agricultural statistics**  
**Main results — 2008–09**

**2010 edition**

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This publication has been produced by units E1 – Farms, agro-environment and rural development – and E2 – Agricultural and fisheries statistics.

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## Introduction

The pocketbook *Agricultural Statistics* presents selected tables and graphs providing an overview on developments and the situation in the agricultural sector of the European Union. The most recent data are presented here (reference years 2007, 2008 and 2009, mostly) showing the situation in the 27 Member States and at the European level (EU-27 aggregates) as well as in Norway and Switzerland when available.

This pocketbook, intended for both generalists and specialists, is divided into six parts.

Chapter 1 evaluates the changes occurred in the farm structure, using the results of Farm Structure Surveys 2003, 2005 and 2007;

Chapter 2 covers the economy of the agricultural industry and presents data on output and input values, income indicators and main price trends;

Chapter 3 presents the most recent data on agricultural production i.e. meat and milk production, cereals, main crops, fruit and vegetable production and also some data on vineyards and olive trees;

Chapter 4 provides some important indicators related to the interaction between agriculture and the environment;

Chapter 5 presents the population changes in NUTS3 regions in the light of the level of rurality of those regions;

Finally, chapter 6 presents data on agriculture in coastal regions.

More detailed data as well as methodological information can be found on the Eurostat website at:

<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>

This website offers free access to the Eurostat's dissemination database, predefined tables, methodological documents and other publications of Eurostat.

## Table of contents

Introduction.....	5
Units, abbreviations and symbols used .....	8
<b>I Agricultural holdings — Structural data.....</b>	<b>11</b>
<i>Methodological notes</i> .....	14
1.1 Agricultural holdings .....	16
<i>Number of holdings</i> .....	16
<i>Utilised Agricultural Area</i> .....	21
<i>Livestock</i> .....	25
<i>Economic Size</i> .....	31
1.2 Labour Force .....	34
1.3 Small Holdings .....	40
<b>II Agricultural accounts and prices.....</b>	<b>59</b>
2.1 Agricultural income.....	62
<i>Introduction</i> .....	62
<i>Long-term trends</i> .....	63
<i>Recent trends</i> .....	64
2.2 Final output.....	69
2.3 Inputs.....	72
2.4 Agricultural Labour Input.....	74
2.5 Price indices.....	76
<b>III Main agricultural products .....</b>	<b>81</b>
3.1 Crop production .....	83
<i>Main crops</i> .....	84
<i>Cereals</i> .....	88
<i>Main fruits and vegetables production</i> .....	93
<i>Vineyards and olive trees</i> .....	95
<i>Land Use</i> .....	98
3.2 Animal production.....	100
<i>Livestock and meat</i> .....	101
<i>Milk</i> .....	107

<b>IV</b>	<b>Agriculture and the environment</b> .....	115
4.1	Agricultural energy consumption.....	119
4.2	Specialisation of agriculture.....	124
4.3	Intensification of agriculture.....	132
4.4	Greenhouse gas emissions from agriculture .....	138
4.5	Irrigation.....	144
<b>V</b>	<b>Ageing in rural areas</b> .....	151
5.1	Total population in rural areas grows less than in urban areas.....	155
5.2	Ageing continues and is more pronounced in urban areas .....	158
5.3	Specific effects are visible .....	160
5.4	Extreme changes.....	167
<b>IV</b>	<b>Agriculture in coastal regions</b> .....	169
	Introduction.....	171
6.1	Coastal regions population .....	172
6.2	Coastal regions areas .....	174
6.3	Agricultural area in coastal regions.....	176
6.4	Agricultural holdings in coastal regions.....	177
6.5	Primary sector employment in coastal regions.....	179
	<i>Methodological notes</i> .....	180

## Units, abbreviations and symbols used

### Units

ha	hectare = 10 000 m <sup>2</sup>
kg	kilogram
KgOE	Kilograms of oil equivalent
KTOE	Thousand tonnes of oil equivalent
t	tonne
€	Euro

### Abbreviations

AWU	Annual work unit
EAA	Economic accounts for agriculture
ESA	European System of Accounts
ESU	Economic Size Unit
EU-SILC	European Survey on Income and Living Conditions
FADN	Farm Accountancy Data Network
FAO	Food and Agriculture Organization of the United Nations
FSS	Farm Structure Survey
GHG	Greenhouse Gas emissions
GIP	Gross indigenous production
GVA	Gross value added
LSU	Livestock unit
LFS	Labour Force Survey
NUTS	Nomenclature of territorial units for statistics
OECD	Organisation for Economic Co-operation and Development
OGA	Other gainful activity
SGM	Standard Gross Margin
UAA	Utilised agricultural area
EU	European Union
EU-27	European Union of 27 Member States
EU-15	European Union of 15 Member States)
NMS-12	New Member States (BG, CZ, EE, CY, LV, LT, HU, MT, PL, SI, SK, RO)
NMS-10	New Member States (CZ, EE, CY, LV, LT, HU, MT, PL, SI, SK)
NMS-2	New Member States (BG, RO)

BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
RO	Romania
PT	Portugal
SI	Slovenia
SK	Slovak Republic
FI	Finland
SE	Sweden
UK	United Kingdom
NO	Norway
CH	Switzerland

### **Symbols**

–	Not applicable
0.0	Less than half the unit used
:	Not available
( )	Small sample size may affect the reliability of the data
<i>Italic figures</i>	Estimated values







**Agricultural holdings  
Structural data**



## 1 Agricultural holdings — Structural data

The purpose of Community surveys on the structure of agricultural holdings, also referred to as Farm Structure Surveys (FSS), is to regularly provide reliable data on the structure of agricultural holdings in the European Union, in particular on land use, livestock and farm labour force. Every ten years since 1970 a basic survey is carried out as an agricultural census. Three intermediate surveys are conducted between two basic ones, i.e. with an interval of two or three years. They are conducted as sample surveys in most of the MS. The next census (2009/2010) is now being conducted and the first results will be available in the summer of 2011.

In last year's edition of the pocketbook the focus was on the results of the 2007 FSS, giving an overview of the main characteristics of the European agriculture structure, and comparing the national FSS results. The present analysis engages in an outline of the tendencies of the last three of these surveys (2003, 2005 and 2007) which were carried out in all EU MS and also in Norway and in Switzerland<sup>(1)</sup>. This section of the agriculture pocketbook presents a brief analysis of the main trends of the key indicators summarised in a few tables and graphs.

The national FSS have to cover 99 % of agricultural economic activity. A threshold is defined under which a unit is too small to be counted as an agricultural holding (e.g. a minimum of 5 pigs, 50 m<sup>2</sup> under glass or 100 m<sup>2</sup> under vineyard). Each Member State defines its own set of thresholds in order to meet the targeted coverage. This means that the smallest farms (under the threshold) are not surveyed. The difference between thresholds makes the FSS results most relevant in a national context.

In several countries the large number of small units impacts heavily on the statistical results, especially those based on the numbers of holdings (e.g. averages). In order to improve their comparability this analysis focuses **on agricultural holdings of at least 1 ESU**<sup>(2)</sup>. A brief overview of small holdings is nevertheless given in section 1.3.

(1) The FSS data for Switzerland is only available for 2005 and 2007. The 2005 FSS data for Switzerland does not include the labour force section or the data on SGM.

(2) For each activity ('enterprise') on a holding, or farm (e.g. wheat, dairy cows or vineyard), a **standard gross margin (SGM)** is estimated, based on the area (or the number of heads) and a regional coefficient. The sum of all margins, for all activities of a given farm, is referred to as the economic size of that farm. The economic size is expressed in European Size Units (ESU), 1 ESU being equal to 1 200 euros of SGM.

### Methodological notes

The methodological notes help the reader to understand the specific concepts and assumptions used, and explain the limitations of the figures provided. For methodological information in greater depth, please check the legal basis and/or the national methodological reports provided by the MS.

The basic statistical unit underlying the Farm Structure Survey (FSS) is the **agricultural holding**. A holding is defined as a techno-economic unit under single management engaged in agricultural production (including the maintenance of land in good agricultural and environmental condition). The FSS covers all agricultural holdings with an utilised agricultural area (UAA) of at least 1 ha and those holdings with a UAA of less than 1 ha if their market production exceeds certain natural thresholds or if certain part of their production is for sale.

The **utilised agricultural area** (UAA) is the total arable land, permanent grassland, land used for permanent crops and kitchen gardens. The UAA excludes unutilised agricultural land, woodland and land occupied by buildings, farmyards, tracks, ponds, etc.

For certain purposes, the various categories of livestock, e.g. piglets, breeding sows and other pigs, have to be aggregated. The coefficient used for this is known as the **Livestock Unit (LSU)**. It is related to the feed requirements of each individual animal category. For example, 1 LSU corresponds to one dairy cow or 10 sheep.

The **farm labour force** includes all persons having completed their compulsory education (i.e. having reached school-leaving age) who carried out farm work on the holding during the 12 months up to the date of the survey. The figures include the holders, even when not working on the holding.

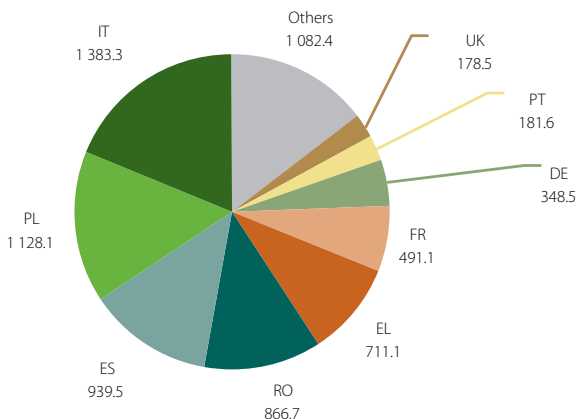
Taking into account the considerable degree of part-time work in agriculture and opportunities for part-time work in other sectors of the economy, information on employment in agriculture is given in annual work units. An **Annual Work Unit (AWU)** is equivalent to full-time employment. One AWU corresponds to the work performed by a person engaged in full-time agricultural work on the holding over a 12-month period. The annual working time of such a worker is 1 800 hours (225 working days of 8 hours per day), unless there are different specific national provisions governing contracts of employment.

The FSS records data on the land use, livestock and labour force of farms in order to select, or describe them and to get a complete and more comprehensive picture of the composition of European farms. Detailed national areas or livestock numbers for different time spans may therefore be obtained by more relevant and specific surveys, such as the crop production and animal production statistics.

## 1.1 Agricultural holdings

### Number of holdings

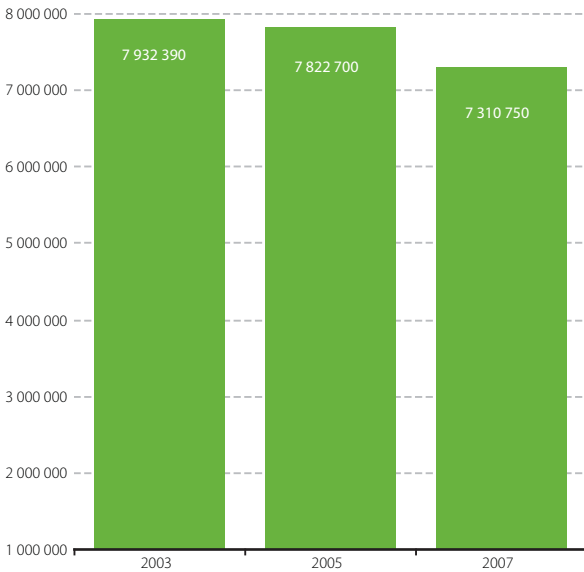
**Figure 1.1.1:** Number of agricultural holdings\* by country (1 000), EU-27, 2007



Source: FSS ([ef\\_ov\\_kvaaesu](#))

\* With at least 1 ESU.

The results of the FSS 2007 show that 76 % of the 7.31 million agricultural holdings over 1 ESU of the EU-27 were built up by the holdings of 6 MS: Italy (19 %), Poland (15 %), Spain (13 %), Romania (12 %), Greece (10 %) and France (7 %).

**Figure 1.1.2: Total number of agricultural holdings\*, EU-27, 2003, 2005, 2007**

Source: FSS (ef\_ov\_kvaaesu)

\* With at least 1 ESU.

In the 2003 FSS the number of holdings with at least 1 ESU in the EU-27 was 7.93 million. There has been a general tendency for a decrease in the number of holdings in the last years. For the total EU-27, the decrease was 1.4 % between 2003 and 2005, while in 2007 the reduction was even greater reaching 6.5 %.

**Table 1.1.1: Number of holdings\* and growth rate of number of holdings, 2003, 2005 and 2007**

	Holdings > 1 ESU (1 000)			Growth (%)		
	2003	2005	2007	2003– 2005	2005– 2007	2003– 2007
<b>EU-27</b>	7 932.4	7 822.7	7 310.8	-1.4	-6.5	-7.8
BE	52.7	49.6	46.1	-5.8	-7.0	-12.4
BG	157.3	118.1	117.8	-25.0	-0.2	-25.1
CZ	26.0	26.8	25.9	3.1	-3.1	-0.1
DK	48.6	51.4	44.4	5.7	-13.6	-8.7
DE	390.2	371.1	348.5	-4.9	-6.1	-10.7
EE	14.6	13.4	12.8	-8.0	-4.8	-12.4
IE	128.8	125.5	117.9	-2.6	-6.0	-8.5
EL	654.9	678.1	711.1	3.6	4.9	8.6
ES	978.5	959.0	939.5	-2.0	-2.0	-4.0
FR	566.4	527.4	491.1	-6.9	-6.9	-13.3
IT	1 428.1	1 381.4	1 383.3	-3.3	0.1	-3.1
CY	28.4	29.9	28.1	5.3	-6.0	-1.1
LV	52.7	44.9	44.4	-14.8	-1.1	-15.8
LT	89.4	128.6	85.3	43.9	-33.7	-4.6
LU	2.3	2.4	2.2	2.6	-5.5	-3.0
HU	161.0	157.2	140.8	-2.4	-10.4	-12.5
MT	7.3	8.2	7.6	12.6	-7.2	4.5
NL	85.4	81.8	76.7	-4.1	-6.2	-10.1
AT	140.6	137.0	130.9	-2.6	-4.5	-6.9
PL	1 056.3	1 082.7	1 128.1	2.5	4.2	6.8
PT	261.6	219.0	181.6	-16.3	-17.1	-30.6
RO	1 211.8	1 236.0	866.7	2.0	-29.9	-28.5
SI	61.4	60.9	61.5	-0.9	1.0	0.1
SK	12.2	12.9	15.8	5.8	23.1	30.2
FI	74.2	70.0	66.6	-5.6	-4.9	-10.2
SE	60.2	66.3	57.5	10.1	-13.3	-4.5
UK	181.8	183.4	178.5	0.9	-2.7	-1.8
CH	:	62.7	61.8	:	-1.5	:
NO	58.0	52.8	49.8	-8.9	-5.6	-14.0
<b>EU-15</b>	5 054.1	4 903.3	4 775.9	-3.0	-2.6	-5.5
<b>NMS- 12</b>	2 878.3	2 919.4	2 534.8	1.4	-13.2	-11.9

 Source: FSS ([ef\\_ov\\_kvaaesu](#))

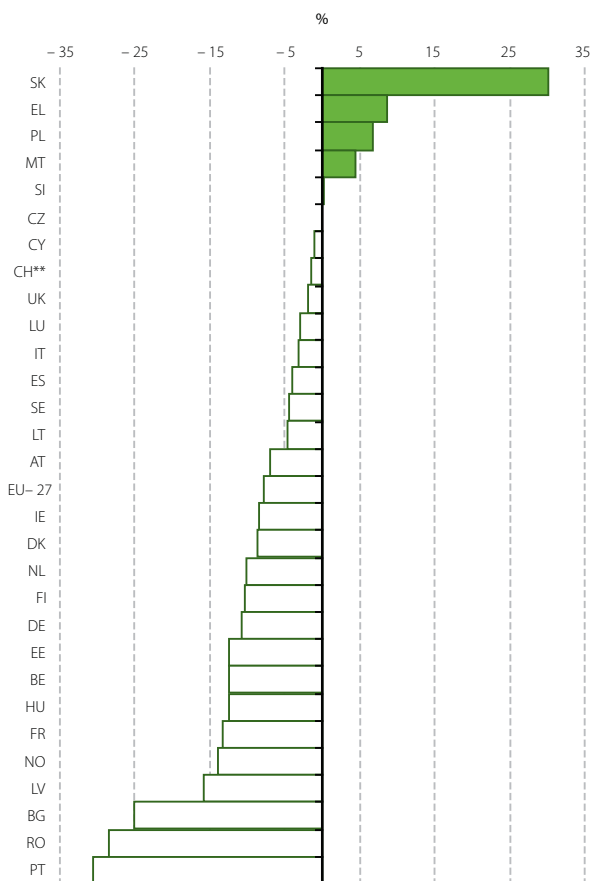
\* With at least 1 ESU.



With exception of Slovakia, Greece, Poland, Malta and Slovenia, where the number of holdings have increased in the period 2003–2007, all other MS registered a decrease. In the case of the two new MS (Bulgaria and Romania) and also Portugal the number of agricultural holdings was reduced by over 25 % between 2003 and 2007.

The drop in the number of agricultural holdings can be linked to the technical developments of the agricultural sector linked with restructuring of the holdings, as well as the ageing of the holders, often leading to the disappearance of the smaller holdings. This general tendency of abandonment of the smaller units is followed by an increase in the number of the larger holdings.

**Figure 1.1.3:** Number of holdings\* by country, % change 2003–2007



Source: FSS (ef\_ov\_kvaaesu)

\* With at least 1 ESU.

\*\* Change in the number of holdings 2005–2007 (%)

## Utilised Agricultural Area

Table 1.1.2: Utilised Agricultural Area (UAA)\*, growth rate of UAA and average UAA per holding, 2003, 2005 and 2007

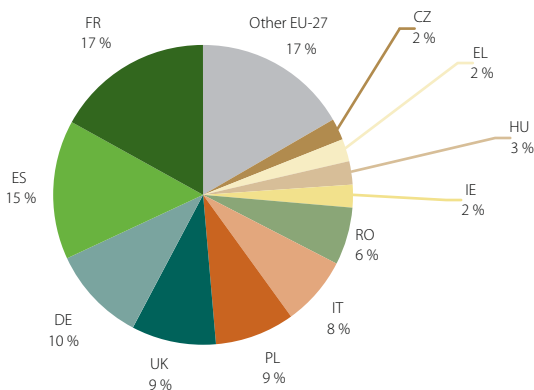
	UAA for holdings >1 ESU (1 000 ha)			Growth of UAA (%)			Average UAA / holding (ha)		
	2003	2005	2007	2003/05	2005/07	2003/07	2003	2005	2007
<b>EU-27</b>	161 633	161 740	160 827	0.1	-0.6	-0.5	20.4	20.7	22
BE	1 392	1 384	1 373	-0.6	-0.8	-1.4	26.4	27.9	29.7
BG	2 629	2 488	2 867	-5.4	15.3	9	16.7	21.1	24.3
CZ	3 594	3 523	3 490	-2	-0.9	-2.9	138.5	131.7	134.6
DK	2 658	2 704	2 660	1.7	-1.6	0.1	54.7	52.7	60
DE	16 909	16 975	16 861	0.4	-0.7	-0.3	43.3	45.7	48.4
EE	703	764	848	8.6	11	20.6	48.3	57	66.5
IE	4 239	4 160	4 019	-1.9	-3.4	-5.2	32.9	33.2	34.1
EL	3 877	3 906	3 996	0.7	2.3	3.1	5.9	5.8	5.6
ES	22 729	23 741	23 874	4.5	0.6	5	23.2	24.8	25.4
FR	27 685	27 490	27 371	-0.7	-0.4	-1.1	48.9	52.1	55.7
IT	12 677	12 410	12 451	-2.1	0.3	-1.8	8.9	9	9
CY	149	142	139	-4.4	-2.5	-6.8	5.2	4.8	4.9
LV	1 202	1 302	1 429	8.3	9.8	18.9	22.8	29	32.2
LT	1 827	2 338	2 134	28	-8.7	16.8	20.4	18.2	25
LU	128	129	130	1	1.2	2.1	55.4	54.5	58.4
HU	4 081	4 048	4 054	-0.8	0.2	-0.7	25.3	25.8	28.8
MT	10	9	9	-4.5	-1.3	-5.8	1.3	1.1	1.2
NL	2 007	1 958	1 914	-2.4	-2.2	-4.6	23.5	23.9	24.9
AT	2 708	2 690	2 576	-0.7	-4.3	-4.9	19.3	19.6	19.7
PL	12 889	13 132	13 856	1.9	5.5	7.5	12.2	12.1	12.3
PT	3 570	3 502	3 321	-1.9	-5.2	-7	13.6	16	18.3
RO	10 624	10 337	9 498	-2.7	-8.1	-10.6	8.8	8.4	11
SI	449	448	461	-0.2	3	2.8	7.3	7.4	7.5
SK	2 095	1 840	1 889	-12.2	2.7	-9.8	172.1	143	119.3
FI	2 242	2 262	2 286	0.9	1.1	1.9	30.2	32.3	34.3
SE	3 066	3 096	2 989	1	-3.5	-2.5	50.9	46.7	51.9
UK	15 494	14 962	14 334	-3.4	-4.2	-7.5	85.2	81.6	80.3
NO	1 040	1 035	1 032	-0.5	-0.3	-0.8	17.9	19.6	20.7
CH	:	1 057	1 057	:	0.0	:	:	16.9	17.1
<b>EU-15</b>	121 382	121 369	120 154	0.0	-1.0	-1.0	24.0	24.8	25.2
<b>NMS-12</b>	40 251	40 371	40 674	0.3	0.8	1.1	14.0	13.8	16.0

Source: FSS (ef\_ov\_kvaesu)

\* Of holdings with at least 1 ESU.

The total UAA of EU-27 was around 160 million ha (1.6 million km<sup>2</sup>), which represents over one third of the territory of the EU in 2007. In the EU-27 as a whole, the UAA has been relatively stable, revealing only a slight decrease (- 0.5 %) from 2003 to 2007. However, analysing the numbers by member state the situation is very heterogeneous. The highest increases are observed in some of the new MS, this is the case of Estonia (20.6 %), Latvia (18.9 %), Lithuania (16.8 %), Bulgaria (9 %) and Poland (7.5 %). This trend can be explained by the new economic and political situation where the incentives of the CAP intensify the use of land for agriculture. On the other hand, other new MS have an opposite tendency. It is the case for Romania and Slovakia where the UAA dropped 10.6 and 9.8 % respectively. These countries face a deep restructuring process in what concerns their agricultural sectors. Privatization and redistribution of agricultural land are still having a restructuring effect on the agriculture of these new MS.

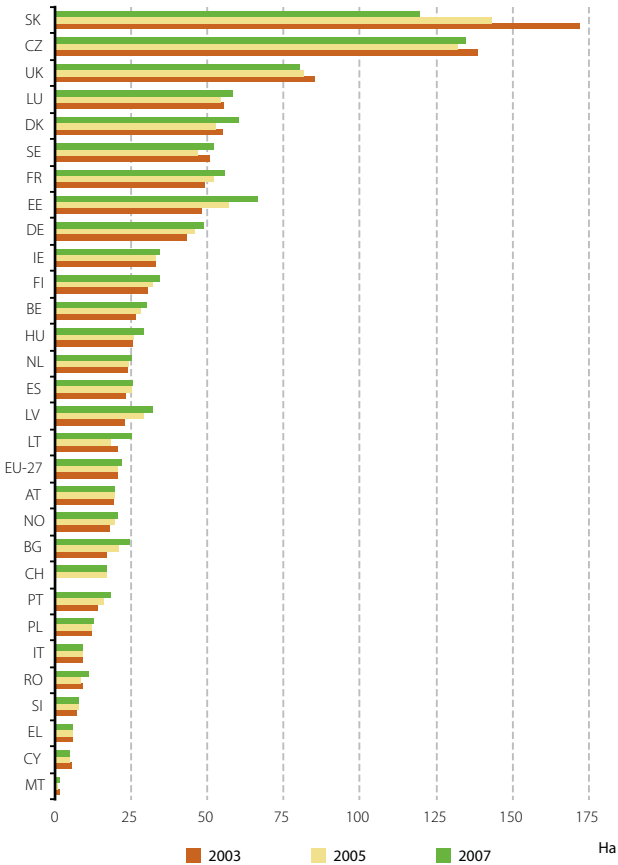
**Figure 1.1.4:** Utilised agriculture area (UAA)\*, % EU-27, 2007



Source: FSS ([ef\\_ov\\_kvaaesu](#))

\* Of holdings with at least 1 ESU.

Slightly over half of the 160 million ha (51.2 %) of EU-27 UAA belongs to France, Spain, Germany and the United Kingdom. The share of each country's UAA in the total of the EU-27 UAA has been stable over the period from 2003 to 2007. The exceptions are Spain and Poland (that have gained 0.8 and 0.6 % respectively as well as Romania and the UK which have both lost 0.7 % each.

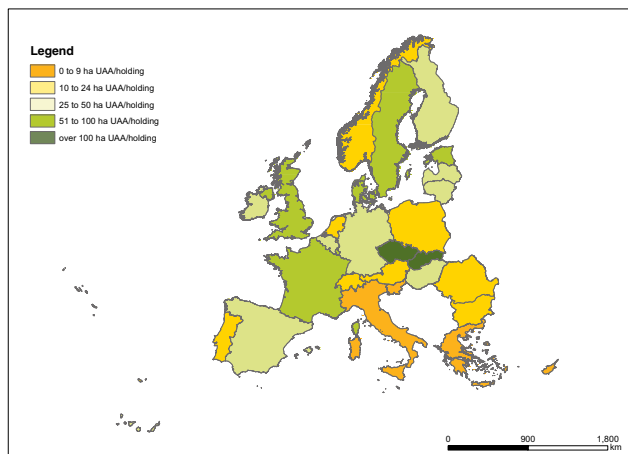
**Figure 1.1.5: Average UAA per holding\*, 2003, 2005 and 2007**

Source: FSS (ef\_ov\_kvaaesu)

\* Of holdings with at least 1 ESU.

When comparing the average UAA per holding the countries show a very high discrepancy. The average UAA per holding in Slovakia is 100 times bigger than in Malta. The average size of a holding for EU-27 is 22 ha. Apart from the countries with the highest UAA per holding (UK, Slovakia and the Czech Republic) there is a general tendency for an increase of average area of the farms, related mainly with the decline in the number of holdings. The outstanding figures for Slovakia and the Czech Republic are due to their peculiar ownership structure, and the large scale corporate farms.

Figure 1.1.6: Average UAA per holding 2007 by country



Source: FSS ([ef\\_ov\\_kvaesu](#))

## Livestock

**Table 1.1.3:** Livestock Units (LSU)\*, growth rate of LSU and average LSU per holding, 2003, 2005 and 2007

	LSU on holdings > 1 ESU (1 000 LSU)			Growth of LSU (%)			LSU per holdings > 1 ESU (LSU)		
	2003	2005	2007	2003/05	2005/07	2003/07	2003	2005	2007
<b>EU-27</b>	136425.2	133570.5	132558.7	-2.1	-0.8	-2.8	17.2	17.1	18.1
BE	3953.2	3882.9	3785.9	-1.8	-2.5	-4.2	75.1	78.2	82.1
BG	992.0	871.1	920.0	-12.2	5.6	-7.3	6.3	7.4	7.8
CZ	2262.3	2059.4	2040.4	-9.0	-0.9	-9.8	87.2	77.0	78.7
DK	4541.2	4565.2	4581.8	0.5	0.4	0.9	93.4	88.9	103.3
DE	18635.8	18121.7	17951.4	-2.8	-0.9	-3.7	47.8	48.8	51.5
EE	312.2	306.6	308.1	-1.8	0.5	-1.3	21.5	22.9	24.2
IE	6310.4	6203.4	5899.6	-1.7	-4.9	-6.5	49.0	49.4	50.0
EL	2602.2	2462.7	2612.2	-5.4	6.1	0.4	4.0	3.6	3.7
ES	14107.3	14397.8	14333.2	2.1	-0.4	1.6	14.4	15.0	15.3
FR	23263.6	22656.1	22500.3	-2.6	-0.7	-3.3	41.1	43.0	45.8
IT	9959.4	9538.5	9885.8	-4.2	3.6	-0.7	7.0	6.9	7.1
CY	255.4	243.1	245.9	-4.8	1.2	-3.7	9.0	8.1	8.7
LV	411.2	412.7	458.4	0.4	11.1	11.5	7.8	9.2	10.3
LT	870.7	1122.9	903.5	29.0	-19.5	3.8	9.7	8.7	10.6
LU	159.1	157.7	160.7	-0.9	1.9	1.0	69.2	66.8	72.1
HU	2242.5	2121.9	2099.9	-5.4	-1.0	-6.4	13.9	13.5	14.9
MT	48.7	45.7	49.2	-6.3	7.8	1.0	6.7	5.6	6.5
NL	6154.2	6388.1	6415.2	3.8	0.4	4.2	72.1	78.1	83.6
AT	2496.3	2437.4	2459.1	-2.4	0.9	-1.5	17.8	17.8	18.8
PL	10748.9	10147.6	10742.4	-5.6	5.9	-0.1	10.2	9.4	9.5
PT	2307.4	2022.2	1986.2	-12.4	-1.8	-13.9	8.8	9.2	10.9
RO	4939.6	4932.1	4197.0	-0.2	-14.9	-15.0	4.1	4.0	4.8
SI	566.7	505.4	540.3	-10.8	6.9	-4.7	9.2	8.3	8.8
SK	902.5	739.0	707.3	-18.1	-4.3	-21.6	74.2	57.4	44.7
FI	1183.1	1157.4	1151.8	-2.2	-0.5	-2.6	16.0	16.5	17.3
SE	1818.6	1798.1	1740.3	-1.1	-3.2	-4.3	30.2	27.1	30.3
UK	14380.8	14273.9	13882.6	-0.7	-2.7	-3.5	79.1	77.8	77.8
NO	1255.2	1256.8	1267.3	0.1	0.8	1.0	21.7	23.8	25.4
CH	:	1767.7	1769.8	:	0.1	:	:	28.2	28.7
<b>EU-15</b>	111872.5	110063.1	109346.2	-1.6	-0.7	-2.3	22.1	22.4	22.9
<b>NMS-12</b>	24552.7	23507.4	23212.5	-4.3	-1.3	-5.5	8.5	8.1	9.2

Source: FSS (ef\_ov\_kvaaesu)

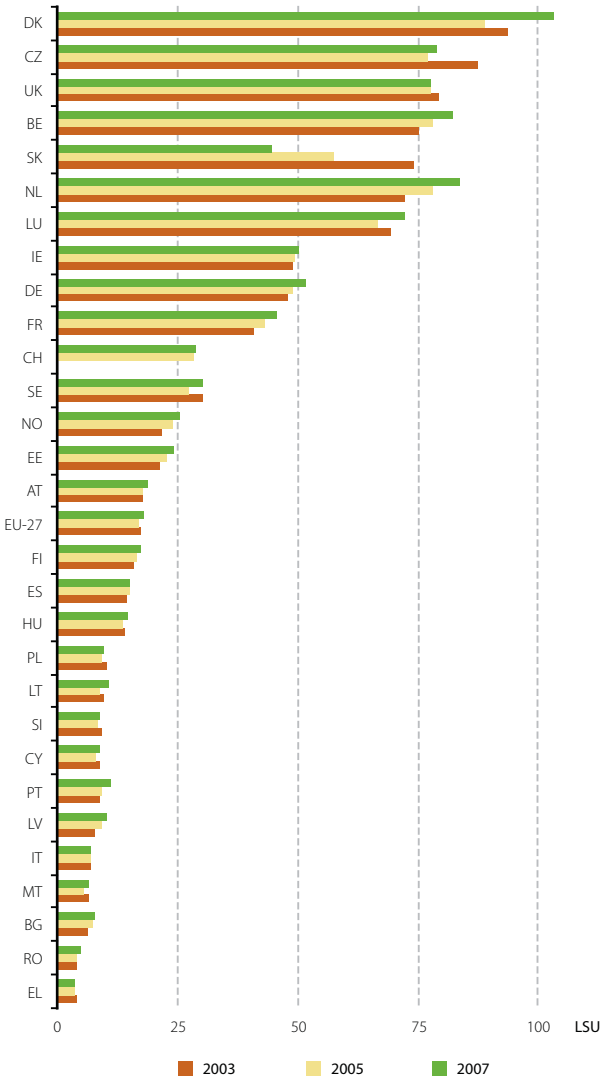
\* Of holdings with at least 1 ESU.

As with the average UAA per holding, the average LSU per holding has also increased on average for the total of the EU-27. Even with the decrease of the number of LSU (from 136.4 million in 2003 to 132.6 million in 2007) the average number of LSU per holding has increased from 17.2 in 2003 to 18.1 in 2007. With the exception of Romania, The reduction of LSU per holding occurred in the countries where it was lower (Greece, Slovenia Malta and Cyprus) and also in the Czech Republic and Slovakia where privatisation process in the agricultural sector is reducing the numbers of livestock per farm.

Similarly to the UAA, the four countries that contribute most to the total amount of EU-27 livestock are France (17 %), Germany (13.5 %), Spain (11 %), and the United Kingdom (10.5 %). These four MS represent more than half (52 %) of the livestock of the EU-27.



**Figure 1.1.7: Average Livestock units\* per holding 2003, 2005 and 2007**



Source: FSS (ef\_ov\_kvaaesu)

\* Of holdings with at least 1 ESU.

**Table 1.1.4:** Main types of livestock\* by country, 2003, 2005 and 2007 (of holdings with at least 1 ESU)

	Total Livestock (1 000 LSU)			Cattle (% of total LSU)			Sheep and goat (% of total LSU)			Pigs (% of total LSU)			Poultry and rabbits (% of total LSU*)		
	2003	2005	2007	2003	2005	2007	2003	2005	2007	2003	2005	2007	2003	2005	2007
<b>EU-27</b>	136 425	133 571	132 559	48.1	48.3	48.3	8.58	8.61	8.51	27.2	27.5	27.8	13.1	12.6	12.4
BE	3 953	3 883	3 786	49.8	49.2	49.4	0.42	0.45	0.46	40.7	40.2	40.8	8.42	9.52	8.64
BG	992	871	920	37.5	41.8	44.2	11.2	10.9	12	24	19.8	18.7	20.1	22.5	20.7
CZ	2 262	2 059	2 040	48.7	50.6	50.6	0.47	0.63	0.76	36.2	34.5	32.9	13.9	13.5	14.8
DK	4 541	4 565	4 582	27.5	24.8	24.6	0.32	0.4	0.37	67.6	70.1	70.6	3.85	3.76	3.57
DE	18 636	18 122	17 951	52.7	51.6	50.7	N.A.	1.43	1.33	35.5	36.5	37.1	8.36	8.28	8.56
EE	312	307	308	65.4	64.1	63.1	1.14	1.95	2.48	25.1	25.4	27.3	7.53	7.31	5.76
IE	6 310	6 203	5 900	80.1	80.2	81	10.4	10	9	6.43	6.43	6.62	2.12	2.31	2.15
EL	2 602	2 463	2 612	19.6	20.6	19.8	56.2	56.2	57.4	8.94	9.46	10.1	14.4	12.7	11.7
ES	14 107	14 398	14 333	29.7	28.4	28.4	15.8	15.4	14.8	38.7	40.6	41.9	14.6	14.3	13.5
FR	23 264	22 656	22 500	60.4	60.6	61.8	4.5	4.41	4.29	14.5	14.2	13.9	19.4	19.4	18.7
IT	9 959	9 538	9 886	45.8	47.5	47	9.06	8.26	7.8	22.6	24	23.9	21.7	19.2	20.2
CY	255	243	246	17.6	17.6	17.1	24.3	23.5	21.3	40.7	41.7	46.6	16.7	16.7	14.5
LV	411	413	458	62.7	61.5	62.7	1.05	1.1	1.58	24.2	24.9	23.2	9.96	10.9	11
LT	871	1 123	904	58	61	60.9	0.39	0.44	0.58	25	24.9	24.2	13.5	10.6	12
LU	159	158	161	85.3	84.2	85	0.69	0.77	0.72	11.7	12.2	11.4	0.66	0.73	0.67
HU	2 242	2 122	2 100	23.6	24.9	24.9	5.39	6.48	5.74	42.6	39.6	40.2	26.8	27.4	27.7

	Total Livestock (1 000 LSU)			Cattle (% of total LSU)			Sheep and goat (% of total LSU)			Pigs (% of total LSU)			Poultry and rabbits (% of total LSU*)		
	2003	2005	2007	2003	2005	2007	2003	2005	2007	2003	2005	2007	2003	2005	2007
MT	49	46	49	28.2	31.8	29.2	3	3.46	2.9	38.9	39.2	41.1	28.6	24.1	25.7
NL	6 154	6 388	6 415	43.8	41.9	41.3	2.37	2.59	2.64	38	37.1	37.5	14.2	16.7	16.9
AT	2 496	2 437	2 459	58.1	58.1	56.5	1.36	1.37	1.43	32.3	32.7	33.2	5.68	5.6	6.51
PL	10 749	10 148	10 742	38.8	41.2	41.2	0.38	0.35	0.35	38.6	40	39.8	20.2	16.4	16.6
PT	2 307	2 022	1 986	43.5	46.7	47.2	13	14.1	13.2	22.3	22.1	21.8	18.7	15.2	16.1
RO	4 940	4 932	4 197	33.4	37.7	39.6	13	15.2	19.8	26	20.8	18.4	17.3	15.8	12
SI	567	505	540	58.1	63	60.2	2.36	2.84	3.14	24.7	23.2	23	12.6	8.2	11.3
SK	902	739	707	46.1	50.2	51	3.48	4.14	4.87	36.3	30.1	26.7	13.7	15.1	16.8
FI	1 183	1 157	1 152	59.6	58.5	56.8	0.89	0.81	1.08	27.5	28.7	30.6	10.3	10.1	9.45
SE	1 819	1 798	1 740	61.7	62	62.6	1.89	0	0	25.1	24.1	23.4	7.36	8.38	8.53
UK	14 381	14 274	13 883	52.2	52.1	52.5	24.7	24.7	24.2	8.67	8.43	8.71	13	13.1	12.6
NO	1 255	1 257	1 267	52.9	51.9	50.2	20.3	19.8	18.5	14.6	15.3	15.5	10.4	11.1	13.8
CH	:	1 768	1 770	:	64.2	64.6	:	2.9	3	:	24	23.4	:	5.59	5.61
<b>EU-15</b>	111 872	110 063	109 346	50.1	49.6	49.5	9.53	9.4	9.18	25.7	26.3	26.7	11.9	11.7	11.6
<b>NMS-12</b>	24 553	23 507	23 212	39.1	41.9	42.3	4.26	4.9	5.35	34.3	32.8	32.7	18.6	16.6	16.2

Source: FSS (ef\_ov\_lsft)

\* The category 'other livestock' is not included in this table. It represents 3 % of the Total EU-27 LSU

\*\* The values for Rabbits are not available for Germany, Sweden or United Kingdom

From 2003 to 2007 the changes between the various categories of livestock have not been significant. There is a slight increase of the pig livestock, and a small decrease of the poultry and rabbits.

If we analyse the figures by country and livestock type, we can perceive some tendencies. The importance of cattle in the percentage of livestock has reduced in the 'old' MS. In Denmark, Finland, and the Netherlands the percentage of cattle in the total amount of LSU has reduced by more than 2 percentage points. Norway also reduced the percentage of cattle from 52.9 to 50.2 % from 2003 to 2007. On the contrary, the new MS have increased the share of cattle. An increase of 2 percentage points or more of the share of cattle was observed for Bulgaria, Romania, Slovakia, Lithuania, Poland and Slovenia. Portugal with an increase of 3.7 percentage points, and Estonia with a decrease of 2.3 percentage points are the exceptions to the rule. In Luxembourg and Ireland more than 80 % of the total LSU belongs to the cattle category.

More than half (57.4 %) of the livestock of Greece are sheep and goats. In this category, there has been a great increase in Romania from 13 % to 19.8 % from 2003 to 2007 and in Cyprus the sheep and goats have dropped from 24.3 to 21.3 % in the share of total livestock.

## Economic Size

**Table 1.1.5:** Standard Gross Margin (SGM)\*, growth rate of SGM and average SGM per holding 2003, 2005 and 2007

	SGM for holdings > 1 ESU (1 000 ESU)			Growth of SGM (%)			SGM per holding > 1 ESU (ESU)		
	2003	2005	2007	2003/05	2005/07	2003/07	2003	2005	2007
<b>EU-27</b>	145 398.4	149 452.7	151 885.0	2.8	1.6	4.5	18.3	19.1	20.8
BE	3 221.4	3 378.8	3 373.5	4.9	-0.2	4.7	61.2	68.1	73.1
BG	858.1	775.3	935.3	-9.6	20.6	9.0	5.5	6.6	7.9
CZ	1 458.1	1 525.1	1 616.8	4.6	6.0	10.9	56.2	57.0	62.4
DK	3 713.6	3 607.6	3 576.1	-2.9	-0.9	-3.7	76.4	70.3	80.6
DE	21 021.9	19 379.1	18 313.2	-7.8	-5.5	-12.9	53.9	52.2	52.5
EE	122.6	127.5	172.8	4.0	35.6	41.0	8.4	9.5	13.6
IE	2 774.7	2 543.2	2 481.7	-8.3	-2.4	-10.6	21.5	20.3	21.1
EL	5 084.9	5 424.1	6 078.1	6.7	12.1	19.5	7.8	8.0	8.5
ES	17 178.9	19 938.1	21 489.0	16.1	7.8	25.1	17.6	20.8	22.9
FR	29 093.2	28 560.0	28 237.1	-1.8	-1.1	-2.9	51.4	54.2	57.5
IT	19 186.7	22 012.7	24 834.5	14.7	12.8	29.4	13.4	15.9	18.0
CY	287.4	291.3	314.7	1.4	8.0	9.5	10.1	9.7	11.2
LV	222.9	233.0	304.1	4.5	30.5	36.5	4.2	5.2	6.9
LT	337.6	486.9	498.7	44.2	2.4	47.7	3.8	3.8	5.8
LU	104.6	113.8	119.1	8.8	4.7	13.9	45.5	48.2	53.4
HU	1 564.6	1 761.9	1 877.5	12.6	6.6	20.0	9.7	11.2	13.3
MT	79.5	57.4	52.2	-27.8	-9.1	-34.4	10.9	7.0	6.8
NL	8 172.6	8 395.4	8 537.8	2.7	1.7	4.5	95.7	102.6	111.3
AT	2 412.9	2 511.8	2 757.7	4.1	9.8	14.3	17.2	18.3	21.1
PL	7 118.8	7 832.7	8 231.0	10.0	5.1	15.6	6.7	7.2	7.3
PT	2 269.8	2 109.6	1 753.5	-7.1	-16.9	-22.7	8.7	9.6	9.7
RO	3 848.4	3 571.3	2 598.8	-7.2	-27.2	-32.5	3.2	2.9	3.0
SI	344.8	343.4	435.4	-0.4	26.8	26.3	5.6	5.6	7.1
SK	492.2	498.0	476.5	1.2	-4.3	-3.2	40.4	38.7	30.1
FI	1 661.7	1 772.0	1 648.9	6.6	-6.9	-0.8	22.4	25.3	24.8
SE	1 930.8	1 628.0	1 786.6	-15.7	9.7	-7.5	32.1	24.5	31.1
UK	10 836.0	10 575.0	9 384.5	-2.4	-11.3	-13.4	59.6	57.7	52.6
NO	1 632.9	1 788.3	1 753.5	9.5	-1.9	7.4	28.2	33.9	35.2
CH	:	2 845.3	:	:	:	:	:	45.4	:
<b>EU.15</b>	128 663.6	131 949.0	134 371.2	2.6	1.8	4.4	25.5	26.9	28.1
<b>NMS-12</b>	16 734.8	17 503.7	17 513.8	4.6	0.1	4.7	5.8	6.0	6.9

Source: FSS (ef\_ov\_kvaesu)

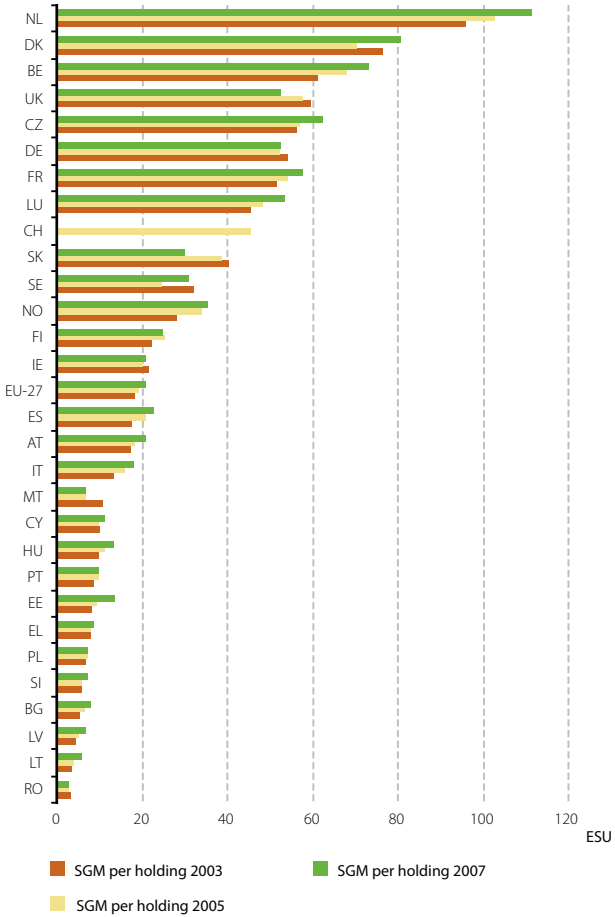
\* Of holdings with at least 1 ESU.

In spite of the general reduction of the crop area and of live-stock, from 2003 to 2007, the total Standard Gross Margin has increased from 145 million to almost 152 million ESU (174 000 to 182 400 million €). France, Germany and Italy combined represent almost half (47 % in 2007) of the total SGM of the EU-27, and this percentage has been stable since 2003. On average the European agricultural holding has raised from 18.3 ESU (21 960 €) in 2003, to 20.8 ESU (24 960€) in 2007.

The change in SGM is very diverse within the countries. There are 16 EU countries with a positive evolution in which the SGM has increased from 2003 to 2007. Among these countries 9 belong to the new MS. The Baltic countries have had particularly outstanding increases: Lithuania (47.7 %), Estonia (41.0 %) and Latvia (36.5 %). On the other side, Malta (- 34.4 %), Romania (- 32.5 %), Portugal (- 22.7 %), United Kingdom (- 13.4 %), Germany (- 12.9 %) and Ireland (- 10.6 %) have all had a decrease of over 10 %.

In what concerns the average SGM per holding, there is also considerable heterogeneity amongst the countries. In 2007 the average SGM per holding in Romania was 3 ESU (3600 €) while in the Netherlands it was 111.3 ESU (133 560 €). The analysis of the change in the average SGM per holding, between 2003 and 2007, showed that 20 of the EU MS and Norway have had an increase.

**Figure 1.1.8:** Average Standard Gross Margin (in ESU)\* per holding 2003, 2005 and 2007



Source: FSS (ef\_ov\_kvaaesu)

\* Of holdings with at least 1 ESU.

## 1.2 Labour Force

Table 1.2.1: Farm labour force (family / non-family)\*, 2003, 2005 and 2007

	Persons regularly employed (1 000 persons)		Labour Force (1 000 AWU)		Family labour force (% AWU)		Non family labour force (% AWU)	
	2003	2005	2003	2005	2003	2005	2003	2005
<b>EU-27</b>	18 211	17 970	10 200	9 787	76.5	76.1	23.5	23.9
BE	97	93	71	69	81.8	80.3	18.2	19.7
BG	411	316	311	246	74.8	68.2	25.2	31.8
CZ	169	159	154	142	17.6	20.0	82.4	80.0
DK	94	97	61	60	65.5	63.1	34.5	36.9
DE	978	940	677	635	72.0	69.5	28.0	30.5
EE	49	48	28	28	50.7	52.6	49.3	47.4
IE	241	240	157	148	92.8	92.9	7.2	7.1
EL	1 263	1 297	584	576	80.4	81.6	19.6	18.4
ES	2 054	1 991	946	949	63.9	64.2	36.1	35.8
FR	1 183	1 092	901	844	51.8	49.0	48.2	51.0
IT	2 918	2 747	1 319	1 272	82.3	80.7	17.7	19.3
KY	59	59	28	26	72.5	71.4	27.5	28.6
LV	129	117	91	82	81.4	80.2	18.6	19.8
LT	218	312	121	153	78.0	82.2	22.0	17.8
								24.1



	Persons regularly employed (1 000 persons)		Labour Force (1 000 AWU)		Family labour force (% AWU)		Non family labour force (% AWU)					
	2003	2005	2007	2003	2005	2007	2003	2005	2007			
LU	5	6	5	4	4	4	84.4	83.5	84.6	15.6	16.5	15.4
HU	431	416	375	255	231	209	58.8	60.2	57.9	41.2	39.8	42.1
MT	13	14	13	4	4	4	87.9	90.2	87.1	12.1	9.8	12.9
NL	261	237	224	186	174	165	63.1	63.1	60.8	36.9	36.9	39.2
AT	377	371	354	162	152	148	91.5	90.4	88.8	8.5	9.6	11.2
PL	2 432	2 735	2 830	1 683	1 727	1 738	96.7	93.1	93.3	3.3	6.9	6.7
PT	704	584	481	383	317	267	79.6	79.3	78.0	20.4	20.7	22.0
RO	3 054	3 071	1 932	1 437	1 355	966	83.6	87.1	85.9	16.4	12.9	14.1
SI	176	171	170	84	83	75	91.6	90.8	92.3	8.4	9.2	7.7
SK	101	86	88	81	67	64	13.9	15.6	20.3	86.1	84.4	79.7
FI	175	153	141	97	83	72	83.8	84.2	82.8	16.2	15.8	17.2
SE	131	139	119	67	67	57	72.6	73.8	73.3	27.4	26.2	26.7
UK	487	478	456	308	292	286	67.3	67.2	65.7	32.7	32.8	34.3
NO	170	152	143	64	59	56	83.5	82.8	80.0	16.5	17.2	20.0

Source: FSS (ef\_ov\_lfft)

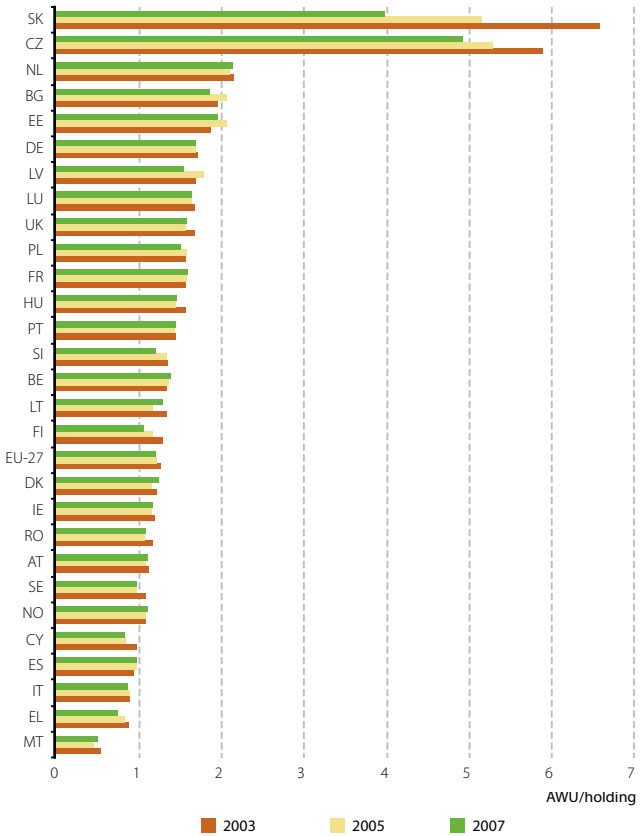
\* Of holdings with at least 1 ESU.

In what regards the labour force, the FSS results for the EU-27 in 2007 show that 16.4 million persons worked regularly on the 7.3 million agricultural holdings of at least 1 ESU. There has been a clear reduction in the number of persons working in agriculture from 2003 to 2007(- 11.8 %).

Farm work (including work by the non-regular labour force) in 2007 represented 9.0 million AWUs, i.e. the equivalent of 9 million people working full-time.

75.5 % of the AWU on the holdings came from the family labour force. In all the countries, with the exception of Malta (where the AWU was the same) and Poland (with a 3.3 % increase), there was a decrease in the AWU from 2003 to 2007. The family labour force became more significant in the Czech Republic and in Slovakia (again due to the privatisation in agriculture structure), contrary to the situation in Bulgaria, Austria and Poland where the share of non-family labour force has increased from 2003 to 2007.

**Figure 1.2.1: Direct labour force per holding (AWU)\*, 2003, 2005 and 2007**



Source: FSS (ef\_ov\_lfft)

\* Of holdings with at least 1 ESU.

**Table 1.2.2:** Labour force per Holding and key variables by labour force, 2007

	Labour force per holding (AWU / holding)	Utilised agriculture area per labour force (ha UAA / AWU)	Livestock units per labour force (LSU / AWU)	Standard gross margin per labour force (SGM / AWU)
<b>EU-27</b>	1.2	17.9	14.8	16.9
BE	1.4	21.2	58.5	52.1
BG	1.9	13.0	4.2	4.2
CZ	5.0	27.1	15.9	12.6
DK	1.3	47.7	82.2	64.1
DE	1.7	28.1	29.9	30.5
EE	2.0	33.6	12.2	6.8
IE	1.2	28.6	42.0	17.7
EL	0.8	7.3	4.8	11.1
ES	1.0	25.6	15.4	23.1
FR	1.6	34.5	28.3	35.6
IT	0.9	10.2	8.1	20.4
CY	0.8	5.8	10.3	13.2
LV	1.6	20.4	6.6	4.3
LT	1.3	19.2	8.1	4.5
LU	1.7	35.1	43.3	32.1
HU	1.5	19.4	10.1	9.0
MT	0.5	2.2	12.2	12.9
NL	2.2	11.6	38.9	51.7
AT	1.1	17.3	16.6	18.6
PL	1.5	8.0	6.2	4.7
PT	1.5	12.5	7.5	6.6
RO	1.1	9.8	4.3	2.7
SI	1.2	6.2	7.2	5.8
SK	4.0	29.7	11.1	7.5
FI	1.1	31.7	16.0	22.9
SE	1.0	52.4	30.5	31.3
UK	1.6	50.1	48.6	32.8
NO	1.1	18.4	22.6	31.2

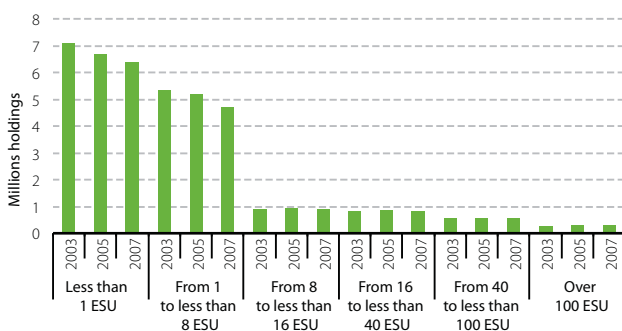
Source: FSS ([ef\\_ov\\_lfft](#))

The results of the Farm Structure Survey 2007 for the EU-27 show that on average each farm employed 1.2 AWU. This value varied from 0.5 AWU per holding in Malta, to 5 AWU per holding in the Czech Republic. For each Annual Working Unit there is on average 17.9 ha of UAA, 14.8 LSU and 16.9 ECU (20 280 €) of SGM. Again all these indicators have high variances between the countries, as shown in table 1.2.2.

### 1.3 Small Holdings

Until now this chapter has only been focusing on the agricultural holdings with a SGM of over 1 ESU (1200 €). In this sub-chapter the analysis will be done using the total number of holdings included in the three last FSS, with a focus on the importance of the small holdings (holdings with a SGM under 1 ESU). Although in 2007 they only accounted for 7 % of the UAA, 2.5 % of the total LSU and 1.6 % of the SGM of EU-27, they cannot be overlooked when investigating the social structure of European agriculture, since they account for 47 % of the holdings, 39 % of the regular farm workers and 23 % of the total farm work (AWU).

**Figure 1.3.1:** Holdings by Economic size of the holding, EU-27, 2003, 2005 and 2007



Source: FSS ([ef\\_ov\\_kvaesu](#))

**Table 1.3.1:** Holdings by Economic size of the holding, 2003, 2005 and 2007  
(1 000 holdings)

	Less than 1 ESU			From 1 to less than 16 ESU			From 16 to less than 100 ESU			Over 100 ESU		
	2003	2005	2007	2003	2005	2007	2003	2005	2007	2003	2005	2007
<b>EU-27</b>	7 089	6 659.3	6 389.7	6 267.7	6 118.1	5 621.5	1 378.8	1 414	1 381.6	285.88	299.66	316.24
<b>% EU-27</b>	47.19	45.95	46.61	41.72	42.22	41.01	9.18	9.76	10.08	1.90	2.07	2.31
BE	2.27	1.91	1.87	16.62	14.91	13.5	25.39	22.83	20.28	10.66	11.89	12.36
BG	508.22	416.55	375.34	151.8	112.78	111.28	3.96	3.93	4.86	1.57	1.35	1.65
CZ	19.82	15.5	13.47	19.19	19.61	18.37	4.35	4.74	5.01	2.41	2.4	2.55
DK	0.01	0.33	0.26	18.1	21.76	19.03	18.62	18.67	15.14	11.88	10.92	10.19
DE	22.13	18.81	21.96	174.04	168.47	161.38	166.54	157	142.83	49.59	45.6	44.31
EE	22.31	14.36	10.59	13.57	12.29	11.24	0.75	0.87	1.18	0.23	0.23	0.33
IE	6.83	7.2	10.35	83.56	82.49	78.22	42.43	40.66	37.02	2.8	2.32	2.65
EL	169.58	155.45	149.08	578.7	594.46	618.8	75.24	82.57	90.33	0.94	1.11	1.94
ES	162.28	120.44	104.4	739.87	689.29	658.31	214.11	239.09	246.91	24.47	30.6	34.29
FR	47.65	39.77	36.27	204.43	183.08	164.69	284.73	264.47	243.23	77.19	79.82	83.16
IT	535.71	347.18	296.15	1 185.3	1 112.3	1 104	215	239.2	239.36	27.81	29.85	39.89
CY	16.79	15.26	12.01	24.79	26.34	24.39	3.28	3.21	3.27	0.34	0.36	0.45

	Less than 1 ESU		From 1 to less than 16 ESU		From 16 to less than 100 ESU		Over 100 ESU					
	2003	2005	2007	2003	2005	2007	2003	2005	2007			
LV	73.91	83.79	63.38	51.24	43.12	41.67	1.28	1.51	2.36	0.18	0.25	0.34
LT	182.75	124.33	145.02	87.31	125.84	81.21	1.74	2.37	3.51	0.31	0.41	0.53
LU	0.15	0.09	0.07	0.75	0.81	0.71	1.36	1.28	1.21	0.19	0.27	0.31
HU	612.37	557.62	485.49	149.23	143.19	125.38	10.01	11.97	13.22	1.77	2.01	2.23
MT	3.7	2.86	3.4	6.11	7.4	6.86	1.11	0.78	0.73	0.07	0.03	0.03
NL	0.14	:	:	19.58	18.84	17.5	38.23	36.28	32.23	27.55	35.78	35.55
AT	33.14	33.64	34.53	91.53	87.86	80.13	47.77	47.35	47.58	1.33	1.79	3.18
PL	1 115.9	1 393.8	1 262.8	983.9	993.21	1 029.1	69.06	85.68	94.87	3.35	3.82	4.15
PT	97.69	104.91	93.48	235.32	194.9	161.18	23.79	21.36	18.21	2.48	2.75	2.21
RO	3 273.1	3 020.2	3 064.7	1 198.3	1 223.3	855.63	10.54	10.69	9.3	2.96	1.97	1.75
SI	15.73	16.29	13.83	58.09	57.5	56.9	3.22	3.3	4.35	0.11	0.08	0.26
SK	59.57	55.62	53.15	9.89	10.47	13.39	1.28	1.39	1.48	1	1.01	0.97
FI	0.79	0.59	1.66	41.53	38.03	37.68	31.24	29.99	26.84	1.39	2.01	2.05
SE	7.66	9.49	15.08	37.73	46.55	38.54	18.25	16.78	15.57	4.25	2.99	3.42
UK	98.81	103.38	121.32	87.21	89.3	92.31	65.56	66.03	60.71	29.05	28.04	25.49
NO	0.27	0.18	0.1	28.43	23.6	22.45	27.75	26.35	24.16	1.78	2.87	3.23

Source: FSS (ef\_ov\_kvaaesu)

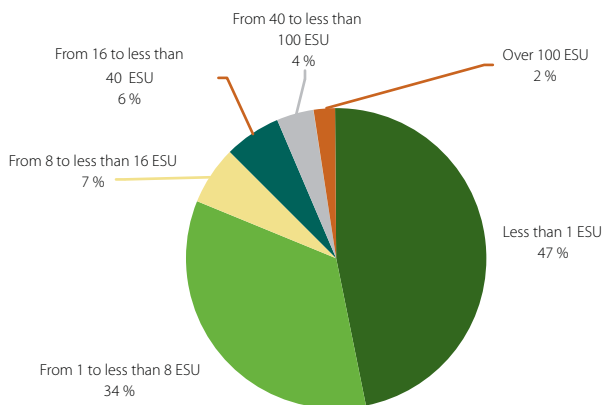


The total number of holdings sums up to slightly over 13.7 million when we include all the holdings obtained in FSS 2007. Close to half (6.3 million) of the holdings are under the 1 ESU threshold. In the EU-27 there has been a gradual decrease (– 10 % in EU 27) of the number of holdings with less than 1 ESU and an increase (10 % in EU-27) in the higher economic class (over 100 ESU). This trend is contradicted in some MS where there is an opposite development, as is the case of the United Kingdom, Ireland, Sweden and Denmark. These countries have seen the number of their small farms increase while the number of the larger ones has decreased.

In 7 of the 12 new MS (Romania, Poland, Hungary, Slovakia, Bulgaria, Latvia and Lithuania) the farms with less than 1 ESU represented more than half of the holdings counted in the FSS 2007. In 2007 the Romanian farms under 1ESU represented 23 % of the total number of the EU agricultural holdings. The tendency in the Romanian farm structure is the reduction of the number of the farms in all of the economic size categories, but overall the percentage of the smaller farms in the total number of farms has grown from 73 to 78 % from 2003 to 2007.

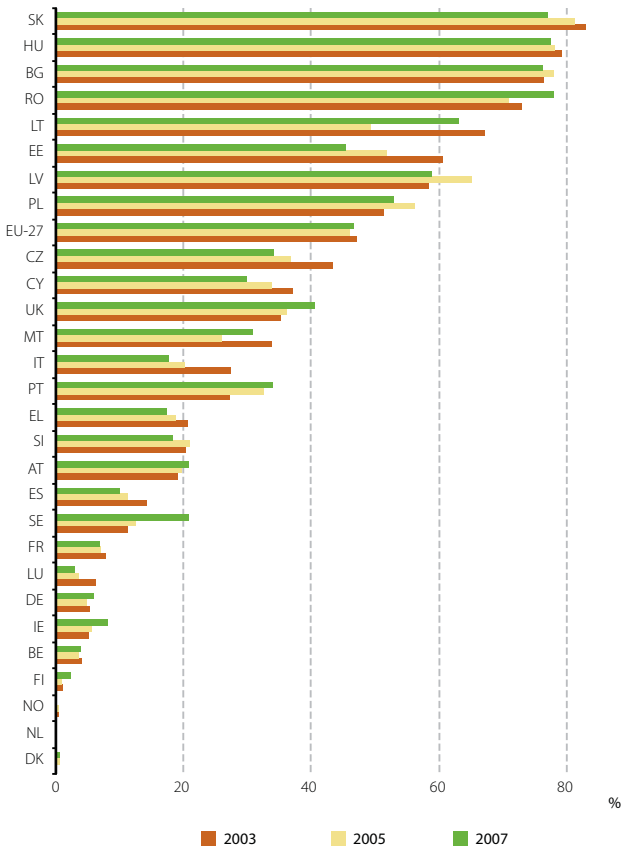
Since 2005, the Netherlands do not include farms with less than 1 ESU in the FSS, because they do not represent more than 1 % of the economic agricultural activity, and therefore can be excluded from the universe. In other MS, such as Luxembourg, Denmark, Norway and Finland these small farms have very little significance, being always under 5 % of the total farms and summing up to less than 4000 holdings altogether.

**Figure 1.3.2:** Holdings by economic size of the holding, % EU-27, 2007



Source: FSS (ef\_ov\_kvaesu)

**Figure 1.3.3:** Share of holdings with less than 1 ESU in total number of holdings, by country, 2003, 2005 and 2007



Source: FSS (ef\_ov\_kvaaesu)

**Table 1.3.2:** Utilised agriculture area (UAA) in holdings with less than 1 ESU, 2003, 2005 and 2007

	UAA of holdings with <1 ESU (ha)			UAA of holdings with <1 ESU (% of the total UAA)			UAA per holding (ha)		
	2003	2005	2007	2003	2005	2007	2003	2005	2007
<b>EU-27</b>	11 161 730	10 256 590	11 657 660	6.46	5.96	6.76	1.57	1.54	1.82
BE	2 130	1 850	1 830	0.15	0.13	0.13	0.94	0.97	0.98
BG	275 130	241 820	183 690	9.47	8.86	6.02	0.54	0.58	0.49
CZ	37 310	34 860	28 370	1.03	0.98	0.81	1.88	2.25	2.11
DK	0	3 330	2 310	0.00	0.12	0.09	0.00	10.09	8.88
DE	72 440	59 910	70 990	0.43	0.35	0.42	3.27	3.19	3.23
EE	92 530	65 110	59 030	11.63	7.85	6.51	4.15	4.53	5.57
IE	59 210	58 970	120 220	1.38	1.40	2.90	8.67	8.19	11.62
EL	90 830	77 950	80 710	2.29	1.96	1.98	0.54	0.50	0.54
ES	2 446 590	1 114 110	1 018 200	9.72	4.48	4.09	15.08	9.25	9.75
FR	110 070	100 540	106 100	0.40	0.36	0.39	2.31	2.53	2.93
IT	438 450	298 160	292 870	3.34	2.35	2.30	0.82	0.86	0.99
CY	7 730	9 410	7 510	4.94	6.21	5.14	0.46	0.62	0.63
LV	287 860	400 130	345 040	19.33	23.51	19.45	3.89	4.78	5.44
LT	664 470	453 870	514 830	26.68	16.26	19.44	3.64	3.65	3.55
LU	670	400	660	0.52	0.31	0.50	4.47	4.44	9.43
HU	271 430	218 950	174 380	6.24	5.13	4.12	0.44	0.39	0.36
MT	1 290	1 180	1 380	11.96	11.51	13.36	0.35	0.41	0.41
NL	220	:	:	0.01	:	:	1.57	:	:
AT	549 230	576 010	613 340	16.86	17.64	19.23	16.57	17.12	17.76
PL	1 536 900	1 622 600	1 621 610	10.65	11.00	10.48	1.38	1.16	1.28
PT	154 970	177 330	152 440	4.16	4.82	4.39	1.59	1.69	1.63
RO	3 307 200	3 569 630	4 254 930	23.74	25.67	30.94	1.01	1.18	1.39
SI	37 710	37 360	27 420	7.75	7.70	5.61	2.40	2.29	1.98
SK	42 550	39 140	47 310	1.99	2.08	2.44	0.71	0.70	0.89
FI	2 270	2 060	6 510	0.10	0.09	0.28	2.87	3.49	3.92
SE	61 160	96 590	129 390	1.96	3.03	4.15	7.98	10.18	8.58
UK	611 380	995 320	1 796 590	3.80	6.24	11.14	6.19	9.63	14.81
NO	420	370	230	0.04	0.04	0.02	1.56	2.06	2.30

Source: FSS (ef\_ov\_kvaesu)

In the EU-27, the total UAA of the holdings with less than 1 ESU reaches 11.6 million ha in 2007, which represents 6.8 % of the total UAA. This percentage in 2007 varies from close to zero percent (0.02 %) in Norway to up to 31 % in Romania. In addition to Romania there are six other MS where the percentage of UAA covered by the small farms is higher than 10 %, (Latvia, Lithuania, Austria, Malta, United Kingdom and Poland). The old MS in this group owe their high percentage to the extensive grassland farms, where in general there is no livestock (they therefore contribute to the structure without having actual production). Both Austria and the United Kingdom also have the highest UAA per holding in the category less than 1 ESU (17.8 and 14.8 ha respectively). The holdings with less than 1 ESU in Bulgaria, Malta and Hungary all have the average UAA per holding below 0.5 ha.

Although the number of farms with less than 1 ESU has decreased from 2003 to 2007, the corresponding UAA has increased, which has boosted the average UAA per holding of this type of farms.

**Table 1.3.3: Livestock units (LSU) in holdings with less than 1 ESU, 2003, 2005 and 2007**

	LSU (number)			% of the total LSU (%)			LSU per holdings (number/holding)		
	2003	2005	2007	2003	2005	2007	2003	2005	2007
<b>EU-27</b>	4 637 880	3 570 360	3 423 620	3.29	2.60	2.52	0.65	0.54	0.54
BE	3 100	1 680	1 850	0.08	0.04	0.05	1.37	0.88	0.99
BG	636 120	455 910	326 030	39.07	34.36	26.17	1.25	1.09	0.87
CZ	18 250	14 940	12 430	0.80	0.72	0.61	0.92	0.96	0.92
DK	0	330	390	0.00	0.01	0.01	0.00	1.00	1.50
DE	37 810	27 500	33 750	0.20	0.15	0.19	1.71	1.46	1.54
EE	14 080	9 480	5 060	4.32	3.00	1.62	0.63	0.66	0.48
IE	14 700	16 930	18 730	0.23	0.27	0.32	2.15	2.35	1.81
EL	26 430	16 950	14 320	1.01	0.68	0.55	0.16	0.11	0.10
ES	67 380	54 610	47 490	0.48	0.38	0.33	0.42	0.45	0.45
FR	52 560	46 990	43 320	0.23	0.21	0.19	1.10	1.18	1.19
IT	42 770	25 240	14 830	0.43	0.26	0.15	0.08	0.07	0.05
CY	1 340	850	790	0.52	0.35	0.32	0.08	0.06	0.07
LV	48 520	43 570	29 440	10.55	9.55	6.03	0.66	0.52	0.46
LT	303 710	167 580	127 360	25.86	12.99	12.35	1.66	1.35	0.88
LU	300	100	80	0.19	0.06	0.05	2.00	1.11	1.14
HU	427 000	380 160	309 410	16.00	15.19	12.84	0.70	0.68	0.64
MT	200	480	400	0.41	1.04	0.81	0.05	0.17	0.12
NL	0	:	:	0.00	:	:	0.00	:	:
AT	11 910	16 310	14 160	0.47	0.66	0.57	0.36	0.48	0.41
PL	422 850	417 200	375 550	3.79	3.95	3.38	0.38	0.30	0.30
PT	47 250	47 620	43 880	2.01	2.30	2.16	0.48	0.45	0.47
RO	2 309 340	1 670 610	1 844 760	31.86	25.30	30.53	0.71	0.55	0.60
SI	19 010	18 110	13 250	3.25	3.46	2.39	1.21	1.11	0.96
SK	51 710	43 710	39 870	5.42	5.58	5.34	0.87	0.79	0.75
FI	260	160	310	0.02	0.01	0.03	0.33	0.27	0.19
SE	19 430	36 880	44 480	1.06	2.01	2.49	2.54	3.89	2.95
UK	61 850	56 460	61 680	0.43	0.39	0.44	0.63	0.55	0.51
NO	290	400	340	0.02	0.03	0.03	1.07	2.22	3.40

Source: FSS (ef\_ov\_kvaesu)

In what concerns the livestock figures, the holdings with less than 1 ESU follow the general tendency of decrease in the number of LSU. In fact from 2003 to 2007, the total LSU on holdings with less than 1 ESU fell by 26 %. Although presenting a clear reduction of the number of LSU since 2003, the small holdings in Romania, Bulgaria and Hungary present, in 2007, the highest EU-27 values in the percentage of their total national LSU (31 %, 26 % and 13 % respectively). Unlike the UAA per holding, which has increased in the small farms, the LSU per holding has dropped in the EU 27 average between 2003 and 2007.

**Table 1.3.4:** Standard gross margin (SGM) in holdings with less than 1 ESU, 2003, 2005 and 2007

	SGM of holdings < 1ESU (ESU)			SGM of holdings < 1ESU (% in total SGM)			SGM per holding < 1ESU (ESU)		
	2003	2005	2007	2003	2005	2007	2003	2005	2007
<b>EU-27</b>	2 848 740	2 525 140	2 490 920	1.92	1.66	1.61	0.40	0.38	0.39
BE	1 290	1 110	1 020	0.04	0.03	0.03	0.57	0.58	0.55
BG	217 930	155 650	126 020	20.25	16.72	11.87	0.43	0.37	0.34
CZ	9 300	7 570	6 860	0.63	0.49	0.42	0.47	0.49	0.51
DK	0	70	90	0.00	0.00	0.00	0.00	0.21	0.35
DE	15 370	13 090	15 410	0.07	0.07	0.08	0.69	0.70	0.70
EE	12 110	7 950	5 500	8.99	5.87	3.08	0.54	0.55	0.52
IE	3 380	3 790	4 340	0.12	0.15	0.17	0.49	0.53	0.42
EL	93 230	89 570	87 610	1.80	1.62	1.42	0.55	0.58	0.59
ES	87 570	64 680	53 450	0.51	0.32	0.25	0.54	0.54	0.51
FR	28 070	23 630	21 270	0.10	0.08	0.08	0.59	0.59	0.59
IT	266 670	183 580	165 550	1.37	0.83	0.66	0.50	0.53	0.56
CY	8 060	7 480	5 980	2.73	2.50	1.86	0.48	0.49	0.50
LV	38 040	37 260	26 890	14.58	13.79	8.12	0.51	0.44	0.42
LT	99 390	65 420	68 970	22.74	11.85	12.15	0.54	0.53	0.48
LU	80	50	30	0.08	0.04	0.03	0.53	0.56	0.43
HU	192 540	183 820	155 090	10.96	9.45	7.63	0.31	0.33	0.32
MT	1 250	1 170	1 460	1.55	2.00	2.72	0.34	0.41	0.43
NL	40	:	:	0.00	:	:	0.29	:	:
AT	10 350	9 730	9 350	0.43	0.39	0.34	0.31	0.29	0.27
PL	391 710	431 890	441 780	5.22	5.23	5.09	0.35	0.31	0.35
PT	54 910	57 740	50 880	2.36	2.66	2.82	0.56	0.55	0.54
RO	1 264 800	1 128 720	1 190 930	24.74	24.02	31.43	0.39	0.37	0.39
SI	10 240	10 510	8 810	2.88	2.97	1.98	0.65	0.65	0.64
SK	23 290	21 200	20 340	4.52	4.08	4.09	0.39	0.38	0.38
FI	580	410	970	0.03	0.02	0.06	0.73	0.69	0.58
SE	3 710	4 030	6 800	0.19	0.25	0.38	0.48	0.42	0.45
UK	14 830	15 020	15 520	0.14	0.14	0.17	0.15	0.15	0.13
NO	180	110	50	0.01	0.01	0.00	0.67	0.61	0.50

Source: FSS (ef\_ov\_kvaaesu)



The economic importance of the holding with less than 1 ESU is very small compared with the SGM of the total farms (1.61 %). The percentage of the small holdings' SGM in the total SGM of the EU-27 has decreased from 2003 to 2007. The figures for Romania continue to stand out from the rest of the countries; these semi-subsistence or subsistence farms represent almost one third of the SGM of Romanian agriculture, according to FSS 2007 results. In Bulgaria and Lithuania the share of the small farms' SGM is around 12 %, in all the other countries this value is under 10 %. The SGM per holding in the farms with less than 1 ESU has decreased between 2003 and 2007. The average EU-27 small farm has a SGM value of 0.39 ESU (468 €), ranging from 0.13 ESU (156 €) in the United Kingdom to 0.70 ESU (840 €) in Germany.

**Table 1.3.5:** Labour force (AWU) in holdings with less than 1 ESU, 2003, 2005 and 2007

	AWU of holdings < 1 ESU (number)			AWU of holdings < 1 ESU (% in total AWU)			AWU per holding < 1 ESU (number)		
	2003	2005	2007	2003	2005	2007	2003	2005	2007
<b>EU-27</b>	3 151 600	2 928 670	2 708 550	23.60	23.03	23.16	0.44	0.44	0.42
BE	960	800	890	1.32	1.15	1.36	0.42	0.42	0.48
BG	480 260	378 260	269 680	60.67	60.55	54.94	0.94	0.91	0.72
CZ	12 570	9 850	8 750	7.55	6.48	6.37	0.63	0.64	0.65
DK	10	100	120	0.02	0.17	0.21	1.00	0.30	0.46
DE	11 380	8 530	9 270	1.65	1.33	1.52	0.51	0.45	0.42
EE	9 930	8 840	6 830	26.47	23.96	21.30	0.45	0.62	0.64
IE	4 380	4 390	6 960	2.72	2.88	4.72	0.64	0.61	0.67
EL	30 080	24 500	20 720	4.90	4.08	3.64	0.18	0.16	0.14
ES	51 640	43 410	36 000	5.18	4.37	3.72	0.32	0.36	0.34
FR	12 690	11 060	10 380	1.39	1.29	1.29	0.27	0.28	0.29
IT	157 390	102 410	86 650	10.66	7.45	6.65	0.29	0.29	0.29
KY	3 770	2 770	2 120	11.71	9.67	8.18	0.22	0.18	0.18
LV	49 950	55 490	34 840	35.46	40.43	33.25	0.68	0.66	0.55
LT	101 410	68 870	68 910	45.65	31.09	38.25	0.55	0.55	0.48
LU	60	30	40	1.52	0.75	1.07	0.40	0.33	0.57
HU	271 010	231 520	194 670	51.54	50.03	48.25	0.44	0.42	0.40
MT	460	200	190	10.22	4.93	4.50	0.12	0.07	0.06
NL	490	:	:	0.26	:	:	3.50	:	:
AT	13 890	14 160	14 860	7.92	8.51	9.10	0.42	0.42	0.43
PL	508 200	546 570	524 710	23.20	24.04	23.18	0.46	0.39	0.42
PT	71 930	80 860	71 480	15.80	20.31	21.15	0.74	0.77	0.76
RO	1 262 050	1 240 530	1 239 730	46.75	47.79	56.22	0.39	0.41	0.40
SI	11 050	12 090	8 700	11.59	12.73	10.39	0.70	0.74	0.63
SK	38 090	32 120	27 750	32.11	32.51	30.40	0.64	0.58	0.52
FI	200	180	380	0.21	0.22	0.52	0.25	0.31	0.23
SE	3 530	4 410	8 400	5.00	6.20	12.83	0.46	0.46	0.56
UK	44 220	46 720	55 520	12.55	13.78	16.26	0.45	0.45	0.46
NO	60	50	100	0.09	0.08	0.18	0.22	0.28	1.00

Source: FSS (ef\_ov\_kvaesu)

According to the FSS 2007 figures, the holdings with less than 1 ESU represented 23 % of the European agricultural labour force, *i.e.* 2.7 million AWU. Seven new MS are Above the EU-27 average, of which Romania and Bulgaria (with 56 % and 55 % respectively). For EU-27 the percentage of AWU from small farms has been stable throughout the three surveys (2003, 2005 and 2007).

The labour intensity of the small farms has also been stable at EU-27 level, registering only a slight decrease from 0.44 AWU in 2003 and 2005 to 0.42 AWU in 2007. But at national level there are many differences in the number of AWU per small farm and also in the changes over time. The AWU per holding varied 0.06 AWU in Malta to 1 AWU in Norway in 2007. Small farms occupy more than half of a full time worker during a full year in 11 countries.

**Table 1.3.6:** Farm labour force in holdings with less than 1 ESU (persons), 2003, 2005 and 2007

	Regular Labour force in holdings < 1 ESU (number of persons)			Regular Labour force in holdings < 1 ESU (% in total farm labour force)			Number of persons per holding < 1 ESU		
	2003	2005	2007	2003	2005	2007	2003	2005	2007
<b>EU-27</b>	12 305 010	11 740 730	10 290 580	40.3	39.5	38.6	1.7	1.8	1.6
BE	2 780	2 390	2 410	2.8	2.5	2.7	1.2	1.3	1.3
BG	940 050	762 100	644 160	69.6	70.7	67.8	1.8	1.8	1.7
CZ	30 060	24 450	27 640	15.1	13.3	14.4	1.5	1.6	2.1
DK	10	400	380	0.0	0.4	0.4	1.0	1.2	1.5
DE	35 950	30 140	34 080	3.5	3.1	3.7	1.6	1.6	1.6
EE	44 330	32 930	22 720	47.7	40.6	34.7	2.0	2.3	2.1
IE	9 390	9 860	15 050	3.7	3.9	6.2	1.4	1.4	1.5
EL	245 110	229 750	207 340	16.3	15.0	13.7	1.4	1.5	1.4
ES	268 810	194 470	167 100	11.6	8.9	7.9	1.7	1.6	1.6
FR	60 040	50 510	45 840	4.8	4.4	4.3	1.3	1.3	1.3
IT	819 600	532 730	447 210	21.9	16.2	14.1	1.5	1.5	1.5
CY	27 460	24 460	21 510	31.8	29.2	25.5	1.6	1.6	1.8
LV	124 090	143 750	105 630	49.0	55.1	48.5	1.7	1.7	1.7
LT	322 550	225 300	261 620	59.6	41.9	54.4	1.8	1.8	1.8
LU	200	120	100	3.5	2.1	1.9	1.3	1.3	1.4
HU	1 041 990	1 006 380	885 990	70.7	70.7	70.3	1.7	1.8	1.8
MT	5 200	3 900	4 240	28.4	21.3	24.1	1.4	1.4	1.2
NL	630	:	:	0.2	:	:	4.5	:	:
AT	63 790	67 670	66 340	14.5	15.4	15.8	1.9	2.0	1.9
PL	1 872 640	2 376 870	2 211 900	43.5	46.5	43.9	1.7	1.7	1.8
PT	207 420	223 090	200 850	22.8	27.6	29.4	2.1	2.1	2.1
RO	5 829 640	5 443 330	4 535 420	65.6	63.9	70.1	1.8	1.8	1.5
SI	35 470	36 430	30 590	16.8	17.6	15.3	2.3	2.2	2.2
SK	145 920	133 360	123 910	59.1	60.7	58.4	2.4	2.4	2.3
FI	820	750	2 150	0.5	0.5	1.5	1.0	1.3	1.3
SE	13 280	15 530	31 390	9.2	10.1	20.9	1.7	1.6	2.1
UK	157 780	170 060	195 010	24.5	26.2	30.0	1.6	1.6	1.6
NO	430	260	220	0.3	0.2	0.2	1.6	1.4	2.2

Source: FSS

When analysing the number of persons that work on small farms the situation changes and the values indicate a stronger impact of these holdings in the general agriculture structure of the EU. Close to 40 % of the persons working in the European holdings work in a farm with less than 1 ESU, which in absolute numbers corresponds to over 10 million people. Compared to the figures of the AWU, there has been a stronger tendency for the reduction of the share of persons working on the small farms between 2003 and 2007.

The average number of persons working on farms with less than 1 ESU was 1.6 in 2007. This indicator has shown similar values over the years with exception of the Czech Republic and the Scandinavian countries (Denmark, Norway, Finland and Sweden) where the number of persons per holding in the small farms has increased considerably.

On average, a person working on a small farm in the EU works 26 % of his full time working days, while on the farms with a SGM of at least 1 ESU this percentage is 55 %.

**Table 1.3.7:** Holdings consuming over 50 % of own production, 2005 and 2007

	Total Holdings				Holdings with less than 1 ESU			
	Holdings consuming >50 % of own production (number of holdings)		Holdings consuming >50 % of own production (%)		Holdings consuming >50 % of own production (number)		Holdings consuming >50 % of own production (%)	
	2005	2007	2005	2007	2005	2007	2005	2007
BG	367 910	343 920	68.8	69.7	325 050	306 940	78.0	81.8
CZ	14 000	12 230	33.1	31.0	8 800	7 410	56.8	55.0
EE	17 370	10 630	62.6	45.5	12 300	7 030	85.7	66.4
EL	26 040	86 640	3.1	10.1	24 570	71 770	15.8	48.1
ES	3 970	2 810	0.4	0.3	1 650	1 060	1.4	1.0
IT	535 900	498 560	31.0	29.7	183 890	134 750	53.0	45.5
CY	15 810	15 850	35.0	39.5	8 180	7 960	53.6	66.3
LV	98 420	77 620	76.5	72.0	74 830	56 030	89.3	88.4
LT	129 990	123 900	51.4	53.8	90 980	99 750	73.2	68.8
HU	596 760	522 590	83.5	83.4	509 680	445 870	91.4	91.8
MT	3 910	3 640	35.3	33.0	700	990	24.5	29.1
PL	1 014 950	908 170	41.0	38.0	788 990	685 350	56.6	54.3
PT	29 440	21 830	9.1	7.9	29 440	21 830	28.1	23.4
RO	3 444 760	3 172 280	80.9	80.7	2 590 620	2 621 860	85.8	85.6
SI	52 770	45 570	68.4	60.5	15 810	12 280	97.1	88.8
SK	63 570	64 010	92.8	92.8	55 130	52 590	99.1	98.9
<b>Total</b>	<b>6 415 570</b>	<b>5 910 250</b>	<b>50.9</b>	<b>49.7</b>	<b>4 720 620</b>	<b>4 533 470</b>	<b>73.8</b>	<b>73.3</b>

Source: FSS

In FSS 2005 and 2007 the number of farms producing mainly for own consumption (consuming over 50 % of their production) <sup>(3)</sup> was surveyed in 16 of the 27 EU countries where this characteristic was significant, which includes all the new MS and the old Mediterranean MS (Greece, Italy, Spain and Portugal). With the exception of Malta, the percentage of holdings consuming more than 50 % of their production was higher in the size class under 1 ESU than in the total of the holdings. The figures in table 1.4.7 contribute to point out the farm structure situation and the divergence between the EU-15 and the new MS. The subsistence and semi-subsistence farming is a major component of the agricultural structure of the NMS-12. The FSS has recorded an overall decrease in the total number of these farms (– 8 %) from 2005 to 2007, however, in the farms under 1 ESU this reduction was smaller (– 4 %).

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<sup>(3)</sup> A holding is considered to produce mainly for own consumption if more than 50 % of the value of its final production is consumed by the holder's household. This should not be confused with self-consumption by the agricultural holding, i.e. the use of a product as an input (e.g. fodder for animals).





# II

**Agricultural accounts  
and prices**



## 2 Agricultural accounts and prices

This chapter gives an overview of indicators on agricultural output and income and of agricultural prices in the EU. The data are extracted from Eurostat agricultural statistics collections: economic accounts for agriculture (EAA), agricultural price indices (API) and absolute agricultural prices.

The EAA are a satellite account of the European System of Accounts (ESA 1995). They cover the agricultural products and services produced over the accounting period that are 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 include not only the production of grapes and olives but also the production of wine and olive oil by agricultural producers, as well as information on intra-unit consumption of crop products used in animal feed, output accounted for by own-account production of fixed capital goods and own final consumption of agricultural units. EAA data can be used to calculate income indicators for the agricultural sector.

Agricultural price statistics provide information on trends in producer prices of agricultural products and purchase prices of the goods and services consumed by agriculture in the production process. Data on prices are available for single commodities and for larger aggregates in the form of absolute prices and price indices. Both annual and quarterly time series are published in the free dissemination database on the Eurostat website.

## 2.1 Agricultural income

### *Introduction*

Indicator A is the real net value added at factor cost of agriculture per annual work unit (AWU). The net value added at factor cost (factor income) is calculated by subtracting the consumption of fixed capital from gross value added at basic prices and adding the value of (other) subsidies less taxes on production. The AWU is defined as the work volume corresponding to one full-time worker.

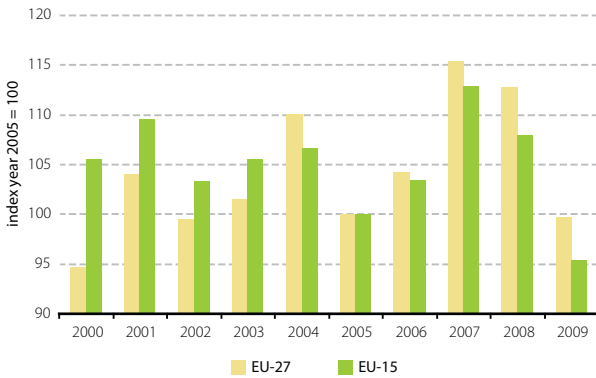
Output of the agricultural industry comprises output from agricultural production and output from non-agricultural secondary activities that are inseparable from the main agricultural activity.

The comparability of data over time is affected by types of subsidies, as product-related subsidies are included in the results in basic prices, while general subsidies are only included in the income. An important shift in types of subsidies were implemented in 2005 and 2006.

The comparability of factor income and indicator A is not affected by these changes.

## Long-term trends

Figure 2.1.1: Agricultural income indicator, 2000–2009



Agricultural income in the EU has gone up and down over the last 10 years, as illustrated by indicator A. While 2007 and 2008 showed significantly higher income than 2005, the result for 2009 was at the same level as in 2005. However, one trend can be deduced from the figures. The average income per work unit has improved more in the new Member States than in the EU-15, also from 2000 to 2005.

For the EU-27, the recent fall brings indicator A down from 112.8 in 2008 (2005 = 100) to 99.7 in 2009. For the EU-15, indicator A fell to 95.4, meaning 4.6 % lower income than in 2005.

Using indicator A, the results for the Member States in 2009 compared to 2005 can be divided into two groups.

The first group contains countries whose agricultural income in real terms in 2009 was above the level recorded for 2005. This group comprises nine Member States in which real agricultural income per labour unit has improved, most markedly in the United Kingdom, Bulgaria, Poland and Slovakia.

The second group contains the other 18 Member States, where agricultural income in 2009 was below the level recorded for 2005. Within this group of countries, the sharpest falls were recorded in Denmark, Ireland, Luxembourg and Italy.

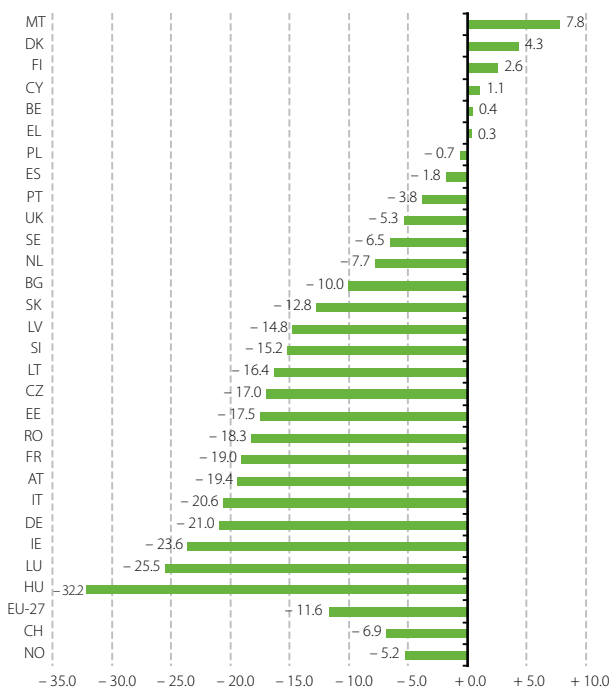
### Recent trends

Indicator A is estimated to have decreased by 11.6 % in the European Union (EU-27) in 2009, following a 1.8 % drop in 2008.

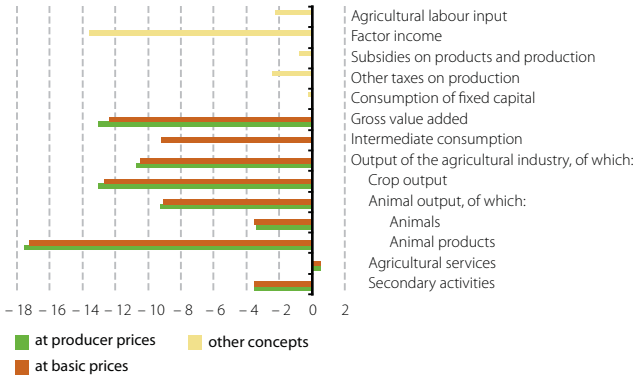
Agricultural income in 2009 fell in all parts of the EU-27, with 21 of the Member States showing lower income per annual work unit. The steepest drops were recorded in Hungary (- 32.2 %), followed by Luxembourg (- 25.5 %), Ireland (- 23.6), Germany (- 21.0 %), Italy (- 20.6 %), Austria (- 19.4 %) and France (- 19.0 %). Among the EFTA countries, Switzerland (- 6.9 %) and Norway (- 5.2 %) also show a decrease in indicator A.

Only six countries posted an increase in income in 2009: Malta (+ 7.8 %), Denmark (+ 4.3 %), Finland (+ 2.6 %), Cyprus (+ 1.1 %), Belgium (+ 0.4 %) and Greece (+ 0.3 %).

**Figure 2.1.2:** Agricultural income (indicator A) in the EU, % 2009/2008



**Figure 2.1.3: Main components of agricultural income, EU-27, % 2009/2008**



From 2008 to 2009 the value of agricultural output in producer prices decreased by 10.7 % in real terms. This fall is due to a decrease in the output values of both crop production (-13.0 %) and animal production (-9.3 %). For crop production, the decrease is explained by a steep fall in average prices (-12.8 %), while volume went down by 0.3 %. For animal production, average producer prices decreased by 8.3 %, and output volume by 1.0 %.

The output value of agricultural services grew by 0.5 % while the value of inseparable non-agricultural secondary activities decreased by 3.5 % compared to 2008.

In 2009 the value of intermediate consumption of goods and services decreased by 9.2 %. This is explained partly by lower volume (-2.7 %), but mainly by a fall in prices (-6.7 %). Steep decreases in prices were observed for feedstuffs (-15.1 %) and energy (-12.3 %).

Consumption of fixed capital ('depreciation') was slightly lower (-0.2 %) than in 2008. The value of overall subsidies (product-specific subsidies and other subsidies on production) decreased by 0.8 %, while taxes fell by 3.7 %.

As a consequence, real agricultural factor income, an indicator A component, decreased by 13.6 % compared to 2008. With the continuous reduction in agricultural labour input (-2.3 %), indicator A fell by 11.6 %.

**Table 2.1.1: Agricultural income indicator A**

	ø 2000–2004	ø 2006–2008	2009
	index year 2005 = 100		
<b>EU-27</b>	102.0	110.8	99.7
<b>EU-15</b>	106.1	108.1	95.4
BE	108.0	114.1	93.0
BG	95.4	115.6	136.9
CZ	74.5	115.0	102.5
DK	102.0	87.8	56.7
DE	94.0	123.6	100.8
EE	59.5	119.4	93.9
IE	84.2	88.6	66.8
EL	109.6	99.6	96.9
ES	112.4	102.3	101.9
FR	108.9	115.5	89.6
IT	115.0	95.4	75.7
CY	100.7	89.5	87.7
LV	60.1	127.1	98.6
LT	64.1	115.3	103.3
LU	102.7	96.7	67.2
HU	75.7	124.3	99.2
MT	100.4	93.0	94.6
NL	110.1	114.1	90.2
AT	99.1	118.0	95.9
PL	72.6	124.0	126.4
PT	100.4	102.7	99.8
RO	116.8	96.1	91.8
SI	75.9	101.7	83.4
SK	91.0	131.5	125.1
FI	89.1	98.0	91.6
SE	97.9	125.4	119.8
UK	93.8	120.5	137.0
NO	121.4	95.6	91.4
CH	100.3	102.5	100.5

Source: Eurostat - Economic accounts for agriculture



**Table 2.1.2:** Agricultural gross value added at producer prices and subsidies

	GVA at producer prices			Overall subsidies		
	2000	2005	2009	2000	2005	2009
	million €					
<b>EU-27</b>	131 213.5	129 433.6	125 408.8	38 633.1	49 336.5	52 997.6
<b>EU-15</b>	116 401.5	111 991.1	108 296.4	37 462.8	43 814.5	44 762.4
BE	2 484.0	2 138.2	1 914.0	351.2	486.2	598.6
BG	1 634.1	1 544.3	1 465.5	5.4	86.7	446.9
CZ	831.4	969.5	629.2	170.1	669.5	1 226.9
DK	2 495.5	2 248.7	1 570.8	788.8	974.3	1 002.3
DE	13 570.7	12 919.7	12 923.9	5 600.7	6 093.0	6 546.0
EE	137.5	196.5	157.0	22.2	89.6	134.8
IE	1 616.7	1 627.2	936.6	1 284.0	2 225.0	1 924.4
EL	6 239.8	6 405.9	5 800.6	2 134.3	2 221.0	3 099.6
ES	19 225.1	20 344.7	21 276.8	4 895.3	6 550.5	7 021.4
FR	23 889.7	21 303.2	20 585.5	8 152.3	9 742.9	9 787.3
IT	24 526.8	24 410.2	22 074.9	4 794.1	4 315.1	4 096.9
CY	324.6	332.3	302.1	3.0	45.5	40.1
LV	182.4	221.9	141.0	15.1	175.1	271.3
LT	394.1	409.5	426.7	17.8	228.4	326.7
LU	102.9	107.2	87.3	48.4	62.0	65.6
HU	1 814.5	1 794.8	1 551.3	172.2	1 087.7	1 162.7
MT	64.5	44.7	52.1	1.0	19.4	17.0
NL	9 052.8	7 751.1	7 396.3	408.4	801.3	842.4
AT	2 126.8	2 201.6	2 338.4	1 409.5	1 725.1	1 672.2
PL	4 597.5	5 160.7	5 651.3	214.4	2 111.4	3 120.0
PT	2 159.9	1 926.7	1 846.1	663.7	1 071.8	891.2
RO	4 121.3	6 003.1	5 998.8	228.3	548.8	712.5
SI	399.4	397.4	344.2	93.9	232.2	265.8
SK	310.7	367.8	393.3	226.8	227.6	510.6
FI	669.7	785.2	699.1	1 967.3	2 095.3	2 155.0
SE	1 093.5	1 118.9	1 200.3	881.9	1 018.0	970.0
UK	7 147.4	6 702.6	7 645.9	4 083.0	4 433.1	4 089.6
NO	980.0	919.5	878.1	1 291.1	1 207.0	1 234.2
CH	3 052.8	2 582.6	2 657.3	1 497.0	1 717.9	1 982.9

Source: Eurostat - Economic accounts for agriculture

In 2009, the gross value added (GVA) at producer prices amounted to €125 billion in the EU-27. About 85 % of this is generated in the 15 old Member States (EU-15), although the share has declined slightly since 2000. Over 60 % of the GVA of agriculture in the EU-15 is produced by France, Italy and Spain.

The value of all agricultural subsidies (product subsidies and other production subsidies) recorded in 2009 amounted to € 53 billion in the EU-27. The share of the new Member States (which joined the EU in 2004 and 2007) in terms of the total value of subsidies paid to agricultural producers increased from 3 % to 15 % between 2000 and 2009.

The type of subsidies has changed over time. In 2000, product subsidies accounted for 69 % of total subsidies, while the corresponding share in 2008 was 15 %.

## 2.2 Final output

**Table 2.2.1:** Output value at producer prices of the agricultural industry

	2000	2005	2009	2000	2009
	million €			% of EU-27	
<b>EU-27</b>	295 330.9	308 681.0	329 390.4	100.0	100.0
<b>EU-15</b>	258 936.0	263 451.9	279 278.9	87.7	84.8
BE	6 844.6	6 540.3	6 864.0	2.3	2.1
BG	3 389.3	3 356.0	3 795.7	1.1	1.2
CZ	2 819.1	3 424.2	3 702.8	1.0	1.1
DK	7 725.3	7 865.5	8 180.4	2.6	2.5
DE	39 203.4	38 946.0	42 923.3	13.3	13.0
EE	363.4	521.3	547.5	0.1	0.2
IE	5 141.7	5 301.2	5 002.4	1.7	1.5
EL	9 849.2	10 539.7	10 332.9	3.3	3.1
ES	32 693.5	35 406.9	37 087.4	11.1	11.3
FR	56 607.1	56 149.0	61 235.7	19.2	18.6
IT	40 995.9	42 169.6	42 465.8	13.9	12.9
CY	579.6	654.1	656.9	0.2	0.2
LV	459.8	693.1	773.8	0.2	0.2
LT	1 140.4	1 433.2	1 706.9	0.4	0.5
LU	237.9	256.0	290.7	0.1	0.1
HU	4 851.4	5 700.7	5 718.9	1.6	1.7
MT	130.4	109.7	122.9	0.0	0.0
NL	19 638.7	20 302.1	22 710.4	6.6	6.9
AT	5 226.3	5 342.7	5 972.1	1.8	1.8
PL	12 406.3	14 120.9	16 441.9	4.2	5.0
PT	5 996.8	6 110.6	6 537.7	2.0	2.0
RO	7 971.5	12 667.1	13 843.7	2.7	4.2
SI	952.4	982.9	945.7	0.3	0.3
SK	1 331.5	1 566.0	1 854.7	0.5	0.6
FI	3 424.4	3 605.8	3 862.4	1.2	1.2
SE	4 392.3	4 282.3	4 399.1	1.5	1.3
UK	20 958.9	20 634.1	21 414.6	7.1	6.5
NO	2 946.8	3 106.3	3 374.7	1.0	1.0
CH	7 067.1	6 627.9	7 039.4	2.4	2.1

Source: Eurostat - Economic accounts for agriculture

**Table 2.2.2:** Main components of output value at producer prices of the agricultural industry

	VOLUME (at producer prices)	VALUE (real, at producer prices)	VALUE (real, at basic prices)	Share in EU-27 overall output value (producer prices, 2008)
	2009 / 2008 (%)			%
Cereals	-5.7	-31.3	-30.3	13.7
Oilseeds	10.8	-16.7	-16.1	2.5
Sugar beet	7.7	7.1	7.7	0.8
Fresh vegetables	2.9	-1.9	-1.9	8.0
Plants and flowers	-2.8	-1.3	-1.3	5.3
Potatoes	2.1	-8.2	-8.3	2.7
Fruits	4.0	-12.6	-11.6	6.6
Wine	0.9	-4.3	-4.3	4.4
Olive oil	-9.3	-24.2	-23.8	1.3
Crop output	-0.3	-13.0	-12.7	53.2
Cattle	-3.0	-4.3	-4.3	7.7
Pigs	0.0	-3.8	-4.2	8.8
Sheep and goats	-5.1	4.0	4.0	1.3
Poultry	0.0	-3.4	-3.5	4.6
Milk	-0.5	-21.0	-20.6	14.1
Eggs	-0.4	3.1	3.2	2.0
Animal output	-1.0	-9.3	-9.1	39.9
Agricultural services	+0.2	+0.5	+0.5	4.1
Secondary activities	-1.2	-3.5	-3.5	2.8

Source: Eurostat - Economic accounts for agriculture

According to the EAA, the output value at producer prices (the producer price excludes subsidies, less taxes on products) of the agricultural industry was €329 billion in 2009 for the EU-27. The new Member States contributed €50 billion (15 %) to this value. With an output value of €61 billion, France is the largest agricultural producer in value terms in the EU-27, followed by Germany, Italy and Spain, which each report an output value of between €37 billion and €42 billion.

The main agricultural output is from crop, amounting to 53.2 % of the total, while the share for animal output was 39.9 % in 2008. The remainder is from agricultural services (4.1 %) and secondary activities (2.8 %). The most important agricultural products are milk (14.1 %) and cereals (13.7 %)

The fall in value of crop production in 2009 was due to the decrease in producer prices (-12.8 %), plus a slight reduction in volume (-0.3 %). As regards the three largest crop products, output volumes went down for cereals (-5.7 %) and up for fresh vegetables (+2.9 %) and fruits (+4.0 %). The sharpest decreases in crop prices were recorded for cereals (-27.1 %), oilseeds (-24.8 %) olive oil (-16.3 %) and fruits (-15.9 %). The only increase in producer prices in 2009 was recorded for plants and flowers (+1.5 %).

The lower value of animal output in 2009 was the result of a small decrease in output volumes (-1.0 %) and a significant drop in producer prices (-8.3 %). The steep fall in the real value of milk production was driven by a drop in prices (-20.6 %), while volume remained nearly stable (-0.5 %). Volume of pig production remained stable while prices went down by 3.8 %. Cattle production volumes fell (-3.0 %), and at the same time, producer prices decreased by 1.2 %.

Please note that the concept of producer prices in the EAA is somewhat different from agricultural price statistics (API). The price indices in EAA relate to the previous year, while API is based on the weighting structure of 2005. There are also differences in the values taken into account in the weighting scheme and the reference period.

## 2.3 Inputs

**Table 2.3.1:** Intermediate consumption value by crop and animal production

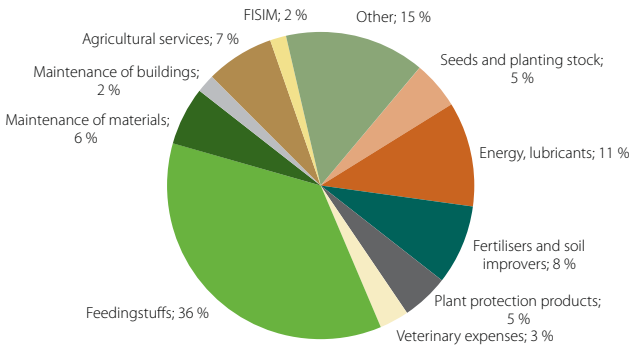
	Share of product specific inputs in			
	crop production <sup>1</sup>		animal production <sup>2</sup>	
	2000	2009	2000	2009
	%			
<b>EU-27</b>	18.7	22.1	53.9	59.5
<b>EU-15</b>	18.9	21.6	52.8	59.5
BE	22.6	28.9	63.4	68.4
BG	:	21.8	:	59.4
CZ	18.8	31.8	82.7	78.3
DK	21.3	30.5	56.0	61.1
DE	21.7	24.5	59.4	64.1
EE	10.7	26.2	73.2	70.5
IE	37.9	41.4	42.9	59.7
EL	11.0	12.1	56.1	60.7
ES	14.6	10.8	54.5	62.8
FR	23.9	29.1	56.8	69.9
IT	9.9	15.2	51.2	53.4
CY	:	15.8	:	59.5
LV	20.0	30.5	54.3	68.2
LT	24.1	37.2	67.4	68.7
LU	26.0	22.8	38.3	68.6
HU	20.6	32.5	59.9	60.5
MT	10.1	13.8	51.2	54.3
NL	16.4	18.1	40.9	50.9
AT	16.1	16.3	50.1	58.3
PL	17.2	24.8	63.3	50.6
PT	10.2	13.0	70.6	79.0
RO	12.0	19.1	64.6	67.4
SI	17.1	24.2	67.4	64.1
SK	41.9	43.1	57.7	47.7
FI	24.7	33.9	68.4	68.0
SE	28.5	30.3	51.5	45.8
UK	37.9	37.9	35.3	36.1
NO	19.0	26.2	69.4	66.8
CH	12.7	15.3	58.0	57.9

Source: Eurostat - Economic accounts for agriculture

<sup>1</sup> Inputs in crop production: seeds, fertilisers, plant protection products

<sup>2</sup> Inputs in animal production: feedingstuffs and veterinary costs

**Figure 2.3.1:** Composition of the value of intermediate inputs consumed by the agricultural industry in the EU-27, 2009



Source: Eurostat - Economic accounts for agriculture

In the EU-27, intermediate consumption in 2009 ate up 62 % of the output value of the agricultural industry at producer prices. In 2005 the corresponding figure was 58 %. The main intermediate input to agriculture in value terms is animal feed, which accounts for 36 % of total intermediate consumption. Energy and lubricants contribute 11 % to the value of intermediate inputs consumed by the agricultural industry, while the figure for fertilisers and soil improvers is 8 %. The main intermediate input items for crop production are fertilisers, plant protection products and seeds and plantings, which together account for 19 % of total agricultural intermediate consumption.

The margin between output and direct related input is different for crop and animal production. The costs for seeds and plantings, fertilisers and plant protection products constituted 22.1 % of the crop output in producer prices in 2009, while feedingstuff and veterinary costs amounted to 59.5 %. In 2000 the shares were 18.7 % and 53.9 % respectively.

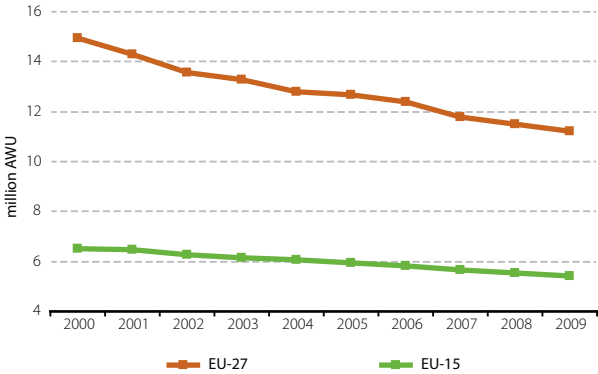
## 2.4 Agricultural Labour Input

**Table 2.4.1:** Agricultural labour input

	2000	2005	2009	2009/2008
	1 000 AWU			%
<b>EU-27</b>	14 945	12 688	11 223	97.7
<b>EU-15</b>	6 511	5 928	5 424	98.0
BE	75	70	64	98.2
BG	771	626	400	90.6
CZ	166	152	134	99.0
DK	76	63	56	98.1
DE	685	583	536	98.3
EE	65	38	29	93.3
IE	153	149	147	99.1
EL	586	607	571	99.6
ES	1 102	1 017	909	96.1
FR	1 028	936	858	97.9
IT	1 383	1 242	1 164	98.1
CY	31	29	26	100.0
LV	149	138	92	94.9
LT	187	174	147	97.6
LU	4	4	4	97.3
HU	676	522	441	100.8
MT	5	4	4	100.0
NL	220	194	182	98.8
AT	177	165	153	98.6
PL	2 495	2 292	2 214	96.3
PT	503	429	344	95.7
RO	3 645	2 596	2 148	99.8
SI	104	90	82	98.4
SK	143	99	82	91.0
FI	111	96	87	98.0
SE	77	76	63	96.0
UK	334	298	290	101.8
NO	72	66	58	97.3
CH	101	89	85	98.7

Source: Eurostat - Agricultural Labour input



**Figure 2.4.1: Agricultural labour input, 2000–2009**

Agricultural labour input (ALI) is the second component in calculating indicator A after factor income. The data presented here are somewhat different from the FSS data in Chapter I. AWU data from ALI statistics are usually higher than FSS data, because they also cover the labour input of agricultural units below the threshold of FSS and agricultural work used for agricultural services, inseparable secondary activities and hunting.

In total the agricultural labour input in EU 2009 was 11.2 million AWU. Slightly less than half of the labour input is in the EU-15, where about 85 % of the gross value added is generated. Consequently, the relation between GVA and labour input is very different in the new Member States.

Over the period from 2000 to 2009, agricultural labour input fell by 24.9 % in the EU-27. The rate of change was slower in the EU-15 (–16.7 %) than in other parts of the EU.

In 2009, total agricultural labour input continued to fall in all Member States, with the exception of the United Kingdom (+1.8 %) and Hungary (+0.8 %). The steepest declines were recorded in Bulgaria (–9.4 %), Slovakia (–9.0 %) and Latvia (–5.1 %). Overall, EU agricultural labour input was down by 2.3 % in 2009.

## 2.5 Price indices

**Table 2.5.1:** Deflated agricultural price indices, crop and animal output (2006, 2008, 2009)

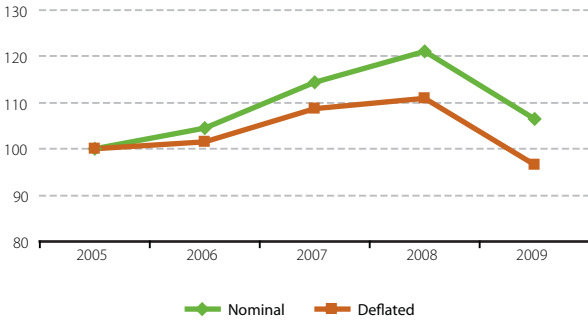
	Crop output*			Animal output		
	2006	2008	2009	2006	2008	2009
	index year 2005 = 100					
<b>EU-27**</b>	103.1	116.0	97.0	99.9	105.5	96.2
BE	123.8	105.0	91.6	102.7	102.7	92.2
BG	104.8	126.3	93.4	93.3	101.0	86.2
CZ	105.1	137.9	92.7	94.2	92.2	77.9
DK	101.5	136.4	107.0	102.3	103.2	88.3
DE	:	:	:	:	:	:
EE	108.3	117.4	86.7	94.2	95.1	75.4
IE	:	:	:	:	:	:
EL	105.3	105.6	100.8	101.0	98.7	98.0
ES	90.4	94.9	79.6	101.7	99.2	95.3
FR	106.5	124.3	104.6	100.2	107.5	97.7
IT	103.2	115.9	100.9	102.4	105.3	101.8
CY	99.8	125.1	:	107.2	113.8	:
LV	116.0	118.0	90.6	98.2	93.3	70.8
LT	113.1	133.2	88.4	97.4	102.6	81.9
LU	104.8	104.0	93.9	98.1	108.1	86.3
HU	116.0	122.5	102.5	99.7	102.3	93.8
MT	97.9	104.5	111.6	97.6	102.8	104.3
NL	113.3	105.6	96.2	100.6	110.5	95.3
AT	107.9	108.9	98.5	103.4	113.1	97.5
PL	:	:	:	:	:	:
PT	100.4	103.2	96.4	104.2	105.3	100.5
RO	101.6	133.8	109.3	94.9	98.1	105.2
SI	111.1	138.6	111.3	99.3	106.3	93.1
SK	97.3	120.5	81.3	95.1	94.7	74.5
FI	105.5	123.9	101.4	102.7	107.4	99.7
SE	107.3	128.2	107.9	101.5	118.1	104.3
UK	107.0	141.7	118.5	98.8	125.4	125.1

Source: Eurostat - Agricultural prices and price indices

Crop output, including fruits and vegetables

\*\* EU27 dose not include DE, IE and PL for 2006, 2008,2009; CY for 2009

**Figure 2.5.1:** EU-27 output price indices of agricultural goods, 2005–2009



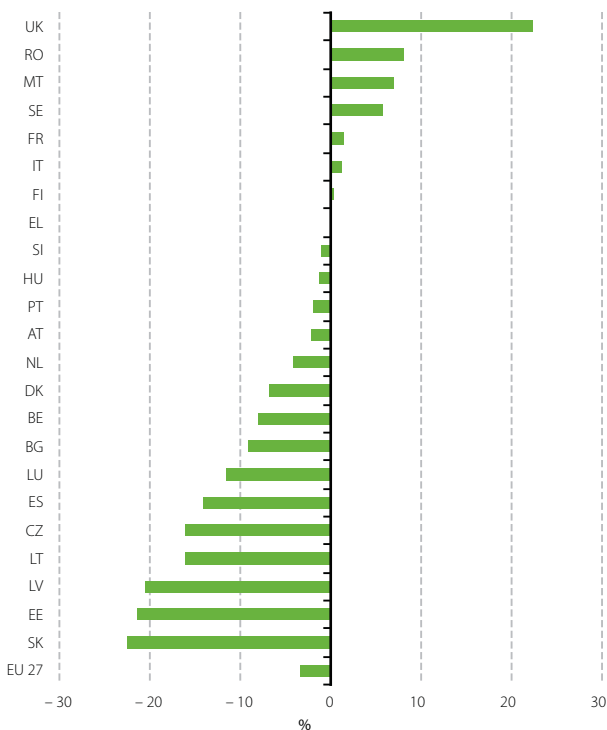
EU 27 for the period 2005–2009 does not include data for DE, IE and PL; data are missing for CY 2009

The final data for 2009 reveal that the level of agricultural prices for crop output in real terms was 3 % lower than in 2005, while the prices for animal output fell by almost 4 %.

The output price indices of agricultural goods for the European Union (EU-27) went up by 6.6 % in nominal terms compared to 2005. When adjusted for inflation (using the Harmonised Consumer Price Index (HCPI)), this represents a decrease of 3.3 %.

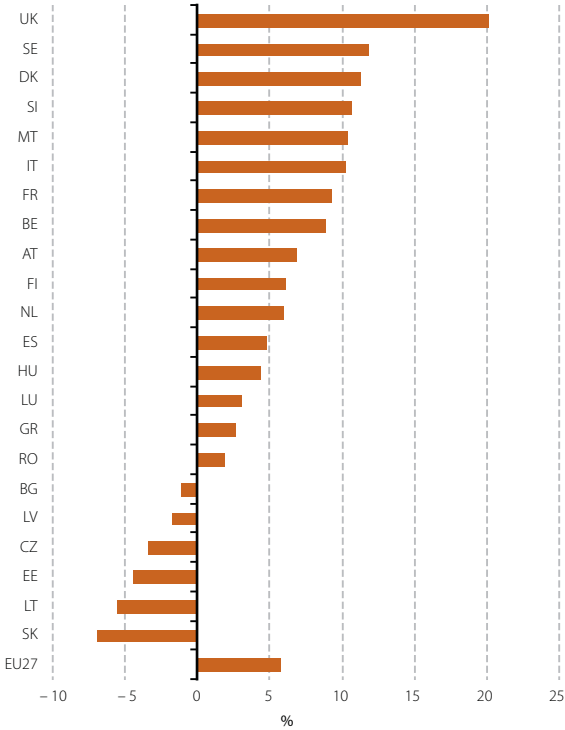
Among the 23 Member States for which data are currently available, twelve countries (BE, BG, CZ, EE, ES, LV, LT, LU, NL, AT, PT, SK) registered a decrease in the real crop output price index, the steepest drops in excess of 10 % being recorded in Spain (–20.5 %), Slovakia (–18.7 %) and Estonia (–13.3 %). The animal output real price index went up in only six countries (IT, MT, PT, RO, SE and UK). The highest increase was observed in the United Kingdom with 25.1 %, while for the other countries the increase was between 5.2 % in Romania and 0.5 % in Portugal. Among the 17 Member States which registered a decrease in the animal output price index, the steepest drops were recorded for Latvia (–29.2 %), Slovakia (–25.5 %), Estonia (–24.7 %) and Czech Republic (–22.1 %).

**Figure 2.5.2:** Deflated price indices of agricultural output, % change 2005–2009



Real price indices of agricultural output have developed differently across Member States. The available data show that fifteen countries registered a decrease in 2009 compared to 2005. The steepest drops were recorded in Slovakia (–22.5 %), Estonia (–21.5 %) and Latvia (–20.6 %). Among the other eight Member States for which data are available and which registered increases, the highest rise was recorded in the United Kingdom with 22.4 % followed by Romania with 8 % and Malta with 6.9 %.

**Figure 2.5.3:** Deflated price indices of means of agricultural production, % change 2005–2009



EU 27 does not include data for CY, DE, IE, PL.

Among the 22 Member States for which information on input total is available for 2009, only six recorded negative change between –6.9 % in Slovakia and –1.1 % in Bulgaria, in comparison with 2005. In contrast, the other 16 countries recorded positive developments, ranging from 20.1 % in the United Kingdom to 1.8 % in Romania.

**Table 2.5.2:** Annual selling prices of agricultural products (absolute prices), 2009

	Crop products			Animal products		
	Soft wheat	Sunflower	Main crop potatoes	Cows	Pigs (light)	Raw cows' milk actual fat content
	prices/ 100 kg	prices/ 100 kg	prices/ 1 000 kg	prices/ 100 kg live weight	prices/ 100 kg live weight	prices per 100 l
BE	11.1	:	6.2	169.8	:	23.6
BG	10.8	19.6	23.6	65.2	115.2	:
CZ	10.9	26.8	12.5	99.9	113.1	:
DK	:	:	:	:	:	:
DE						
EE	10.4	:	:	:	:	21.0
IE	:	:	:	:	:	:
EL	:	:	:	:	:	:
ES	14.2	22.5	14.0	106.0	111.5	29.2
FR	:	:	:	:	:	:
IT						
CY	:	:	:	:	:	:
LV	11.3	:	13.5	:	116.2	:
LT	11.5	:	13.9	71.8	115.1	17.9
LU	10.0	:	29.2	162.8	:	26.0
HU	10.6	21.1	17.1	116.7	112.4	21.9
MT	:	:	28.9	:	:	44.9
NL	11.1	:	9.4	103.1	99.2	26.7
AT	8.3	15.7	9.9	99.0	113.2	29.0
PL	11.2	:	9.4	:	:	20.7
PT	13.7	25.0	16.7	146.1	:	29.3
RO	11.1	20.3	28.8	81.4	123.4	21.2
SI	11.9	:	12.4	84.4	177.9	26.0
SK	10.3	20.1	19.7	78.0	111.0	25.7
FI	13.2	:	14.5	:	:	38.9
SE	10.7	:	22.1	:	:	26.9
UK	12.3	:	13.4	:	122.4	25.8

Source: Eurostat - Agricultural prices and price indices

# III

**Main agricultural products**







### 3.1 Crop production

Statistical data on crop production (under agricultural products) in the Eurostat database refer to areas under cultivation (expressed in hectares), harvested production (expressed in tonnes) and yield per hectare (expressed in 100kg/hectare).

The data are obtained from sample surveys supplemented by estimates based on expert observations and administrative data. The sources are not always the same for each Member State but are adapted to national conditions and statistical practices. The final data sent to Eurostat should be harmonised.

In the EU-27, the main crops grown on arable land are cereals (including rice). Cereal production soared in 2008 as a result of good weather conditions during the year and high cereal prices the previous year, but decreased in 2009 due to a reduction in the total area under cereals and less favourable weather conditions.

Cereals are followed by forage plants, the volume of which varies considerably from country to country, due to different natural conditions, production and consumption behaviour, historical reasons, etc.

Vegetable and fruit crops are becoming increasingly important in terms of food consumption and of value. Some of these crops are widespread among the EU-27 (such as apples) whilst others are specific to certain countries or regions (such as aubergines). Most fruits and vegetables are relatively concentrated in the EU Mediterranean countries as, in general, the climate in the south of Europe is more conducive to such production.

## Main crops

**Table 3.1.1:** Harvested production of some of the main crops, in 1 000 tonnes, 2009

1 000 t

	Cereals total (including rice)	Field peas and others <sup>1</sup>	Sugar beet <sup>2</sup>	Rape <sup>3</sup>	Sunflower <sup>4</sup>
<b>EU-27</b>	295 828	1 394	110 992	21 399	6 934
BE	3 221	4	4 569	42	-
BG	5 273	7	0	231	1 301
CZ	7 832	52	3 038	1 128	61
DK	10 200	14	2 011	637	-
DE	49 748	166	25 550	6 307	57
EE	879	8	-	136	-
IE	2 384	-	45	29	-
EL	4 820	6	902	-	16
ES	17 833	165	4 089	29	876
FR	70 000	550	33 146	5 562	1 676
IT	15 892	29	3 308	51	280
CY	57	0	-	-	-
LV	1 663	3	0	209	-
LT	3 806	50	682	416	-
LU	189	1	-	18	-
HU	13 571	33	708	565	1 306
MT	-	-	-	-	-
NL	2 089	6	5 735	12	-
AT	5 144	35	3 083	171	71
PL	29 827	33	10 849	2 497	4
PT	1 057	0	137	-	14
RO	14 934	29	685	572	1 083
SI	533	1	262	10	0
SK	3 330	12	899	387	187
FI	4 261	11	559	140	-
SE	5 249	50	2 406	302	-
UK	22 036	132	8 330	1 951	2
IS	:	:	:	:	:
LI	:	:	:	:	:
NO	1 347	:	:	9.5	:
CH	1 007.9	16.2	1 508.4	59.5	11.1

 Source: [apro\\_cpp\\_crop](#)
<sup>1</sup> Field peas and other: 2008 data for BE, BG, DK, EL, CH

<sup>2</sup> Sugar beet: 2006 data for SI; 2008 data for BG, DK, EL, CH

<sup>3</sup> Rape: 2008 data for BG, DK, NO, CH

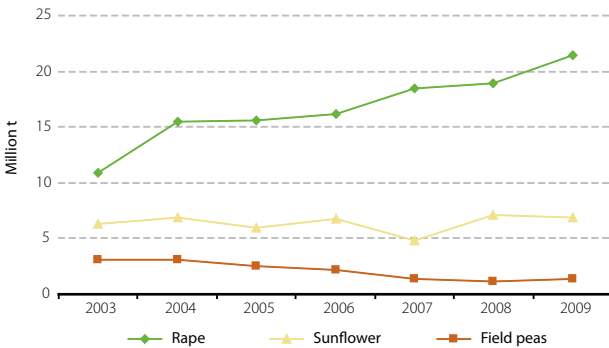
<sup>4</sup> Sunflower: 2005 data for UK; 2008 data for BG, EL, CH

**Figure 3.1.1:** Evolution of cereal and sugar beet production, EU-27, 2003–2009



Source: [apro\\_cpp\\_crop](#)

**Figure 3.1.2:** Evolution of rape, sunflower, and field peas production, EU-27, 2003–2009



Source: [apro\\_cpp\\_crop](#)

Cereal production has fluctuated considerably over time. After a very high increase in 2004 (29 % higher than 2003), cereal production fell sharply between 2004 and 2007 (–20 %). In response to the very high cereal prices in 2007, production in 2008 increased by 19 % but dropped by 6 % in 2009, probably because of the unfavourable meteorological conditions, characterised by spells of unusually high temperatures and water shortages in southern and eastern Europe, compounded by persistent rains that hampered harvesting in northern Europe.

Sugar beet production grew steadily between 2003 and 2005, subsequently decreasing by 23 % in 2006. Since 2006, production

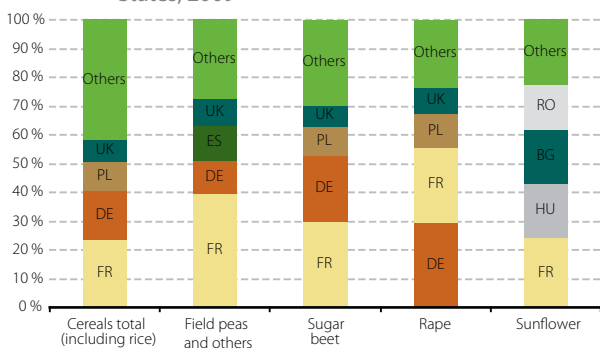
has been more stable, fluctuating around the 100 million tonnes mark (110 million tonnes in 2009).

Rape seed production increased massively (by 97 %) between 2003 and 2009. The biggest increases occurred in 2004 (up 42 % compared to 2003) and 2007 (up 14 % compared to 2006). The upward trend continued in 2009 as well (further 13 % increase).

Sunflower seed production did not follow the same trend. Output roughly stabilised between 2003 and 2006. In 2007, owing to very bad weather conditions in some producing countries, production decreased by 30 % compared to 2006. In 2008 production picked up again (49 % increase relative to 2007). Bulgaria and Romania more than doubled their sunflower seed production between 2007 and 2008. In 2009, EU-27 production decreased by 3 % and went back to approximately the 2007 level.

Field peas production has followed a decreasing trend since 2001 (54 % fall between 2003 and 2009). This crop is mainly used for animal feed and is increasingly being replaced by other protein crops, such as soya. Most of this reduction took place between 2006 and 2007 (36 % decrease) and between 2007 and 2008 (14 % decrease). The biggest producer of field peas (France) recorded a decrease of 41 % between 2006 and 2007 and of 25 % between 2007 and 2008. However, between 2008 and 2009, EU-27 production recovered slightly (17 % increase), mainly due to the 23 % increase in France.

**Figure 3.1.3:** Share of main crop production between Member States, 2009



These crops are produced in almost all EU Member States. However, a small group of four countries (varying from crop to crop) is responsible for the bulk of production.



France, Germany and Poland together produce approximately half of the cereals in the EU-27.

For field peas production France accounts for 39 % of the EU-27, followed by Germany and Spain (approximately 12 % each).

For sugar beet and rape seed, France and Germany are the largest producers, together accounting for 54 % and 55 % of EU-27 production. It is interesting to note that during the last few years some of the formerly important sugar beet producers have almost disappeared. For example, production in Ireland decreased by 95 % between 2005 and 2006 and by 40 % the following year. Latvian production had a 98 % fall between 2006 and 2008 and the country has had no sugar beet production since 2008.

Most of the sunflower seed production is concentrated in eastern Europe. Even if the largest producer is France (24 % of EU-27 production), Hungary and Bulgaria (19 % each) and Romania (16 %) represent together more than half of EU production.

## Cereals

**Table 3.1.2:** Harvested production of the most important cereals, in 1 000 tonnes, 2009

1 000 t

	Wheat <sup>1</sup>	Barley <sup>2</sup>	Grain maize	Rye and maslin <sup>3</sup>	Rice <sup>4</sup>
<b>EU-27</b>	138 954	62 057	57 782	10 202	3 013
BE	1 928	451	754	3	-
BG	4 000	815	1 273	15	39
CZ	4 358	2 003	890	178	-
DK	5 996	3 421	-	245	-
DE	25 190	12 288	4 527	4 325	-
EE	346	380	-	39	-
IE	951	1 089	-	0	-
EL	1 830	280	2 352	37	205
ES	4 797	7 400	3 479	181	899
FR	38 325	12 880	15 300	130	138
IT	6 341	1 049	7 878	12	1 493
CY	15	40	-	-	-
LV	1 036	265	-	162	-
LT	2 100	858	24	208	-
LU	91	54	3	7	-
HU	4 396	1 033	7 543	75	10
MT	-	-	-	-	-
NL	1 402	310	245	11	-
AT	1 523	835	1 891	195	-
PL	9 790	3 984	1 707	3 968	-
PT	110	76	594	18	159
RO	5 205	1 183	8 035	36	69
SI	137	71	303	2	-
SK	1 538	676	988	57	-
FI	887	2 171	-	42	-
SE	2 284	1 677	-	219	-
UK	14 379	6 769	0	36	-
IS	:	:	:	:	-
LI	:	:	:	:	-
NO	460	530	:	47	-
CH	545.2	184.5	167.8	12.5	-

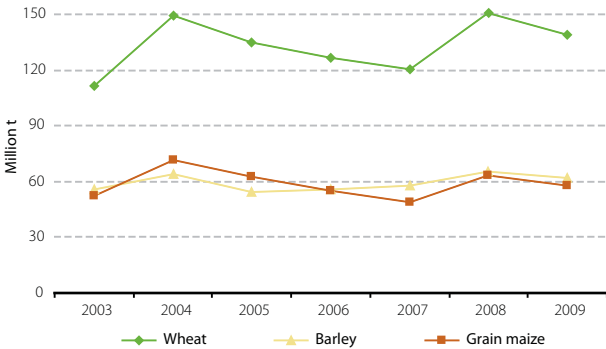
 Source: [apro\\_cpp\\_crop](#)
<sup>1</sup> Wheat: 2008 data for IE, NO, CH

<sup>2</sup> Barley: 2008 data for NO, CH

<sup>3</sup> Rye and maslin: 2008 data for BG, NO, CH

<sup>4</sup> Rice: 2007 data for IT, 2008 data for BG

**Figure 3.1.4:** Evolution of wheat, barley and grain maize production, EU-27, 2003–2009



Source: [apro\\_cpp\\_crop](#)

The most important cereal in the European Union is wheat, with a production level of approximately 139 million tonnes. Barley and grain maize production levels are similar (62 and 58 million tonnes respectively). Barley production has exceeded grain maize production since 2007.

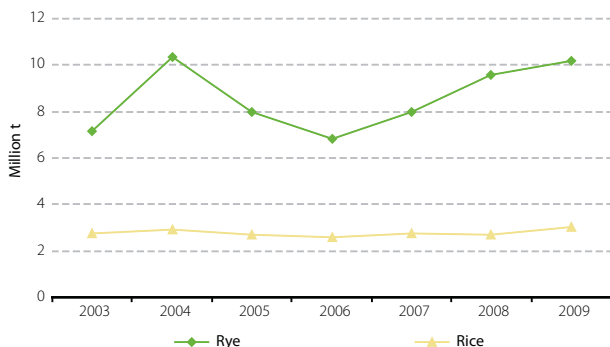
Production of all three cereals soared in 2004 and 2008, which were exceptionally good years. In 2009, the production level of all these crops dropped (8 % decrease for wheat, 5 % for barley and 9 % for grain maize).

The above graph shows some instability in production, except for barley, which appears more stable. This instability is mainly due to weather conditions (dry year in 2003 and excellent weather in 2004) but also to imbalanced supply and demand in 2007, which resulted in very high prices for cereals. As a consequence, production increased sharply in 2008 (+25 % for wheat, +30 % for grain maize and +13 % for barley between 2007 and 2008). This was mainly due to the world supply shortage and the consequently high market prices that led to cereal production being stepped up. 2009 production decreased considerably, especially for wheat.

The graph shows also that wheat and grain maize production follows a parallel trend. Barley production is much more stable.



**Figure 3.1.5:** Evolution of rye and rice production, EU-27, 2003–2009

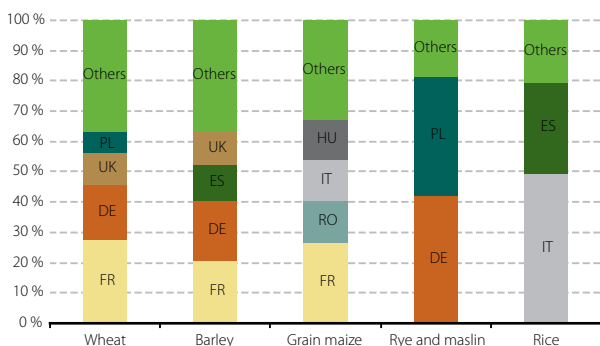


Source: [apro\\_cpp\\_crop](#)

Rye and maslin production fluctuates greatly, increasing by 44 % between 2003 and 2004 (two extreme years) and decreasing by 34 % between 2004 and 2006. Since 2007, rye and maslin production has followed an upward trend, returning close to the 2004 level in 2009.

2009 was a very good year for rice, and saw an 11 % increase in production. In general, rice production fluctuates less, as this cereal needs specific growing conditions and cannot be easily replaced by other crops.

**Figure 3.1.6:** Share of cereal production between Member States, 2009



Cereal production is concentrated in a few Member States. For each cereal presented in the figure, the first four producing countries account for more than 60 % of production. For rye and maslin and for rice, this share exceeds 80 %.





France and Germany, the two main wheat producers, account for almost 46 % of EU-27 production.

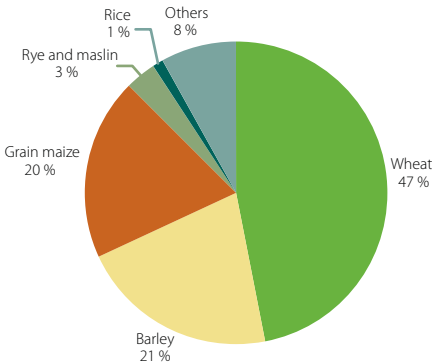
A 28 % increase in production between 2007 and 2008 made France the largest producer of barley. In 2009 it accounted for 21 % of EU-27 production, closely followed by the second biggest producer, Germany, with 20 %.

France is the largest EU-27 grain maize producer and accounts for 26 % of production. Romania, with 14 % of production, became the second biggest EU-27 producer in 2009, although in 2007 and 2008 it was producing less than Italy and Hungary. It more than doubled its production between 2007 and 2008.

Germany and Poland account for more than 80 % of EU-27 rye and maslin production.

Only eight countries produce rice in the European Union, with Italy accounting for 50 % of EU-27 rice production.

**Figure 3.1.7:** Harvested production of cereals by type of cereal, EU-27, 2009



Source: [apro\\_cpp\\_crop](#)

Wheat, barley and grain maize are the cereals most grown in the European Union.

With harvested production of cereals amounting to around 296 million tonnes, 139 million tonnes come from wheat production, which represents almost half of all cereal production (47 %). The share of wheat production compared to 2008 stayed almost constant (48 % in 2008).



Barley production totalled 62 million tonnes, accounting for 21 % of all cereal production. Grain maize production totalled around 58 million tonnes, or 20 % of the cereal harvested.

Rye and maslin production totalled approximately 10 million tonnes, which this year accounted for 3 % of cereal production.

Rice accounted for 1 % of production at around 3 million tonnes.

The share of all the cereals in total production remained fairly constant compared to 2008 (1 % or less variation).



## Main fruits and vegetables production

**Table 3.1.3:** Harvested production of some fruits and vegetables, in 1 000 tonnes, 2009

	Tomatoes <sup>1</sup>	Carrots <sup>2</sup>	Onions <sup>3</sup>	Apples <sup>4</sup>	Peaches	Oranges <sup>5</sup>
<b>EU-27</b>	16 855	5 457	5 757	11 784	3 327	6 281
BE	238	236	55	348	-	-
BG	134	13	16	24	15	-
CZ	10	28	45	152	4	-
DK	18	69	56	32	-	-
DE	65	570	415	965	1	-
EE	1	12	0	1	-	-
IE	8	23	8	15	-	-
EL	1 339	48	200	235	734	802
ES	4 749	426	1 195	553	1 226	2 780
FR	715	557	326	1 940	153	1
IT	6 383	624	385	2 176	1 035	2 478
CY	30	2	7	9	2	25
LV	0	36	17	29	-	-
LT	1	52	27	64	-	-
LU	0	0	0	10	-	-
HU	206	75	54	511	60	-
MT	12	1	9	0	1	1
NL	800	561	1 269	407	-	-
AT	42	84	139	486	9	-
PL	264	898	688	2 628	13	-
PT	993	54	39	274	53	194
RO	670	163	362	507	11	-
SI	5	3	5	103	7	-
SK	31	9	15	48	5	-
FI	41	61	20	4	-	-
SE	17	102	29	22	-	-
UK	86	752	376	243	-	-
IS	:	:	:	:	:	:
LI	:	:	:	:	:	:
NO	12	47.4	18.8	16.7	:	:
CH	:	:	:	:	:	:

Source: [apro\\_cpp\\_fruveg](#)

<sup>1</sup> Tomatoes: 2000 data for IE; 2003 data for PT; 2006 data for BE, DK; 2007 data for UK, NO; 2008 data for BG, DE, EE, EL, FR, LT, HU, SI, SK, FI

<sup>2</sup> Carrots: 2000 data for IE; 2003 data for PT; 2006 data for BE, DK; 2007 data for CZ, ES, UK, NO; 2008 data for EE, EL, FR, LV, LT, HU, SI, SK, FI

<sup>3</sup> Onions: 2000 data for IE; 2003 data for PT; 2005 data for SE; 2006 data for BE, DK; 2007 data for UK, NO; 2008 data for BG, EE, EL, FR, LV, LT, SI, SK, FI

<sup>4</sup> Apples: 2000 data for IE; 2006 data for DK; 2007 data for BE, UK; 2008 data for BG, EE, EL, FR, LV, LT, SI, FI, NO

<sup>5</sup> Oranges: 2006 data for FR; 2008 data for EL



In the European Union, the most important vegetables in terms of production are tomatoes (around 16.8 million tonnes), carrots (around 5.4 million tonnes) and onions (around 5.7 million tonnes). The main fruits are apples (around 11.7 million tonnes), oranges (around 6.2 million tonnes) and peaches (around 3.3 million tonnes).

While apples are produced by almost all Member States, production of oranges, other citrus fruits and peaches is more concentrated in the southern and Mediterranean countries.



## Vineyards and olive trees

**Table 3.1.4:** Vineyard area in production, EU-27, 2009

	Vineyard total	Vineyard for wine <sup>1</sup>	Vineyard for table grape <sup>2</sup>	Vineyard for raisins <sup>3</sup>
	1 000 ha			
<b>EU-27</b>	3 660	3 498	125	37
BE	-	-	-	-
BG	111	107	3	0
CZ	16	16	0	0
DK	-	-	-	-
DE	100	100	0	0
EE	-	-	-	-
IE	-	-	-	-
EL	87	49	5	33
ES	1 131	1 109	19	2
FR	854	846	7	:
IT	785	715	70	:
CY	8	8	0	0
LV	-	-	-	-
LT	-	-	-	-
LU	1	1	0	-
HU	82	79	3	:
MT	-	:	:	:
NL	-	0	-	-
AT	46	46	0	0
PL	-	-	-	-
PT	225	217	6	3
RO	188	178	10	0
SI	16	16	0	0
SK	10	10	0	0
FI	-	-	-	-
SE	-	-	-	-
UK	0	0	-	-
IS	:	:	:	:
LI	:	:	:	:
NO	:	:	:	:
CH	:	:	:	:

Source: [apro\\_cpp\\_crop](#)

<sup>1</sup> Vineyard for wine: 2007 data for Es; 2008 data for BG, EL, FR, IT, HU, SI

<sup>2</sup> Table grapes: 2007 data for ES; 2008 data for BG, EL, FR, HU, SK

<sup>3</sup> Raisins: 2007 data for PT, ES; 2008 data for EL

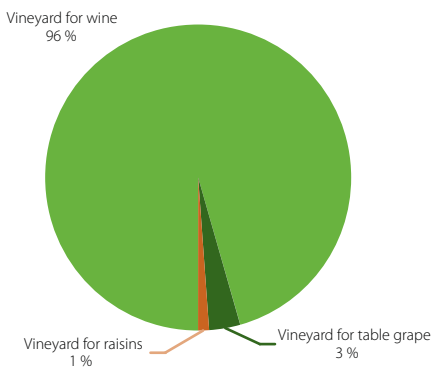


The vineyard area in the EU-27 totalled 3.64 million hectares in 2009, of which 96 % is dedicated to wine production. The European Union is the largest wine-producing region in the world. Within the EU-27, Spain has the largest vineyard area.

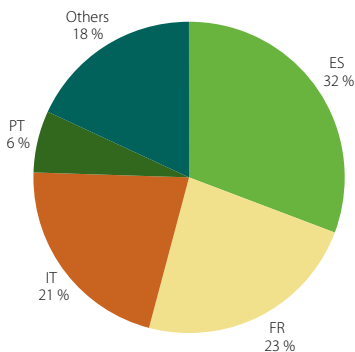
Italy and Greece are the main countries for vineyard area dedicated to the production of dessert grapes and raisins respectively.

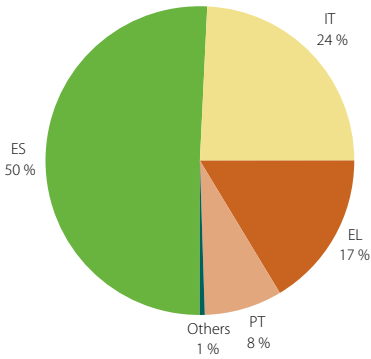
8 % of the EU-27 vineyard area is located in two new Member States (Bulgaria and Romania), both important wine producers.

**Figure 3.1.8:** Allocation of the EU-27 vineyard area, 2009



**Figure 3.1.9:** Share of vineyard area between Member States, 2009



**Table 3.1.10:** Distribution of the EU-27 Olive trees area, 2009

Olive oil is another key EU Mediterranean product. 99 % of the area planted with olive trees is concentrated in four countries (Spain, Italy, Greece and Portugal), with Spain accounting for half of the area.



## Land Use

Table 3.1.5: Agricultural land use, 2009:

	Area Total	UAA	Arable Land	Land under permanent crop	Land under permanent grassland
	1 000 ha	%			
<b>EU-27</b>	432 525	38	24	3	14
BE	3 053	45	28	1	16
BG	11 100	46	28	2	16
CZ	7 887	45	33	0	12
DK	4 310	63	57	0	5
DE	35 710	47	33	1	13
EE	4 523	15	15	0	4
IE	7 029	60	16	0	44
EL	13 196	30	16	9	2
ES	50 537	16	16	10	16
FR	54 909	54	33	2	18
IT	30 132	44	24	9	11
CY	925	14	10	3	0
LV	6 459	2	2	0	10
LT	6 530	41	29	0	11
LU	259	51	24	1	26
HU	9 303	62	48	2	11
MT	32	33	25	4	0
NL	3 736	52	28	2	22
AT	8 387	38	16	1	21
PL	31 268	50	38	1	10
PT	9 191	40	12	8	19
RO	23 839	62	39	2	20
SI	2 027	24	9	1	14
SK	4 904	39	28	0	11
FI	33 842	7	7	0	0
SE	45 030	7	6	0	1
UK	24 410	65	23	0	42
NO	:				
CH	4 128.5	37	10	1	26

Source: [apro\\_cpp\\_luse](#)





Utilised Agricultural Area (UAA) represents 37 % of the whole EU-27 territorial area. The share of UAA in the total area varies greatly from country to country, from only 7 % in Finland and Sweden to 65 % in the United Kingdom (2 % Latvia).

As part of UAA, arable land represents almost one quarter of the whole EU-27 territory. Denmark has the highest share of arable land (57 %).

Permanent grassland represents 14 % of EU-27 territory. While more than 45 % of the land in Ireland and the United Kingdom is used for permanent grassland, extreme northern and southern countries (Finland and Cyprus) have less than 1 % of their land under permanent grassland.

Land under permanent crops represents less than 3 % in the EU-27. However, several southern European countries have a higher share of land under permanent crops (10 % in Spain, 9 % in Greece and Italy, 8 % in Portugal).

## 3.2 Animal production

This chapter presents information on livestock numbers and meat and milk production in the European Union (EU). The EU was composed of 15 Member States (EU15) from 1995 to 2004, 25 Member States (EU25) from 2004 to 2006 and 27 Member States (EU27) from 2007 onwards.

The data are obtained directly from the Member States in accordance with EU legislation and specific agreements on animal production statistics. The data are used not only by European and national institutions but also by third-country administrations, stakeholders, scientists and the general public for policymaking, risk management, market analysis, production forecasts, research, information, etc. More detailed statistical data on animal production are available on Eurostat's website. The website also contains metadata describing the scope of statistical collections and short descriptions of the methodology used.

Serious animal disease outbreaks, such as the BSE crisis in 1996 and 2000, Foot-and-Mouth disease in 2001, and avian influenza in 2005, had disturbing effects not only on EU animal production but also on society and the economy in general. Trade globalisation, consumer demands and EU enlargement also present new challenges for EU animal production. To meet these challenges, the Common Agricultural Policy (CAP) aims to: (i) stabilise EU markets; (ii) ensure a fair standard of living for farmers; (iii) restore levels of consumption of animal products; and (iv) make EU animal products more competitive on the world market. The main existing market measures are direct payments to producers and public/private storage.

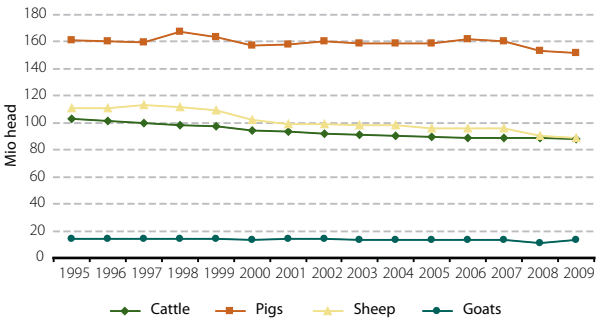
In November 2008, EU agriculture ministers reached a political agreement on the 'Health Check', designed to modernise, simplify and streamline the CAP, thereby removing farmers' production restrictions. Concerning animal production, the range of measures includes an agreement to gradually cut milk quotas until they are abolished in 2015 and further remove remaining coupled payments that are incorporated into the Single Payment Scheme (SPS), with the exception of suckler cow, goat and sheep premia, where Member States may maintain current levels of coupled support. In addition, Member States may retain, by sector, 10 % of their national budget ceilings for direct payments to help farmers producing milk, beef, goat and sheep meat in disadvantaged regions or by vulnerable means of farming. The year 2009 was especially marked by the milk crisis.

All these economic, social, environmental, health and political variables are reflected in the EU's figures for animal production.



## Livestock and meat

Figure 3.2.1: EU Livestock numbers, million heads, 1995–2009



Source: [apro\\_mt\\_lscatl](#), [apro\\_mt\\_lspig](#), [apro\\_mt\\_lssheep](#), [apro\\_mt\\_lsgoat](#)

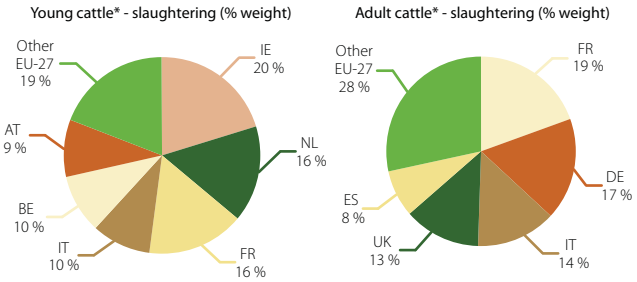
Cattle and sheep livestock numbers have fallen slightly over the past decade, while the numbers of pigs and goats have stabilised in the EU as a whole.

From 2008 to 2009 the number of cattle, pigs and sheep in the EU decreased by 0.7 %, 1.0 % and 2.3 % respectively, while the number of goats increased by 16.1 % in Member States with a significant herd.

**Table 3.2.1: Animal slaughtering by species, 1 000 t, 2009**  
in 1 000 tonnes

Animal	Cattle	Pigs	Sheep	Goats	Poultry
<b>EU27</b>	7 715.3	21 276.1	748.1	59.3	:
BE	255.0	1 082.0	0.7	0.0	:
BG	4.7	38.3	5.9	0.1	98.6
CZ	77.0	284.6	0.1	-	194.3
DK	126.4	1 583.2	1.8	-	167.4
DE	1 177.7	5 253.8	20.1	0.4	1 276.4
EE	9.6	30.8	0.1	-	14.8
IE	514.2	195.9	55.0	-	:
GR	57.2	117.6	71.9	36.7	174.1
ES	575.1	3 236.6	121.3	8.6	1 305.1
FR	1 466.7	2 004.2	83.3	6.5	1 670.0
IT	1 055.0	1 588.4	39.6	1.5	1 143.1
CY	4.3	58.1	2.7	2.7	27.1
LV	19.0	24.8	0.2	-	22.7
LT	43.9	41.4	0.1	-	65.4
LU	9.0	9.4	0.0	0.0	-
HU	29.7	388.7	0.2	-	360.0
MT	1.5	7.4	0.0	0.0	4.7
NL	400.2	1 275.0	14.2	1.1	782.0
AT	223.7	533.4	7.1	0.7	109.2
PL	385.1	1 608.2	0.8	0.1	1 266.5
PT	102.7	373.4	9.5	0.9	291.6
RO	25.0	222.1	1.3	-	289.9
SI	35.3	24.1	0.1	-	59.5
SK	15.8	70.1	0.6	-	68.1
FI	81.1	205.7	0.7	0.0	94.9
SE	150.8	261.7	5.1	0.0	:
UK	869.6	757.2	305.6	0.1	1 459.1

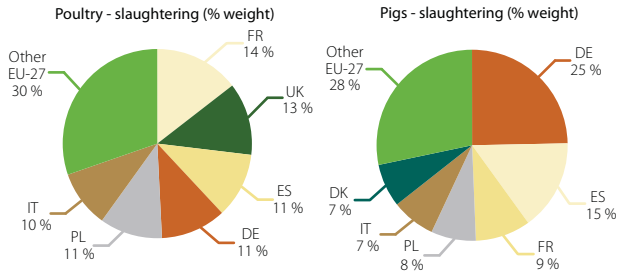
Source: livestock and meat statistics


**Figure 3.2.2: Slaughter by Member State, 2009**


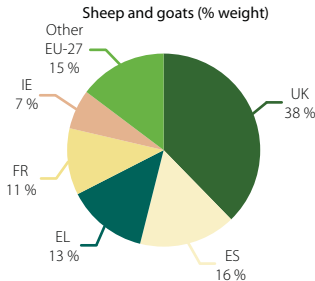
Source: [apro\\_mt\\_pann](#)

Cattle under one year old are 'young cattle' and the others 'adult cattle'. Their meat is respectively called veal and beef.

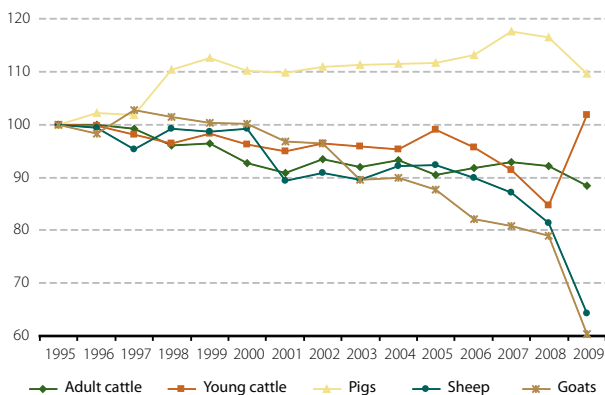
Ireland, the Netherlands and France produce over half (52 %) of the veal produced in the EU. France, Germany and Italy produce a similar proportion (51 %) of beef.



Germany, Spain and France supply almost half (49 %) of the EU production of pigmeat. Five Member States (France, the United Kingdom, Spain, Germany and Poland) account for 60 % of total EU production of poultry meat.



The United Kingdom and Spain produce more than half (54 %) of the sheep or goat meat produced in the EU.

**Figure 3.2.3: Slaughter index (in weight) by species, EU**


Source: [apro\\_mt\\_pann](#)

From 2008 to 2009, meat production decreased faster than in the previous year for pig, adult cattle, sheep and goat. Since 1995, meat production in the EU-27 has fallen for adult cattle, sheep and goat while production of pigmeat has increased.

The weight of pigmeat produced rose rapidly between 1997 and 1999, dropped slightly between 1999 and 2001, then slowly picked up again until 2007 when a new maximum was registered, before falling in 2008 by 1 %.

Production of meat from grazing livestock decreased between 1995 and 2005 with some fluctuation, and has fallen since. The exceptional increase in calf meat production in 2009 may be partly explained by methodological changes and is partly a side effect of the milk crisis.

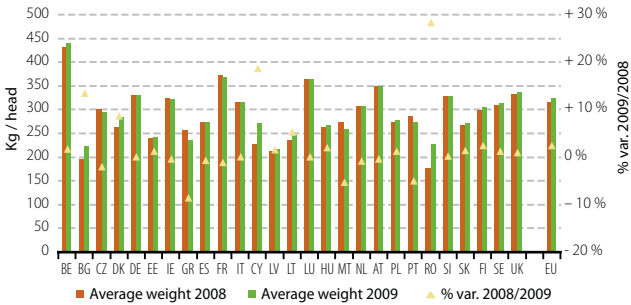
Some methodological changes have indeed had an impact. Nevertheless the strongest trend displayed in sheep production is confirmed by the national figures in the most important sheepmeat-producing countries.

In the EU the average carcass weight of adult cattle (at least one year old) increased slightly from 2008 to 2009 (+ 2.4 %) to around 323 kg. The most significant variations occurred in Romania, Bulgaria and Cyprus (increase), and in Greece, Malta and Portugal (decrease), but referring to limited quantities.

The differences between national averages can be mainly explained by the proportion of bulls and bullocks in adult cattle slaughtered.



Figure 3.2.4: Average carcass weight for adult cattle, 2009



Source: apro\_mt\_pann

Table 3.2.2: Cattle slaughter by animal category, 2009  
in 1 000 tonnes

Animal	All Cattle	Calves*	Heifers	Cows	Bullock	Bulls
<b>EU27</b>	7 695.6	908.4	1 141.3	2 247.2	719 <sup>e</sup>	2 644 <sup>e</sup>
BE	255.0	52.6	3.7	117.0	0.5	80.2
BG	4.7	0.6	1.1	2.3	0.0	0.7
CZ	77.0	1.1	6.2	32.3	0.1	37.4
DK	126.4	28.5	12.3	55.2	2.6	27.8
DE	1 177.7	46.1	137.7	416.2	13.1	564.5
EE	9.6	0.3	0.9	5.8	0.1	2.6
IE	514.2	0.4	134.2	98.9	223.9	56.8
GR	57.2	7.2	9.3	5.7	:	:
ES	575.1	118.1	128.6	90.7	12.8	224.9
FR	1 466.7	221.1	153.2	626.5	85.8	380.2
IT	1 055.0	136.5	169.2	137.3	2.1	609.9
CY	4.4	1.5	0.5	1.5	:	0.9
LV	19.0	1.4	2.1	9.3	:	6.2
LT	43.9	0.5	7.7	19.8	:	15.9
LU	9.0	0.2	1.4	2.5	0.3	4.5
HU	29.7	1.1	3.2	18.5	0.1	6.8
MT	1.5	0.0	0.2	0.6	-	0.8
NL	400.2	222.0	3.1	151.5	-	24.1
AT	223.7	8.0	28.5	63.8	10.1	113.2
PL	385.1	15.4	49.4	129.1	:	191.2
PT	102.7	23.1	14.2	17.4	1.3	46.7
RO	25.0	3.3	2.1	13.5	1.4	4.7
SI	35.3	2.3	3.4	5.6	0.2	23.8
SK	15.8	0.1	1.2	8.4	:	6.1
FI	81.1	0.4	8.6	23.3	:	48.8
SE	150.8	15.3	14.8	46.5	13.7	60.4
UK	849.9	1.4	244.8	148.1	350.6	104.9

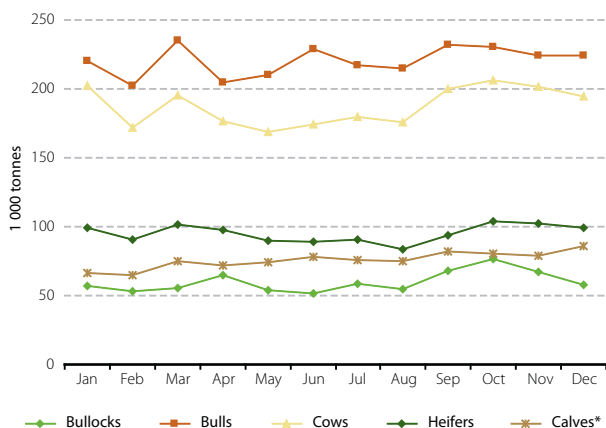
e: estimate

Source: livestock and meat statistics

\* including other young cattle under one year



**Figure 3.2.5:** Cattle slaughtered by animal category, 1 000 t, 2009



Source: [apro\\_mt\\_pwgtm](#)

\* Calves: including other young cattle less than one year old.

Overall, annual cattle production in 2009 visibly picked up in October, similar to the trend observed in 2008, while it remained relatively stable during the rest of the year. The peak in March is higher for cows and bullocks following a low February level.





## Milk

Table 3.2.3: Collection of cows' milk and dairy products, 2009

in 1 000 tonnes

	Cows' milk collected	Drinking Milk	Cream for Direct Consum.	Skimmed Milk Powder	Butter	Cheese
	Collection	Products obtained				
<b>EU27</b>	133 370 e	31 300 e	2 410 e	: e	: e	: e
BE	2 954	660	139	75	91	69
BG	579	52	2	:	1	61
CZ	2 354	681	50	11	34	107
DK	4 741	483	64	111	37	324
DE	28 248	5 288	568	80	453	2 086
EE	592	89	27	: c	9	37
IE	4 904	509	11	:	123	:
GR	684	435	12	-	1	18
ES	5 827	3 594	147	2	38	119
FR	22 839	3 493	401	121	414	1 712
IT	10 415	2 770	127	:	93	1 059
CY	149	76	4	:	-	2
LV	595	88	28	: c	5	28
LT	1 275	88	4	2	15	94
LU	271	: c	: c	:	: c	: c
HU	1 354	395	5	:	8	76
MT	: c	: c	: c	: c	: c	: c
NL	11 085	: c	: c	: c	128	714
AT	2 709	715	61	1	32	146
PL	9 136	1 462	239	30	140	628
PT	1 869	837	17	: c	29	54
RO	978	222	46	2	10	64
SI	517	143	15	:	2	18
SK	852	260	27	3	8	31
FI	2 281	734	54	3	56	104
SE	2 926	921	104	31	30	107
UK	13 233 p	6 735 p	250 p	: c	120 p	357 p

e: estimate; c: confidential

Source: livestock and meat statistics

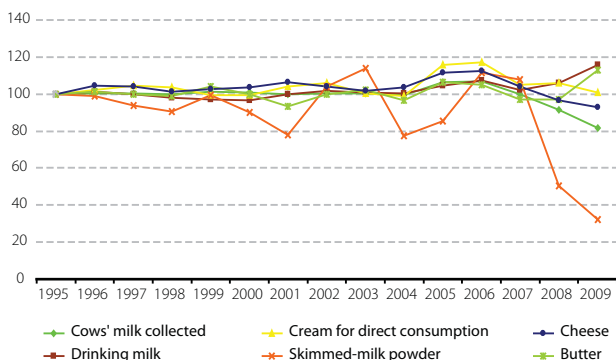
In terms of production weight, drinking milk is of course the most important. Indeed comparing a given weight of milk powder with the same weight of drinking milk is of limited significance.

An index, expressing an annual value relative to the value of the previous year, can be chained over time. Such an index can display the production weight for comparable products and is resilient to changes in coverage (e.g. EU enlargement).

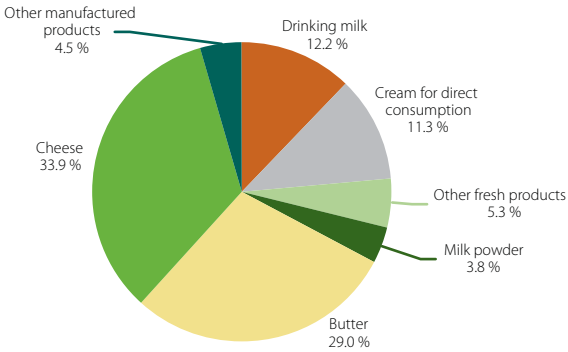
In order to compare the products on the basis of their milk content, the figures are also expressed relatively to their utilisation of milk. This makes it possible also to assess the change in heterogeneous groups of products like cheese.

There has been remarkably little change in the quantity of cows' milk collected in the expanding EU over the past 15 years, due to the milk quota system. As for the products obtained, there has been a notable increase since 1995 in cheese (+ 18 %) and (to a lesser extent) cream production for direct consumption (+ 7 %). Production of butter has increased only since 2009, while production of skimmed milk powder, which is a residual product, has fallen markedly (down by 63 %).

**Figure 3.2.6:** Trend in collection of cows' milk and products obtained, index 100 = 1995 (EU-15)

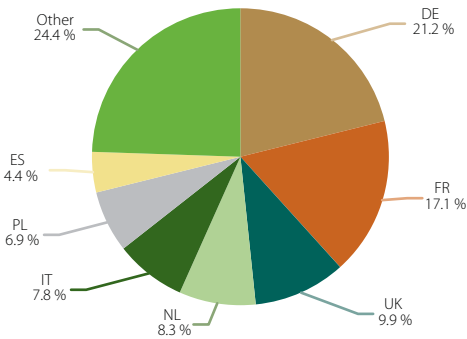


Source: [apro\\_mkCola](#)

**Figure 3.2.7: Utilisation of milk, % EU-27, 2008**


Source: [apro\\_mk\\_pobta](#)

Of the milk (from cows, sheep, goats and buffalos) collected in 2008, almost 29 % was used to produce fresh products. Drinking milk and cream for direct consumption each accounted for about 12 %. Other fresh products, such as yoghurt and milk-based drinks, made up about 5 %. Over two thirds of the milk was used for manufactured products, mainly butter and cheese.

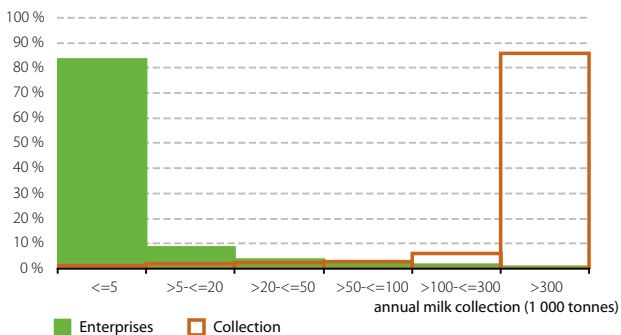
**Figure 3.2.8: Cows' milk collected, % EU-27, 2009**


Source: [apro\\_mkCola](#)

In 2009 (as in 2008) six Member States — Germany, France, the United Kingdom, the Netherlands, Italy and Poland — together contributed more than 70 % of the cows' milk collected in the EU.

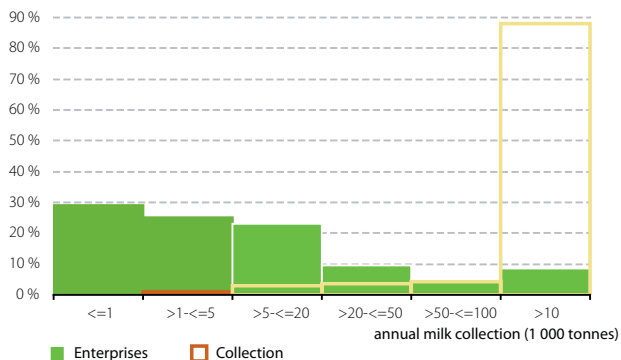
The structure of dairy enterprises including collection centres is surveyed every third year. The results of detailed size classes for the largest ones are surveyed in certain countries (representing 80 % of milk collection) on a voluntary basis and extrapolated to the EU-27. These size classes are lighter-coloured in the charts.

**Figure 3.2.9:** Structure of dairy enterprises EU-27, 2006



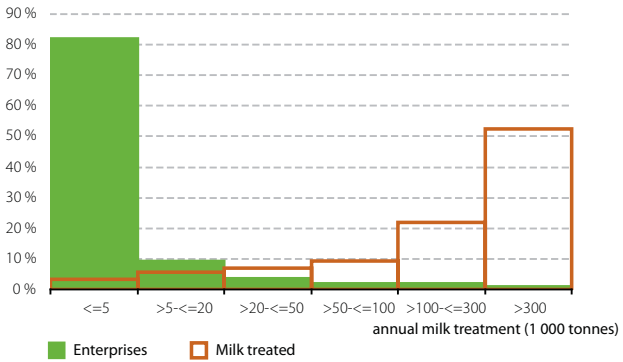
Source: [apro\\_mk\\_strmk](#)

Collection centres and milk collected, EU-27, 2006



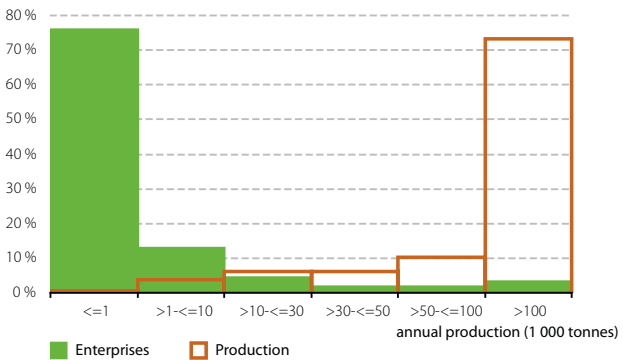
Source: [apro\\_mk\\_strcc](#)

## Enterprises and milk treated, EU-27, 2006

Source: [apro\\_mk\\_strmt](#)

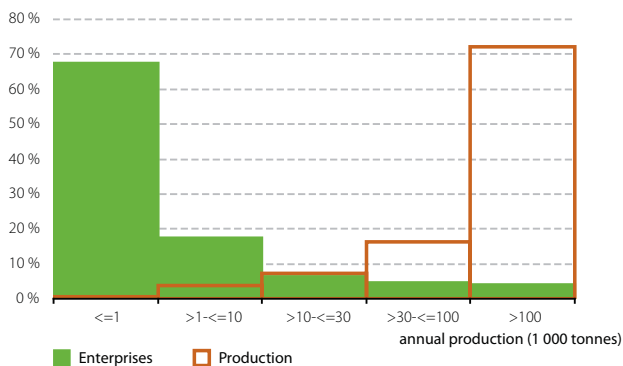
Milk collection and processing activities are more or less concentrated in the hands of a few large enterprises. This is evident in the most specialised activities like milk powder production requiring heavy investment.

## Enterprises and production of fresh products, EU-27, 2006

Source: [apro\\_mk\\_strfp](#)

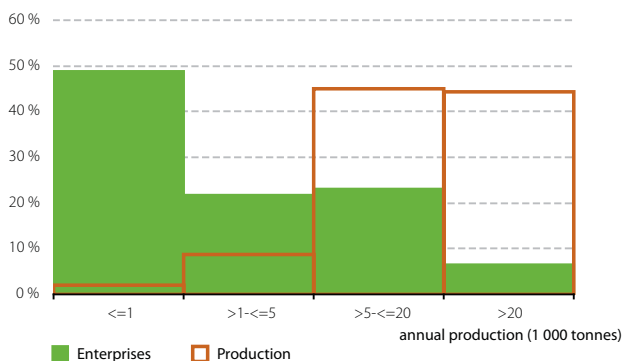


## Enterprises and production of drinking milk, EU-27, 2006



Source: [apro\\_mk\\_strdm](#)

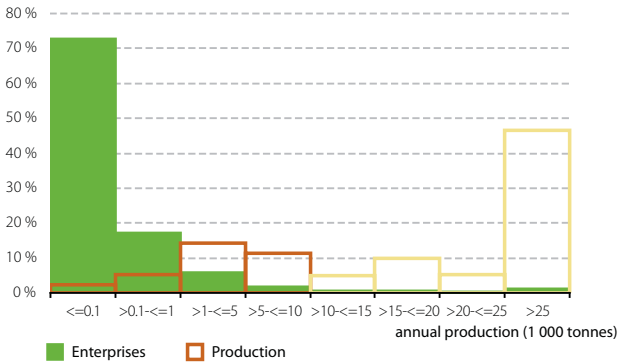
## Enterprises and production of dairy powder, EU-27, 2006



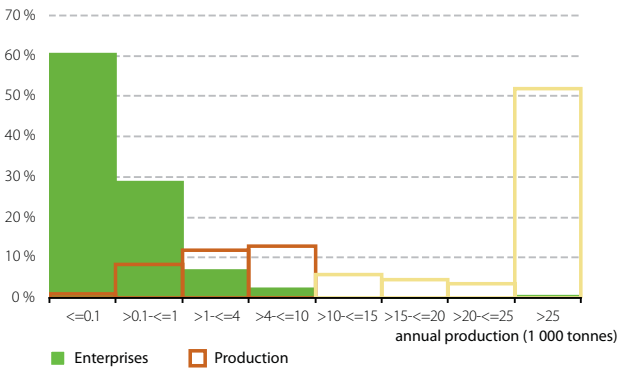
Source: Dairy powder producers [apro\\_mk\\_strpd](#)

For instance, 88 % of milk is collected by 8.5 % of collection centres and 67 % of milk powder is produced by 2.4 % of producers. The distribution of cheese producers by size classes shows a group of small-scale enterprises with significant activity.

## Enterprises and production of butter, EU-27, 2006

Source: [apro\\_mk\\_strbt](#)

## Enterprises and production of cheese, EU-27, 2006

Source: [apro\\_mk\\_strch](#)





# IV

**Agriculture  
and the environment**



## 4 Agriculture and the environment

In its Communication entitled ‘Development of agri-environmental indicators for monitoring the integration of environmental concerns into the common agricultural policy’<sup>(1)</sup>, the European Commission proposed a set of 28 agri-environmental indicators (AEI). 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.

This set of 28 AEI portrays agricultural production systems, farm management practices, pressures and risks to the environment and the state of natural resources. Some of these indicators are already operational, whereas others still need substantial improvement before they can be published.

This chapter will give a glimpse of the information provided by some of the agri-environmental indicators on:

- agricultural energy consumption;
- specialisation of agriculture;
- intensification of agriculture;
- greenhouse gas emissions from agriculture;
- irrigation areas.

Most of the indicators combine different kinds of data with the utilised agricultural area (UAA), that is, the total area taken up by arable land (including temporary grassland and fallow land), permanent grassland, permanent crops and kitchen gardens. Except for intensification, the UAA data used in this chapter, as well as all the other data of specialisation and irrigation, come from the Farm Structure Survey (FSS) and thus relate to all the agricultural holdings with:

- utilised agricultural area of 1 ha or more,
- utilised agricultural area less than 1 ha if it market produce on a certain scale or if its production units exceed certain natural thresholds.

(1) COM(2006) 508 final.

In contrast, the data used to analyse the intensification of agriculture (including the UAA) come from the Farm Accountancy Data Network (FADN) and thus relate to a subset of FSS holdings where only commercial farms<sup>(2)</sup> are included.

For more information on the 28 indicators and for access to regional data, go to:

[http://epp.eurostat.ec.europa.eu/portal/page/portal/agri\\_environmental\\_indicators/introduction](http://epp.eurostat.ec.europa.eu/portal/page/portal/agri_environmental_indicators/introduction)

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<sup>(2)</sup> A commercial farm is defined as a farm which is large enough to provide a main activity for the farmer and a level of income sufficient to support his or her family. In practical terms, in order to be classified as commercial, a farm must exceed a minimum economic size, the threshold depending on the country and the year.

## 4.1 Agricultural energy consumption

Energy is consumed directly by agriculture with the use of machinery (e.g. cultivation of fields with tractors) and the heating of livestock stables and greenhouses. Agriculture also uses energy indirectly, for the production of agrochemicals, farm machinery and buildings. Considerable amounts of natural gas are used for the production of inorganic nitrogen fertilisers.

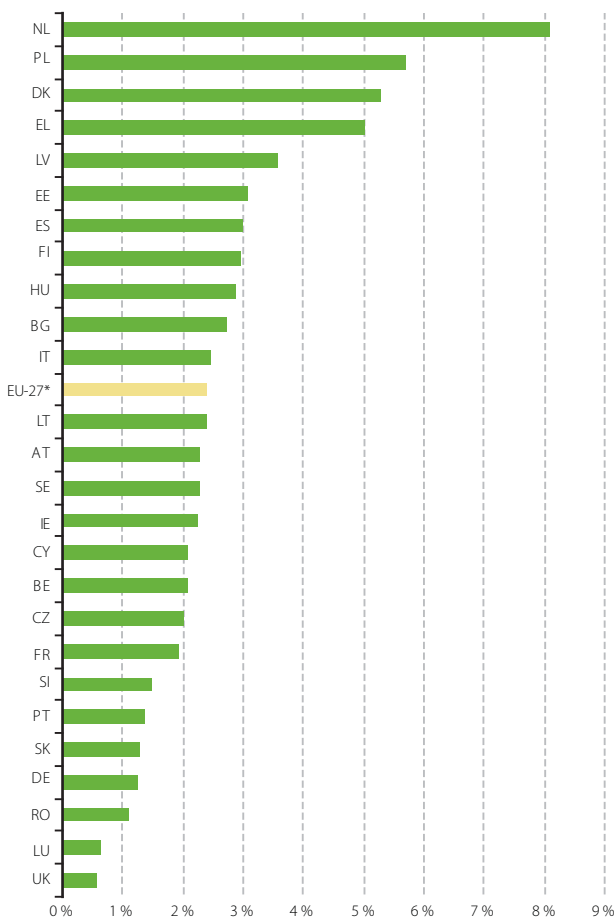
The use of machinery and mineral fertilisers has made it possible to increase agricultural productivity and food supply. However, agriculture, as an energy user, contributes to the depletion of non-renewable energy sources and to global warming (CO<sub>2</sub> emissions from fossil fuel combustion). Internationally, climate change and the need to avoid its potential consequences are being addressed through the United Nations Framework Convention on Climate Change (UNFCCC). The EU has been taking steps to limit its greenhouse gas emissions already since the early 1990s.

This subchapter focuses only on agriculture's **direct use of energy**. Indirect use is not included. Please note that these figures also cover energy used in forestry, which is assumed to be non-significant in most countries relative to agriculture.

The total consumption of energy by agriculture in the EU-27 has decreased by -7 % since 2005, from 29 939 kilo tonnes of oil equivalent to 27 826 in 2007 (see Table 4.1.1). Tonne(s) of oil equivalent, abbreviated as TOE, is a normalised unit of energy. By convention, it is equivalent to the approximate amount of energy that can be released by burning one tonne of crude oil. It is a standardised unit, assigned a net calorific value of 41 868 kilojoules per kilogram and may be used to compare energy from different sources.

Figure 4.1.1 shows the share of agriculture in the final energy consumption of all energy products, in the EU-27 Member States, in 2007. This indicator relates to the relative contribution of agriculture to the total energy consumption of a Member State.

**Figure 4.1.1:** Share of agriculture in total final energy consumption, 2007



Source: Eurostat, Energy Statistics 2007 ([nrg\\_100a](#)).

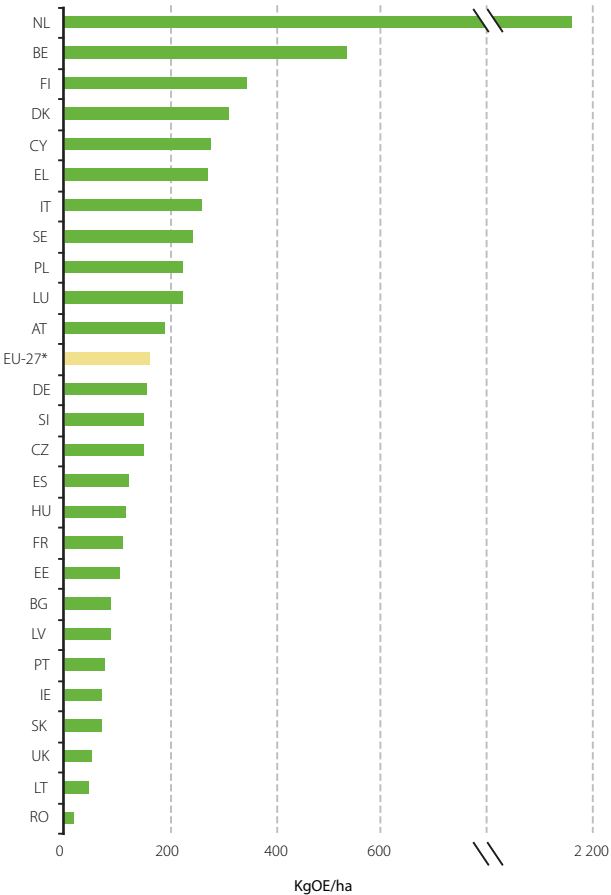
\*: EU-27 aggregate does not include Malta, due to lack of data.

The share of agriculture in final energy consumption by all sectors, in the EU-27 on average, has been steadily declining, from 2.7 % in 2000 to 2.4 % in 2007. In 2007, the share of energy consumed by agriculture varied widely among Member States, with 8.1 % in the Netherlands and 0.6 % in the United Kingdom. However, this indicator does not say much about the intensity of energy use by agriculture in a Member State. The share of

agriculture in final energy consumption in Member States also depends on the size of the agricultural sector, the use of energy in other sectors, and the size of other sectors.

Figure 4.1.2 shows the final energy consumption of all energy products by agriculture in kilograms of oil equivalent per hectare (KgOE/ha) of utilised agricultural area (UAA) in the EU-27 Member States, in 2007.

**Figure 4.1.2:** Final energy consumption by agriculture per hectare of UAA, 2007



Source: Eurostat, Energy Statistics ([nrg\\_100a](#)) and Farm Structure Survey ([aei\\_ps\\_alt](#)), 2007.

\*: EU-27 aggregate does not include Malta, due to lack of data.

This indicator takes into account the size of the agricultural sector by relating agricultural energy consumption to the UAA, thus allowing comparisons between Member States. In the new Member States, the energy consumed per hectare (118 KgOE/ha, excluding Malta) is on average lower than in old Member States (178 KgOE/ha, but only 147 KgOE/ha if the Netherlands are excluded). In the EU-27, average energy consumption is 161 KgOE/ha (excluding Malta).

Energy consumption in agriculture varies widely across livestock and crop production systems. So this indicator also reflects differences in farming systems. Energy consumed per hectare is by far the highest in the Netherlands, with 2 166 KgOE/ha. The high intensity of production involving heated glasshouses, the most energy-consuming type of crop production, accounts for most of this. A possible development for this indicator is the breakdown of energy use by agriculture by type of farming (see 4.2).



**Table 4.1.1:** Final energy consumption and UAA, 2007

	Final energy consumption — Thousand tonnes of oil equivalent (KTOE)		Utilised Agricultural Area - Hectare (ha)
	Total	Agriculture	
<b>EU-27</b>	1 157 654 <sup>p</sup>	27 826 <sup>p</sup>	172 485 050
BE	34 874	734	1 374 430
BG	9 781	268	3 050 740
CZ	25 763	518	3 518 070
DK	15 711	830	2 662 590
DE	210 294 <sup>p</sup>	2 623	16 931 900
EE	3 007	92	906 830
IE	13 213	297	4 139 240
EL	21 957	1 098	4 076 230
ES	98 703 <sup>p</sup>	2 978	24 892 520
FR	154 036	2 961	27 476 930
IT	132 058	3 258	12 744 200
CY	1 900	40	146 000
LV	4 364	155	1 773 840
LT	4 963	119	2 648 950
LU	4 379	29 <sup>p</sup>	130 880
HU	16 946	491	4 228 580
MT	427	: (-)	10 330
NL	51 326	4 146	1 914 330
AT	26 537	602	3 189 110
PL	61 239	3 493	15 477 190
PT	18 813	258	3 472 940
RO	24 022	261	13 753 050
SI	4 873	73	488 770
SK	10 501	136	1 936 620
FI	26 579	789	2 292 290
SE	33 455	756	3 118 000
UK	147 933	821	16 130 490

Source: Eurostat, Energy statistics ([nrg\\_100a](#)) and Farm Structure Survey ([aei\\_ps\\_alt](#)), 2007.

- Not applicable or real zero or zero by default

: Not available

<sup>p</sup>Provisional

## 4.2 Specialisation of agriculture

Agricultural holdings can be described by their activities (raising cattle, raising pigs, cultivating arable crops, horticulture, etc). Some farms earn income from diverse activities, while others specialise. Specialisation describes the trend towards a single dominant activity in farm income: an agricultural holding is said to be specialised when a particular activity provides a Standard Gross Margin<sup>(3)</sup> (SGM) of at least two-thirds of the total SGM of the holding.

Specialisation changes land use towards less diverse cropping and/or livestock patterns, due to more concentration on a limited number of products. A less diverse cropping/livestock pattern may cause a loss of diversity in farmland habitats, as well as in associated flora and fauna, crop varieties and livestock breeds, leading to overall reduction of genetic diversity.

Specialisation towards crops or livestock may also affect the nutrient balance of a holding. Fertilisers and manure contain large amounts of nutrients (e.g. phosphorus, nitrogen) and crops use these nutrients to grow. However, the amount of nutrients a crop can take up is limited, and the excess can leak into water, soil and air, causing a range of environmental problems.

Specialised **livestock holdings** with little or no crop area or pasture are likely to have a nutrient surplus, as it is not possible to spread all of the manure produced on the farm on crop area or pastures belonging to the holding without severe risks to the environment. This can be mitigated if the farmer is able to export excess manure to neighbouring farms with large crop areas. However, when a whole region is specialised in livestock breeding, manure disposal can be very problematic, as high transport costs may make the transport of manure to other regions prohibitively expensive.

Specialist **crop holdings**, on the other hand, may face a nutrient deficit and have to import nutrients. Due to the low availability of manure, regions specialised in cropping tend to rely on mineral fertilisers which are produced with high amounts of energy and contribute to greenhouse gas emissions (see 4.1 and 4.4).

However, some specialised systems have positive impacts on the environment. For instance, extensive cattle and sheep grazing in mountainous regions can be highly specialised, but have a

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(3) The standard gross margin (SGM) for a holding or an activity estimates its gross margin as the difference between the gross production and the variable specific costs.

positive impact on the conservation of high-value EU habitats and associated biodiversity.

The environmental effects of mixed farming are less obvious. Diversification can improve income security and thus the viability of a farm, by spreading risks over several activities. If one activity fails, say, because of animal or crop disease, other activities may still render income. A specialised holding, on the other hand, mainly depends on a single activity. If this fails, the viability of the entire holding may be at stake. Farmers ceasing activities in marginal areas may mean loss of agricultural habitats and soil erosion. Diversification could potentially prevent land abandonment in such areas.

The distribution of crop-specialist, livestock-specialist and mixed-farming holdings remained rather stable between 2003 and 2007. In 2007 in the EU-27, 40 % of agricultural holdings<sup>(4)</sup> were specialised in cropping (field crops, horticulture, permanent crops), 22 % in livestock (grazing livestock, granivores<sup>(5)</sup>) and 38 % were mixed-farming holdings (mixed cropping, mixed livestock, mixed cropping/livestock).

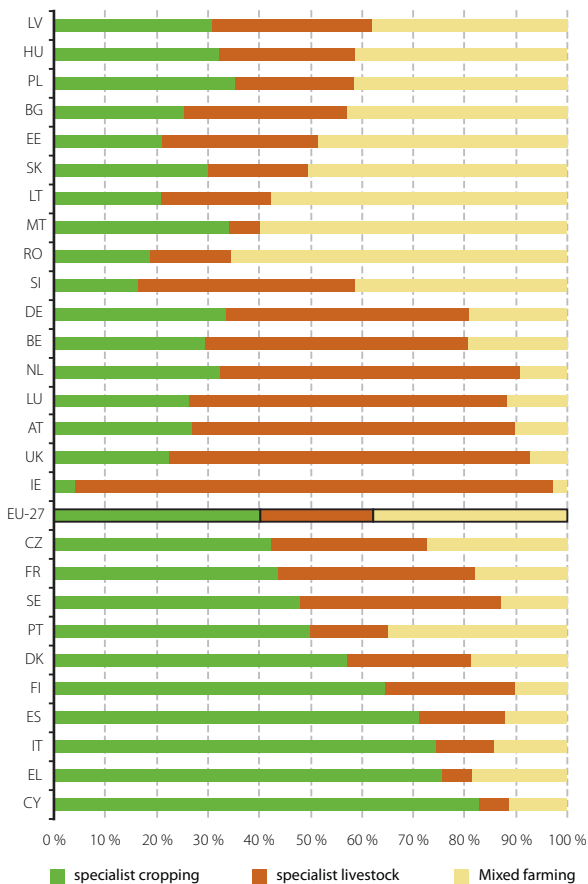
Figure 4.2.1 shows there is much diversity in combinations of specialised and mixed farming. In the Mediterranean and Scandinavian countries, specialist cropping is the dominant farm type. Specialist livestock is the dominant farm type in parts of Western Europe (i.e. Ireland, UK, Benelux, Germany). In most new Member States, mixed farming is the dominant farm type.

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<sup>(4)</sup> Excluding non-classifiable holdings.

<sup>(5)</sup> Granivores is a term used for animals mainly feeding on cereals, i.e. pigs and poultry.

Figure 4.2.1: Specialisation of farm holdings in the EU-27, 2007

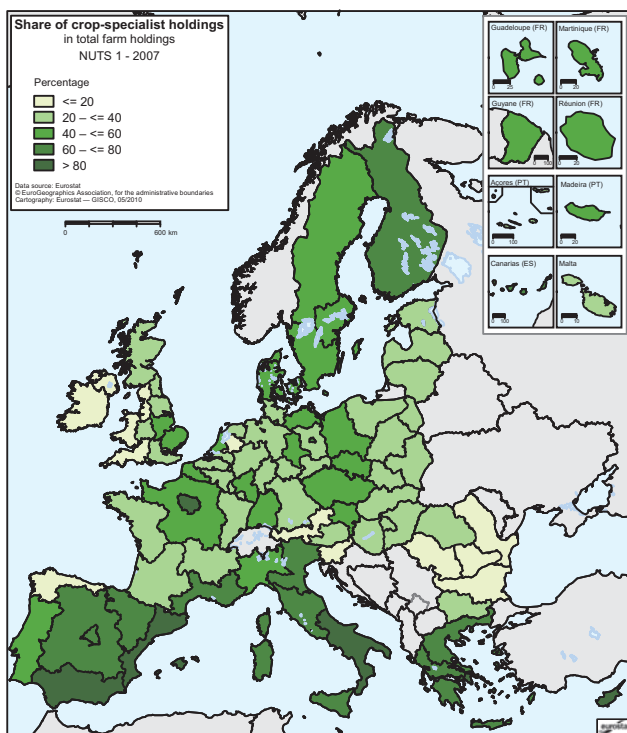


Source: Eurostat, Farm Structure Survey 2007 (aei\_ps\_sm)

Specialisation is often, but not always, associated with intensification. The Netherlands, for instance, have both a high share of specialist holdings and a high share of the utilised agricultural area (UAA) managed by high-input holdings (see Figure 4.3.1). However, specialisation can also be found in more extensive agriculture, for instance, in Ireland, where the share of specialised holdings in 2007 is 97 %, while almost half the UAA is managed by low-input holdings.

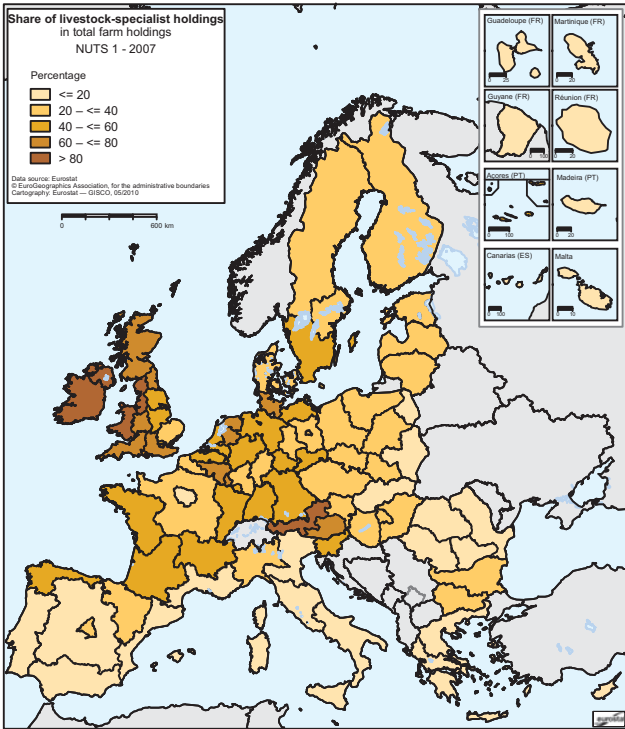
Figure 4.2.2 shows the regional variation of farm specialisation in cropping in the EU-27 in 2007. The specialisation in cropping is rather high in most regions of the Iberian Peninsula, Italy and Greece. As can also be seen in Figure 4.2.3 the share of specialist livestock holdings is rather low in these areas. A high specialisation in cropping may result in a higher need for mineral fertilisers, as manure is less available. However, farms differ in size. Therefore a large share of holdings specialised in cropping does not necessarily mean that also a large part of the UAA is managed by specialist crop holdings. A minority of large specialist livestock holdings may produce enough manure to meet the requirements of a majority specialised in cropping.

**Figure 4.2.2:** Share of crop-specialist holdings in total farm holdings in the EU-27 in 2007



Source: Eurostat, Farm Structure Survey 2007 ([aei\\_ps\\_sm](#))

**Figure 4.2.3:** Share of livestock-specialist holdings in total farm holdings in the EU-27 in 2007



Source: Eurostat, Farm Structure Survey 2007 ([aei\\_ps\\_sm](#))

**Table 4.2.1:** Number of agricultural holdings per farm type, 2007  
Number of holdings

	Specialist farming:					Mixed farming:		
	Field crops	Horticulture	Permanent crops	Grazing livestock	Granivores	Cropping	Livestock	Crops-livestock
<b>EU-27</b>	2 743 760	230 930	2 416 800	2 220 930	725 630	1 584 970	1 553 040	1 952 920
BE	8 270	3 840	2 000	21 590	2 980	1 080	2 210	5 930
BG	74 460	15 090	32 350	90 800	60 260	46 780	74 410	84 160
CZ	10 170	880	5 640	10 480	1 460	2 860	2 180	5 670
DK	24 250	760	520	8 900	1 820	880	300	7 190
DE	82 510	9 300	32 300	163 140	12 460	9 830	13 350	47 610
EE	4 200	390	330	7 010	100	2 780	4 310	4 210
IE	4 900	350	50	119 090	430	70	270	3 000
EL	185 650	16 980	448 290	47 720	3 220	96 270	18 910	43 120
ES	152 450	42 080	544 210	153 400	21 700	64 950	26 270	33 550
FR	124 440	13 150	91 980	191 340	11 060	22 090	19 020	53 480
IT	404 230	28 830	805 490	179 750	8 740	159 860	16 670	59 540
CY	3 900	1 270	27 820	1 940	390	3 250	220	1 040
LV	30 330	400	2 590	32 350	1 150	11 100	11 900	17 930



	Specialist farming:					Mixed farming:		
	Field crops	Horticulture	Permanent crops	Grazing livestock	Granivores	Cropping	Livestock	Crops-livestock
LT	43 120	2 670	2 230	48 930	600	42 760	46 620	43 310
LU	170	20	410	1 380	40	20	70	180
HU	95 840	8 150	93 170	22 810	140 060	65 580	93 550	95 050
MT	1 840	1 170	650	400	250	1 740	240	4 420
NL	11 370	9 050	4 450	39 130	5 770	1 350	1 810	3 810
AT	27 560	1 200	16 060	96 100	7 340	2 960	3 580	10 200
PL	647 290	36 290	126 070	408 320	116 610	213 170	238 720	493 130
PT	28 010	7 620	101 380	37 750	4 290	47 150	17 640	30 730
RO	644 290	22 610	62 820	315 120	308 750	759 480	938 700	858 990
SI	4 830	480	6 970	31 600	330	11 460	10 630	9 040
SK	16 060	270	4 380	10 550	2 900	13 420	7 030	14 360
FI	40 890	2 550	550	16 300	910	1 060	170	5 710
SE	33 200	1 000	480	27 510	830	840	570	7 970
UK	39 530	4 530	3 610	137 520	11 180	2 180	3 690	9 590

Source: Eurostat, Farm Structure Survey 2007 (aei\_ps\_sm)

### 4.3 Intensification of agriculture

This indicator relates to the cost of inputs per hectare of utilised agricultural area (UAA). The inputs considered here are purchased fertilisers and soil improvers, pesticides (i.e. plant protection products, traps and baits, bird scarers, anti-hail shells, frost protection) and purchased feed.

Inputs such as fertilisers, plant protection products (PPP) and animal feed concentrates are very important for agricultural production. Although the use of these inputs can increase agricultural production, they can also have a negative impact on the environment.

In the case of PPP, biochemical properties such as mobility, degradation time span or the persistence and toxicity of residues determine the potential harmful effects of a product on the environment, i.e. soil, water, air and non-target organisms (fish and other aquatic organisms, birds, beneficial insects, soil microorganisms, plants, etc.).

Use of fertilisers is associated with a risk of nutrient losses, of accumulation of nutrients in the soil and water bodies, and of potential degradation of ecosystems.

Feed concentrates can have a direct environmental impact stemming from the area and process of production: global warming, conversion of rainforests into arable land, and cultivation of genetically-modified varieties. Furthermore, animal feedstuffs can also have an indirect impact on the environment. Animal feedstuffs differ in nutrient contents and digestibility, leading to differences in manure production and nutrient contents of manure, affecting greenhouse gas emissions (see 4.4), ammonia emissions and nutrient leaching to surface and groundwater.

Though many environmental problems are generally associated with intensification, extensification can also lead to negative impacts, especially through soil degradation and erosion. Intensive agriculture need not threaten the environment if products are used properly. To analyse possible pressures on the environment, data on soil and water quality should also be taken into account.

The indicator does not express the real volumes of inputs used, but the cost of the inputs purchased. Inputs not purchased, but produced on-farm, such as livestock manure and fodder, are not included, as their value is difficult to estimate. The expenditure on inputs is therefore only an approximation of inputs used, in the absence of data on trends in the volumes of inputs used. To

estimate the level of input use independently of price fluctuations overtime, expenditure is divided by the corresponding price indices; however price differences among countries are not corrected.

The overall level of expenditure on fertilisers, pesticides and feed-stuffs reflects not only differences in the volume of inputs used, but also differences in farming systems and practices. For instance, the mix of inputs used in greenhouse farming is different to that for livestock breeding. Prices for different kinds of inputs vary, so high expenditure on inputs does not necessarily mean high volumes are used. It may reflect high prices for certain inputs.

In this indicator, farms are classified into three intensity categories, low, high and medium, according to the level of input expenditure (in Euro) per hectare of utilised agricultural area (UAA). The thresholds for the categories have been set in such a way that the UAA in the EU-15 is equally distributed for the first year of the analysis (1995). Farms spending less than 125 €/ha are classified as low intensity, those spending more than 295 €/ha as high intensity, and those with intermediate spending are considered to be medium-intensity farms

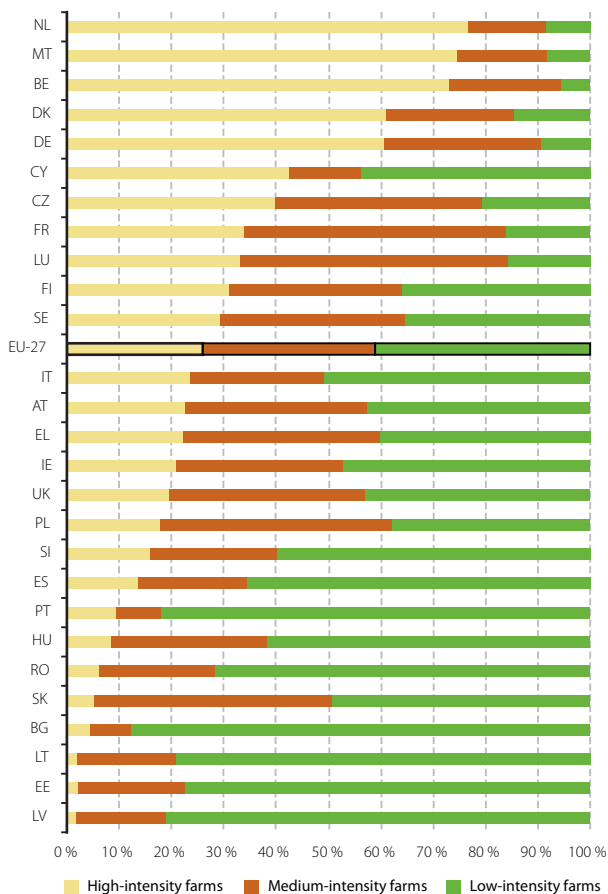
The process of **intensification** can be defined as an increase of the share of UAA managed by high-intensity farms and/or a decrease of the share managed by low-intensity farms. **Extensification** is characterised by a decrease in the former and/or an increase in the latter. These processes can both take place in a Member State at the same time. This occurs if the share of medium-intensity farming decreases, while both the share of low- and high-intensity farming in a Member State increases.

The indicator shows a different trend for the old Member States (EU-15) and the new Member States (NMS-10<sup>(6)</sup>) over the period 2004–2007. Extensification was very slight but continuous in the EU-15, whereas marked intensification took place in the NMS-10. However, the input expenditure per hectare was much lower in the NMS-10 than in the EU-15: the share of UAA managed by high-intensity farms rose from 11 % to 16 % in the NMS-10 and slightly decreased from 32 % to 31 % for the EU-15. At the same time, the UAA managed by low-intensity farms fell from 55 % to 47 % in the NMS-10, while it increased from 32 % to 36 % in the EU-15. The trend in each Member State can, however, be significantly different from the EU average. For instance, Germany experienced intensification during 2004–2007.

<sup>(6)</sup> Data for Romania and Bulgaria were not available over this period.

Figure 4.3.1 shows the share of UAA managed by low-, medium- and high-intensity farms in the EU-27 in 2007.

**Figure 4.3.1:** Share of UAA managed by low-, medium- and high-intensity farms in the EU-27, 2007



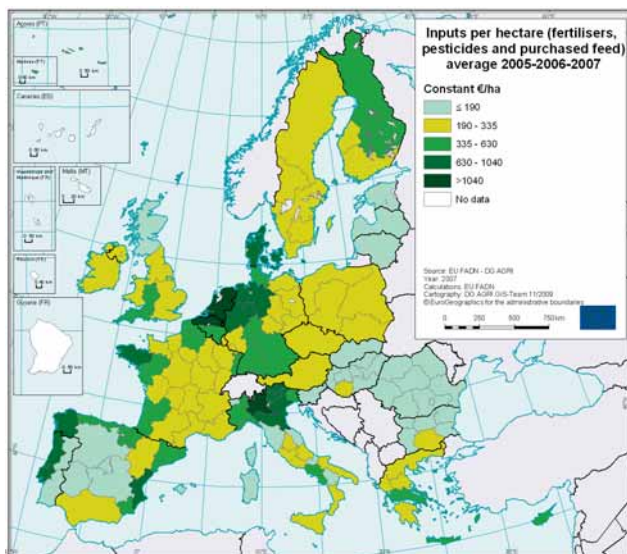
Source: DG AGRI, FADN, 2007 (Eurostat, [aei\\_ps\\_inp](#))

Malta, Cyprus and the Czech Republic's share of UAA managed by highly intensive farms is comparable to that of the old Member States. The Iberian Peninsula, on the other hand, has a relatively small share of intensive farms compared to the EU-15 average. This figure shows also that both the share of UAA managed by high-intensity farms and by low-intensity farms can be large, as is the case in Cyprus.

Highly intensive farms dominated the 2007 pattern for the Netherlands, Malta and Belgium. These Member States also have the highest livestock density (in livestock units per hectare) and the highest average use of inputs (in Euro per hectare). The high density of livestock and use of inputs in these countries may lead to an excess of nutrients applied to the soil, which could leach to soil, water and air. The risk of leaching however cannot be assessed only by looking at the input side, it depends also on agricultural productivity (removal of nutrients with the harvest of crops), how and when the inputs are applied, etc. Nutrient balances are therefore developed to assess the risks by taking into account all nutrient inputs and outputs to agricultural soils and farmer practices related to nutrient management.

Figure 4.3.2 shows the farm input expenditure per hectare at regional level (average 2005–2006–2007).

**Figure 4.3.2:** Regional distribution of input expenditure per hectare, average 2005–2006–2007



Source: DG AGRI, FADN

NB: Data available for Bulgaria and Romania only in 2007.

In this figure, average expenditure on inputs has been calculated at a regional level. This figure already shows that expenditure on inputs can vary considerably among regions within a Member State. Though on average, input expenditure in Portugal is rather low (< 190 €/ha, see Table 4.3.1), average spending on inputs in the western coastal regions is quite high (between 630 – 1 040 €/ha).

**Table 4.3.1:** Intensity classification and input expenditure per hectare of UAA

	UAA managed by farms classified in 2007 as:			Inputs per hectare (fertilisers, pesticides, feed)		
	High-intensity	Medium-intensity	Low-intensity	2005	2006	2007
	Hectares			Constant €/ha		
<b>EU-27</b>	40 684 556	50 799 517	63 336 883	:	:	317
BE	1 031 390	302 027	77 310	1 006	1 034	1 088
BG	131 111	238 263	2 607 734	:	:	108
CZ	1 382 832	1 381 502	715 130	210	230	275
DK	1 608 567	647 027	379 839	852	790	811
DE	9 506 962	4 626 943	1 484 465	416	455	502
EE	18 057	189 704	707 808	77	85	83
IE	1 005 611	1 538 975	2 269 242	209	216	215
EL	844 833	1 422 564	1 530 006	324	315	297
ES	2 864 880	4 349 717	13 755 529	223	242	223
FR	9 292 589	13 825 839	4 398 602	340	333	336
IT	2 973 252	3 229 218	6 357 851	511	433	399
CY	60 194	18 924	62 054	608	526	544
LV	24 527	247 172	1 154 260	83	95	93
LT	43 411	384 940	1 611 851	77	94	82
LU	43 290	66 366	20 491	321	315	305
HU	368 268	1 305 034	2 694 012	172	155	162
MT	3 621	836	391	5 037	4 893	5 059
NL	1 478 526	283 599	165 107	1 482	1 607	1 639
AT	548 833	848 931	1 039 845	287	286	248
PL	2 342 764	5 880 378	4 970 509	223	255	259
PT	263 316	252 286	2 320 805	179	182	170
RO	508 113	1 909 883	6 063 285	:	:	125
SI	76 461	114 651	283 293	169	183	158
SK	105 216	919 085	996 223	111	131	142
FI	653 663	690 215	759 102	340	323	291
SE	753 342	906 577	913 343	273	296	274
UK	2 750 929	5 218 861	5 998 796	270	262	253

Source: DG AGRI, Farm Accountancy Data Network (FADN) (Eurostat, [aei\\_ps\\_inp](#))

## 4.4 Greenhouse gas emissions from agriculture

Greenhouse gas emissions contribute to climate change as they trap heat in the atmosphere.

Agriculture is highly exposed to climate change, which may have an impact on yields, location of production, costs of production, etc. with potential risks for food supply, agricultural product prices and farm income.

Some greenhouse gases, for instance, CO<sub>2</sub>, occur naturally and are emitted to the atmosphere through natural processes and human activities. Others (e.g. fluorinated gases) are generated and emitted solely through human activities (e.g. industrial processes).

The main agricultural sources of greenhouse gas emissions are:

- methane (CH<sub>4</sub>) emissions through enteric fermentation<sup>(7)</sup> in ruminant animals (i.e. cattle, sheep and goats);
- nitrous oxide (N<sub>2</sub>O) emissions through soil denitrification<sup>(8)</sup>;
- CH<sub>4</sub> and N<sub>2</sub>O emissions from manure decomposition.

These biochemical processes generally depend on climatic, soil, agronomic and technological conditions which can affect the anaerobic activity of microorganisms present in animals' rumen, agricultural soils and manure storage facilities. Methane and nitrous oxide emissions are therefore closely related to livestock production.

The indicator is expressed in CO<sub>2</sub>-equivalents, as different greenhouse gases have different global warming potential. All greenhouse gases have what is called a Global Warming Potential (GWP). This value is used to compare the abilities of different greenhouse gases to trap heat in the atmosphere. GWPs are based on the heat-absorbing ability of each gas relative to that of carbon dioxide (CO<sub>2</sub>), as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years). By assigning a GWP value it allows policy makers to compare the impacts of emissions and reductions of different

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(7) Enteric fermentation is a natural part of the digestive process for many ruminant animals where anaerobic microbes, decompose and ferment food in the rumen (a special stomach), that are then absorbed by the ruminant. Because this digestion process is not 100 percent efficient, some of the food energy is lost in the form of methane. Measures to mitigate enteric fermentation would not only reduce emissions, they may also raise animal productivity by increasing digestive efficiency.

(8) Nitrous oxide is produced in soils through the processes of nitrification and denitrification. Nitrification is the aerobic microbial oxidation of ammonium to nitrate, and denitrification is the anaerobic microbial reduction of nitrate to nitrogen gas (N<sub>2</sub>).

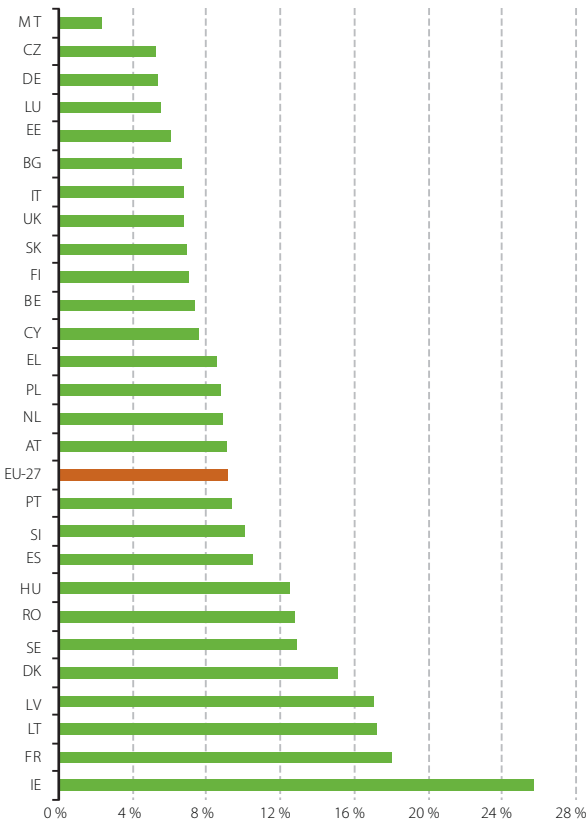


gases. For instance, methane is a significant contributor to the greenhouse effect and has a GWP of 21. This means methane is approximately 21 times more heat-absorptive than carbon dioxide per unit of weight. Nitrous oxide is even 310 times more heat-absorptive than carbon dioxide per unit of weight.

Greenhouse gas emissions from fuel combustion in agriculture (e.g. related to the use of farm machinery) and those attributed to land use, land use change and forestry are not included here.

Figure 4.4.1 shows the share of agriculture in total greenhouse gas emissions in 2007 (EU-27).

**Figure 4.4.1:** Share of agriculture in total greenhouse gas emissions, 2007

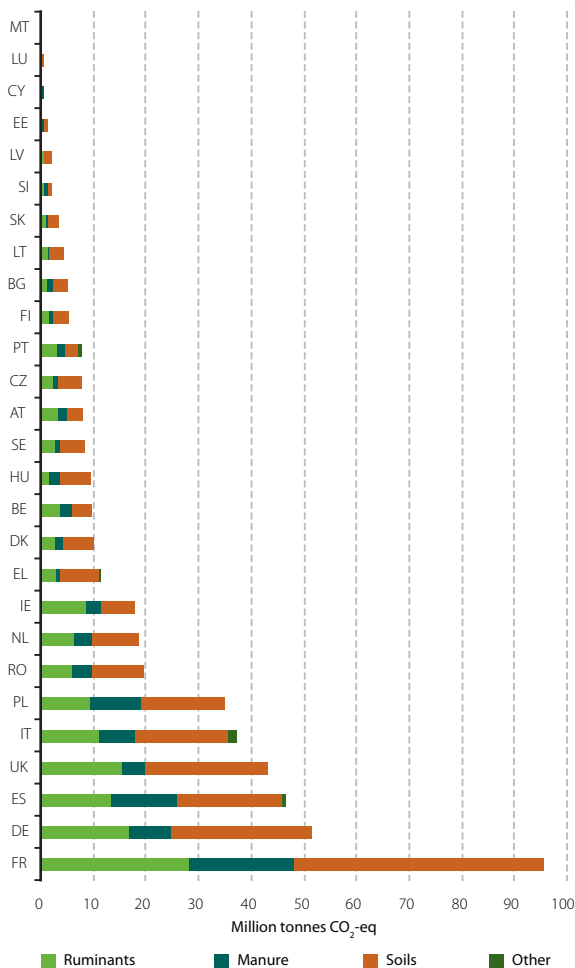


Source: European Environment Agency/European Topic Centre on Air and Climate Change, UN Framework Convention on Climate Change

The share of greenhouse gas emissions from agriculture varies between 25.6 % in Ireland and 2.3 % in Malta. On average in the EU-27, agriculture contributes significantly to greenhouse gas emissions, with a share of 9.2 % in 2007.

Figure 4.4.2 shows greenhouse gas emissions from agriculture by source in absolute terms in the EU-27 Member States (2007).

**Figure 4.4.2:** GHG emissions from agriculture, by source, 2007

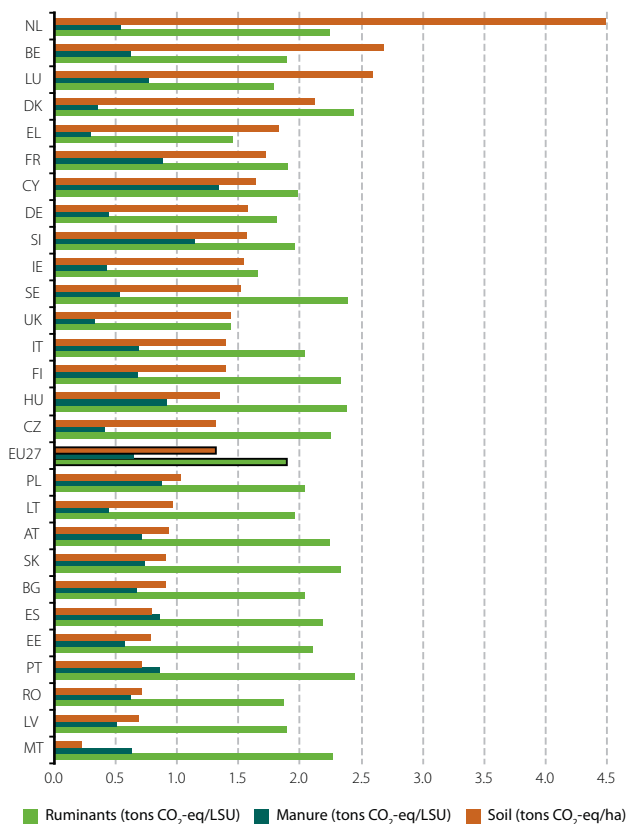


Source: European Environment Agency / European Topic Centre on Air and Climate Change, UN Framework Convention on Climate Change

As greenhouse gas emissions are related to the size of the agricultural sector, it is not surprising that countries with large UAA and livestock populations contribute the most to greenhouse gas emissions from agriculture. In 2007, soil denitrification made up almost half of agricultural greenhouse gas emissions in the EU-27 (see Table 4.4.1), while ruminants were responsible for nearly a third, and manure management for nearly a fifth of agricultural emissions. Field burning of agricultural residues and rice cultivation were only minor contributors to greenhouse gas emissions in EU-27, mainly in Mediterranean countries.

Figure 4.4.3 also presents greenhouse gas emissions from agricultural sources in 2007, but relative to the size of the ruminant and other livestock populations (expressed in Livestock Units) and the UAA. On average, greenhouse gas emissions in the EU-27 stood at 1.3 tonnes/ha for soil denitrification, 1.9 tonnes/LSU for fermentation in ruminants, and 0.6 tonnes/LSU for manure management.

**Figure 4.4.3:** Intensity of GHG emissions from the main agricultural sources, 2007



Source: European Environment Agency/European Topic Centre on Air and Climate Change, UN Framework Convention on Climate Change and Eurostat FSS 2007.

Looking at manure decomposition, Cyprus has the highest greenhouse gas emissions per LSU and Greece the lowest. These differences can relate to differences in livestock breeds, animal feeding, manure storage facilities, etc. Emissions from agricultural soils (per hectare of UAA) are highest in the Netherlands. This is mainly related to the high livestock density (which results in a high use of manure) and the high use of mineral fertilisers (see 4.3).

To fully understand the complex relation between agricultural production and greenhouse gas emissions, other indicators such as manure storage, mineral fertiliser consumption and nitrogen balances are being developed.

**Table 4.4.1:** Greenhouse gas emissions, million tonnes CO<sub>2</sub>-equivalent, 2007

	Total greenhouse gas emissions (excluding LULUCF <sup>1</sup> )	Greenhouse gas emissions from agriculture			
		Total	Fermentation in ruminants	Manure decomposition	Soil denitrification
<b>EU-27</b>	5 045	462	145	88	226
BE	131	10	4	2	4
BG	76	5	1	1	3
CZ	151	8	2	1	5
DK	67	10	3	2	6
DE	956	51	17	8	27
EE	22	1	0	0	1
IE	69	18	9	3	6
EL	132	11	3	1	7
ES	442	46	14	12	20
FR	531	96	28	20	47
IT	553	37	11	7	18
CY	10	1	0	0	0
LV	12	2	1	0	1
LT	25	4	1	0	3
LU	13	1	0	0	0
HU	76	9	2	2	6
MT	3	0	0	0	0
NL	208	18	6	4	9
AT	88	8	3	2	3
PL	399	35	9	10	16
PT	82	8	3	2	2
RO	152	20	6	4	10
SI	21	2	1	1	1
SK	47	3	1	1	2
FI	78	6	2	1	3
SE	65	8	3	1	5
UK	637	43	15	5	23

Source: European Environment Agency/European Topic Centre on Air and Climate Change, UN Framework Convention on Climate Change

<sup>1</sup> Land use, land-use change and forestry (LULUCF) is defined by the UN Climate Change Secretariat as 'A greenhouse gas inventory sector that covers emissions and removals of greenhouse gases resulting from direct human-induced land use, land-use change and forestry activities'.

## 4.5 Irrigation

Irrigation fosters crop production by bringing water to plants, which is absolutely essential if plants are to grow in some areas. Irrigation increases productivity and therefore contributes significantly to agricultural output and food supply. However, irrigation is a major driving force behind water abstraction, which can eventually lead to environmental problems. In particular, availability problems occur when the demand for water exceeds the amount available during a certain period. The environmental impacts of irrigation are variable but some can be very severe, especially in the southern Member States. The use of water in agriculture for irrigation is also continuously under pressure from other users of fresh water (e.g. urban population, industry), as fresh water is a scarce resource throughout the world.

Across Europe, the main types of environmental impact arising from irrigation are:

- water pollution from nutrients and pesticides due to increased run-off;
- damage to habitats and aquifer exhaustion due to abstraction of water;
- salinisation of groundwater sources or contamination of water by minerals;
- ecological effects of large-scale water transfers associated with irrigation projects;
- soil erosion arising both from intensive irrigation and from the abandonment of formerly hand-irrigated terrace agriculture in the hills.

Trends in water abstraction rates depend on different factors: crop variety (examples of water-intensive crops are potatoes in northern Europe and cotton, grain maize, rice and fruit in southern Europe), irrigation area, irrigation technology, water prices, water restrictions, pumping costs and climate conditions. Farmers may select crops that require more water during the growing season, or that have growth periods more sensitive to soil moisture stress. Because of these varying factors, irrigated areas change from year to year and irrigable areas, defined as the total area equipped for irrigation, are used instead to present irrigation trends. The irrigated area is the area which is actually irrigated at least once a year. Crops under glass and kitchen gardens, which are assumed to be generally irrigable and irrigated, are not considered here.

However, before intensive water use can be considered to have a negative impact on the environment, water use for irrigation, among other uses in other sectors, should be compared with water availability at local level. Moreover, the water sources used for irrigation also matter, e.g. surface water can be replenished much faster than groundwater.

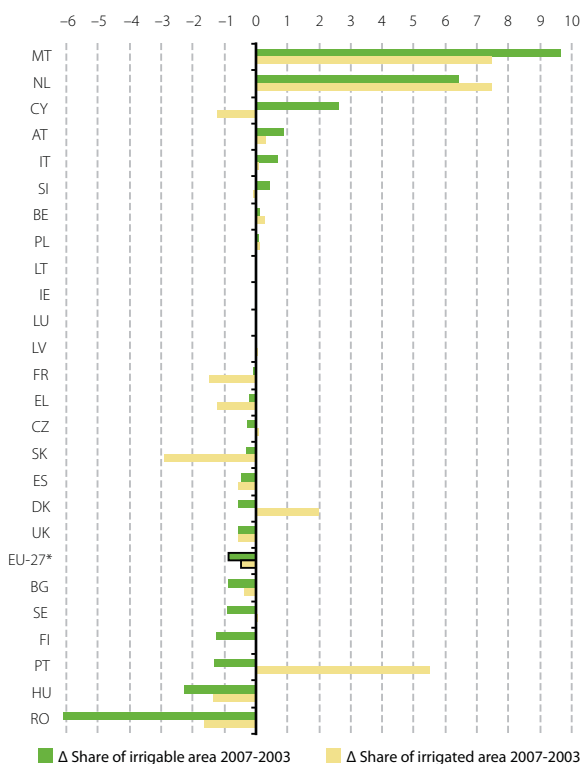
The share of the irrigable area in total UAA in the EU-27 (excluding Germany and Estonia)<sup>(9)</sup> in 2007 was 9.8 %, while the share of the actual irrigated area was only 6.7 %. The share of irrigable area in total UAA is the largest in the Mediterranean countries Greece (38.2 %), Malta (31.0 %), Cyprus (31.4 %) and Italy (31.0 %). In the Netherlands the irrigable area was also quite large (23.9 %); however, only 10.6 % of the UAA was actually irrigated in 2007.

The total irrigable area in the EU-27 (excluding Germany and Estonia) decreased by – 8.2 % from 2003 to 2007. The actual irrigated area decreased less (– 6.5 %). There are great variations from region to region and between countries. In southern European countries full irrigation is an essential element in many types of agricultural production. In central and northern European countries, supplementary irrigation is generally used to improve production in dry summers, especially when the dry period occurs at a sensitive crop growth stage. Ireland and Luxembourg did not declare irrigable or irrigated areas in 2003 and 2007 whereas Finland had an area equipped for irrigation but did not actually irrigate.

Figure 4.5.1 shows the change in shares of irrigable and irrigated area in the total UAA between 2003 and 2007. The difference is presented in percentage points. The share of irrigable area increased in Malta from 21.3 % to 31.0 %, an increase of more than + 9.7 percentage points, while the share of irrigated area rose from 19.7 % to 27.2 %. The share of irrigable area also increased significantly in the Netherlands between 2003 and 2007; however, the share of actually irrigated area increased even more in the same period. In Romania the shares of irrigable and irrigated areas decreased significantly. In Portugal and Denmark irrigation intensified as the share of irrigated area increased while the share of irrigable area decreased.

<sup>(9)</sup> Data for Germany and Estonia are not available.

**Figure 4.5.1:** Difference in the share of irrigable and irrigated areas in total UAA, difference in % points, 2003–2007



Source: Eurostat ([aei\\_ps\\_ira](#)).

\* EU-27 aggregate does not include Germany and Estonia, due to lack of data. Irrigable and irrigated areas in Luxemburg and Ireland were zero in both years.

The changes observed in irrigation could be caused by changes in the cropping pattern (towards less or more water-intensive crops) and the share of irrigated areas by crop. To analyse these influences on irrigation, data on crop areas and irrigated areas for individual crops are needed. Data on irrigated areas by crop are not available after 2003. Therefore it is not possible to see whether the change in irrigation between 2003 and 2007 may have been influenced by changes in cropping patterns and irrigation of crops.

Irrigable and irrigated areas alone give no indication of the intensity of water use, which also depends on the type of equipment used. Sprinkler and drop irrigation methods are less water-intensive

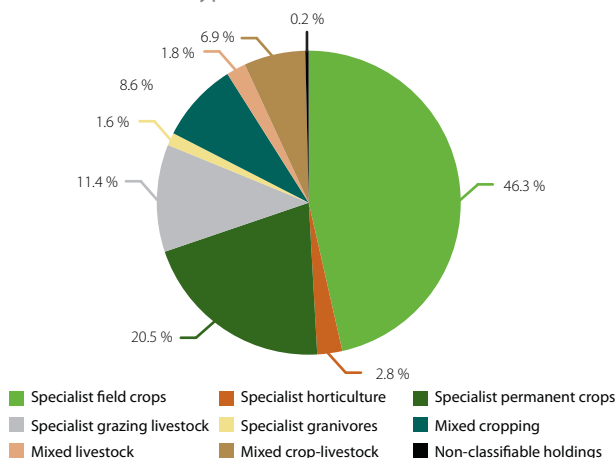


than surface irrigation (also called 'flood irrigation'), which still predominates in some countries. Equipment for drop irrigation is more expensive than for other irrigation methods and this system therefore tends to be concentrated in areas with high-value crops. Given that data on the actual volumes of water used for irrigation are quite difficult to collect, data on irrigation areas and methods can be used to estimate the volume. However, data on irrigation methods used are for the moment only available for 2003.

Irrigation can lead to water pollution from pesticides and nutrients due to increased run-off. Lack of rotation and diversification on specialist holdings takes away key self-regulating mechanisms, turning monocultures into highly vulnerable agri-systems. Therefore crop-specialist holdings have a greater risk of pesticide and nutrient leaching than other types of farm. However, the actual risk of nutrient and pesticide pollution from farming depends on the combination of farm management practices such as the amount of water, pesticides and nutrients used, the irrigation, plant protection and fertilisation techniques, or the timing and method of application.

Figure 4.5.2 shows the share of irrigable area managed by different farm types in the EU-27 (excluding Germany and Estonia) in 2007. The largest share of irrigable area in 2007 was managed by crop-specialist holdings, as farms specialised in field crops, horticulture and permanent crops altogether accounted for 69.6 %, while holdings specialised in grazing livestock and granivores managed 13.0 % of the irrigable area. Mixed farming accounted for 17.3 % and 2.16 % of the irrigable area was managed by non-classifiable holdings. Although some countries experienced significant changes between 2003 and 2007, the distribution over farm types changed very little in the EU-27 (excluding Germany and Estonia) as a whole. The most significant changes occurred in the share managed by holdings specialised in field crops, which decreased from 48.7 % in 2003 to 46.3 % in 2007, and in the share managed by holdings specialised in permanent crops, which increased from 18.5 % to 20.5 %.

**Figure 4.5.2:** Share of irrigable area managed by the different farm types in the EU-27\*, 2007



Source: Eurostat, Farm Structure Survey.

\* EU-27 aggregate does not include Germany and Estonia, due to lack of data.

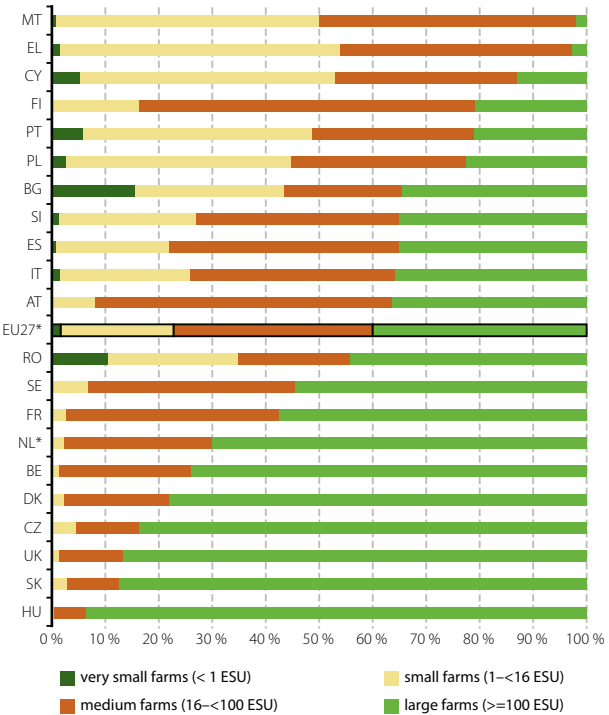
Figure 4.5.3 shows the share of irrigable area managed by holdings of different economic size in the EU-27<sup>(10)</sup> in 2007. In the EU-27 (Germany, Estonia, Latvia and Lithuania excluded), 39.9 % of the irrigable area was managed by large farms (>=100 ESU<sup>(11)</sup>) and 22.7 % by small and very small farms (<16 ESU).

However, the share of UAA managed by large farms in the EU-27 (Germany, Estonia, Latvia and Lithuania excluded) in 2007 was only 29.0 %, whereas the share of UAA managed by small and very small farms was 32.4 %. Thus it seems that, in general, irrigation (measured by the irrigable area) was more common on large farms than on small and very small farms, although the situation was the opposite in Portugal, Bulgaria and Cyprus. In Bulgaria the share of irrigable area managed by very small and small farms was 43.4 %, whereas the share of total UAA managed by these farms was 21.4 %. In most Member States the irrigable area managed by very small farms (<1ESU) is negligible; however, in Portugal, Bulgaria, Romania and Cyprus the irrigable area managed by very small farms is significant (5–10 %).

<sup>(10)</sup> Germany, Estonia, Latvia and Lithuania are not included, due to missing data.

<sup>(11)</sup> Economic Size Unit, see Chapter 1.

**Figure 4.5.3:** Share of irrigable area managed by farms of different economic sizes, 2007



Source: Eurostat, Farm Structure Survey 2007.

\* EU-27 aggregate does not include Ireland, Luxembourg, Germany, Estonia, Latvia and Lithuania. Farm holdings <2 ESU are not included for the Netherlands, due to lack of data.

**Table 4.5.1:** Total UAA, irrigable and irrigated areas in the EU-27 in 2003 and 2007. (Hectares)

	2003			2007		
	Total UAA	Total irrigable area	Total irrigated area	Total UAA	Total irrigable area	Total irrigated area
<b>EU27*</b>	155 016 960	16 443 280	11 067 910	154 646 320	15 091 510	10 345 270
BE	1 394 400	21 810	1 850	1 374 430	23 350	5 680
BG	2 904 480	124 480	79 370	3 050 740	104 580	72 640
CZ	3 631 550	49 090	16 860	3 518 070	38 530	19 910
DK	2 658 210	448 820	201 480	2 662 590	435 350	254 140
IE	4 298 150	0	0	4 139 240	0	0
EL	3 967 770	1 521 600	1 294 400	4 076 230	1 555 310	1 279 520
ES	25 175 260	3 828 110	3 437 370	24 892 520	3 671 340	3 266 330
FR	27 795 240	2 723 700	1 938 730	27 476 930	2 670 340	1 511 730
IT	13 115 810	3 977 210	2 732 730	12 744 200	3 950 500	2 666 210
CY	156 380	44 930	35 410	146 000	45 790	31 260
LV	1 489 350	1 150	0	1 773 840	830	620
LT	2 490 960	740		2 648 950	1 340	1 000
LU	128 160	0	0	130 880	0	0
HU	4 352 370	242 170	148 690	4 228 580	140 940	87 620
MT	10 790	2 300	2 130	10 330	3 200	2 810
NL	2 007 250	350 570	62 190	1 914 330	457 240	202 260
AT	3 257 220	90 420	34 230	3 189 110	116 070	43 440
PL	14 426 320	98 420	46 910	15 477 190	115 710	72 060
PT	3 725 190	674 800	248 040	3 472 940	583 740	421 520
RO	13 930 710	1 510 820	400 520	13 753 050	615 330	173 450
SI	486 470	1 880	1 880	488 770	4 100	1 620
SK	2 137 500	209 070	104 560	1 936 620	183 290	39 090
FI	2 244 700	103 800	0	2 292 290	76 750	0
SE	3 126 910	188 460	53 440	3 118 000	159 690	54 170
UK	16 105 810	228 930	227 120	16 130 490	138 190	138 190

Source: Eurostat ([aei\\_ps\\_ira](#)).

\* EU-27 aggregate does not include Germany and Estonia, due to lack of data.

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**Ageing in rural areas**



## 5 Ageing in rural areas

This chapter presents regional population data (NUTS 3 level) based on the OECD concept dividing the EU in rural, intermediate and urban areas (map 5.0).

This typology distinguishes two hierarchical levels, local and regional. At the local level (LAU1/2) rural communities are defined as having a population density below 150 inhabitants per square kilometre.

At NUTS level 3 (districts) larger functional or administrative units are distinguished by their degree of rurality, depending on what share of the region's population lives in rural communities.

Three types of areas (TOA) are used:

- Predominantly rural areas: >50 % of the population living in rural communities (PR).
- Intermediate areas: 15–50 % of the population living in rural communities (IN).
- Predominantly urban areas: <15 % of the population living in rural communities (PU).

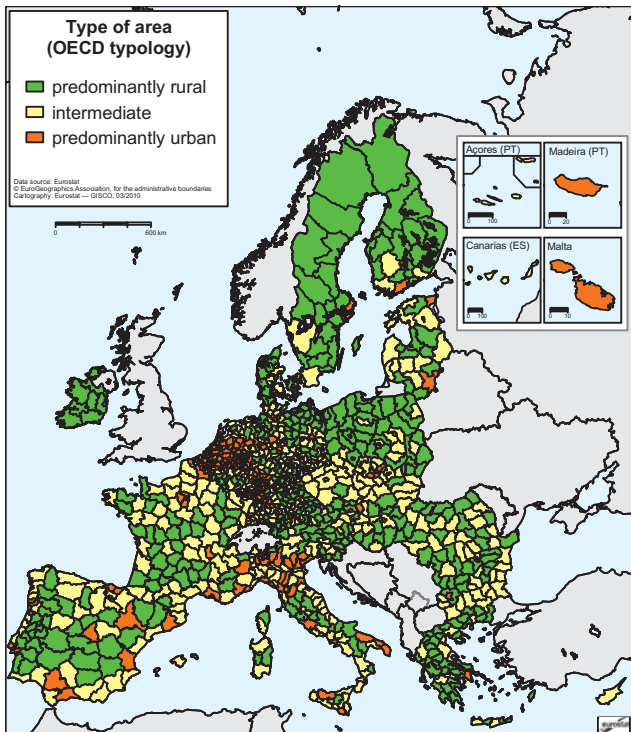
Moreover, when a NUTS3 area includes a city with more than 200 000 inhabitants, the area is classified as intermediate. If an area includes a city with more than 500 000 inhabitants, the area is classified as urban.

The population changes for 1158 NUTS 3 areas of 26 Member States (no data available for the United Kingdom) for the period from 2001 to 2006 were analysed in the light of their degree of rurality and taking into account the three main age groups (0 to 14 years, 15 to 64 years, 65 years and over).

In this analysis ageing is defined as the increase over time of the percentage share of people aged 65 and over in the total population of a given area.

For most of the 26 Member States appearing in this comparison, population figures of 1 January 2001 and 1 January 2006 were used. Exemptions are: Ireland – 28 April 2002 and 23 April 2006, Slovakia – 1 January 2002, Greece – 18 March 2001 and 1 January 2007.

**Map 5.0:** Distribution of rural, intermediate and urban areas in the European Union



\*Data for UK not available



## 5.1 Total population in rural areas grows less than in urban areas

Although the total population of the EU was growing from 2001 to 2006, it is important to know where exactly and how the three age groups behave.

The general trend was that the youngest age group observed (0–14 years) was decreasing while the oldest one (65 years and over) grew.

### Rapid decrease in the number of children and their proportion in the population

Table 5.1.1 illustrates that the EU population is ageing. Although the population of the EU is growing, this is mainly due to an increase of the population aged 65 and over, while the 0 to 14 years group is shrinking.

### Clear contrast between ‘new’ and ‘old’ Member States

The ‘old’ Member States (EU-15(-UK)) underwent a different evolution than the ‘new’ Member States (NMS-12). While the population was increasing in the old Member States, the population in the new Member States was decreasing (table 5.1.1). The youngest age group in particular declined significantly in number in the ‘new’ Member States (map 5.3.2). On the other hand, the age group which grew the most was the one with people aged 65 and over (map 5.3.4), where a much bigger increase in the ‘old’ Member States is observed than in the ‘new’ Member States. More details on the relative changes of the old age group by Member State are presented in table 5.3.1.

### The share of the population aged 65 and over goes up

Ageing is influenced not simply by the increase of the number of people aged 65 and over but also by the decrease in numbers of young people. Both developments lead to a considerable change of the share of the population aged 65 and over in the total population.

Table 5.1.2 gives an overview of the shares of the three age groups for 2001 and 2006 and their changes for the different types of areas for EU aggregates. In addition, the last column of table 5.3.1 shows the percentage share of the population aged 65 and over in the different Member States in 2001 and 2006. The changes are biggest (>1.5 % points) in Germany, Greece and Latvia, indicating a rapid ageing of their populations. However, in southern Member States (France, Spain, Portugal, Italy), where this group already accounts for more than 20 % of the rural population (highlighted in table 5.3.1 in yellow), the change from 2001 to 2006 is smaller or even negative (Spain).

**Table 5.1.1** : Change in number of persons in EU, 2001–2006

	Change of total population (persons)	Change in number of persons (%)		
		Age classes		
		0–14 y	15–64 y	65+ y
EU-27 (-UK)	8 217 047	-3 075 049	5 330 939	5 961 157
	(+1.9)	(-4.4)	(+1.9)	(+8.9)
EU-15 (-UK)	9 708 045	-473 689	4 972 546	5 209 188
	(+3.0)	(-0.9)	(+2.3)	(+9.8)
NMS-12*	-1 490 998	-2 601 360	358 393	751 969
	(-1.4)	(-14.0)	(+0.5)	(+5.3)

Source: Eurostat ([reg\\_pjanagegr3](#))

\*NMS: Member States which acceded the EU on 1 May 2004 and 1 January 2007

**Table 5.1.2:** Change of shares of the three age groups for the different TOAs\* from 2001 to 2006 for EU-aggregates

TOA*	Composition 2001 (%)			Composition 2006 (%)			Change in composition (%points)		
	0-14	15-64	65+	0-14	15-64	65+	0-14	15-64	65+
Aggregate	2001	2001	2001	2006	2006	2006	2001-2006	2001-2006	2001-2006
PR	17.81	65.96	16.23	16.16	66.60	17.25	-1.65	0.64	1.01
IN	16.98	67.30	15.72	15.77	67.47	16.76	-1.20	0.16	1.04
PU	15.64	68.59	15.77	15.13	67.95	16.92	-0.51	-0.64	1.15
PR	16.81	64.97	18.22	15.82	64.89	19.29	-1.00	-0.08	1.08
IN	16.61	66.60	16.80	15.85	66.33	17.82	-0.75	-0.27	1.02
PU	15.78	68.27	15.95	15.39	67.50	17.11	-0.39	-0.77	1.16
PR	19.23	67.39	13.38	16.66	69.13	14.21	-2.57	1.74	0.83
IN	17.82	68.92	13.26	15.58	70.19	14.23	-2.24	1.27	0.97
PU	14.41	71.36	14.23	12.78	72.03	15.19	-1.63	0.67	0.96

Source: Eurostat (reg\_pjanagegr3)

\*TOA: type of area (PR = predominantly rural, IN = intermediate or PU = predominantly urban)

## 5.2 Ageing continues and is more pronounced in urban areas

As can be seen from the last column of table 5.3.1, the share of the people aged 65 and over increased in almost all Member States (except Spain) or remained on a similar level (Ireland, Sweden).

The absolute increase of the number of people aged 65 and over of almost 6 million (table 5.1.1) is unevenly distributed amongst the Member States (table 5.2.1 and figure 5.2.1). Only 9, mainly old, Member States account for more than 90 % of this increase.

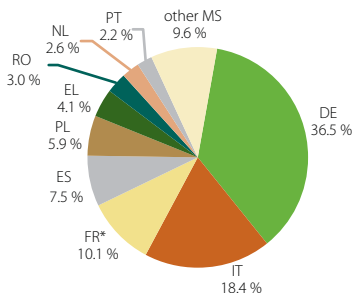
**Table 5.2.1:** Population share, 2006, and distribution of the increase of population aged 65 and over by Member State, 2001–2006

Member State	Share of (in %)	
	EU-27 (-UK) population	Increase of population aged 65 and over
	2006	2001–2006
DE	19.1	36.5
FR*	14.2	10.1
IT	13.6	18.4
ES	10.4	7.5
PL	8.8	5.9
RO	5.0	3.0
NL	3.8	2.6
EL	2.6	4.1
PT	2.4	2.2
remaining	20.1	9.6

Source: Eurostat ([reg\\_pjanagegr3](#))

\* FR: excluding overseas territories

**Figure 5.2.1:** Distribution of the increase of population aged 65 and over by Member State, 2001–2006



Source: Eurostat ([reg\\_pjanagegr3](#))

\* FR: excluding overseas territories

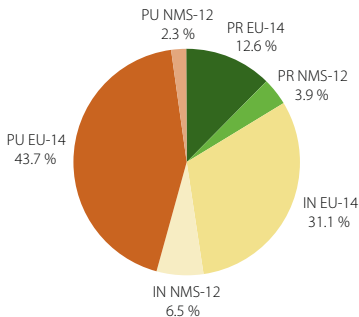
Table 5.2.2 and figure 5.2.2 show that 46 % of this increase can be attributed to urban areas, in which in 2006 40 % of the EU-27 (-UK) population lived, and only 16.5 % to rural areas, which was the home of 21.4 % of the EU-27 ( UK) population at the same time.

**Table 5.2.2:** Population share 2006 and distribution of the increase of population aged 65 and over by type of area, 2001–2006

Aggregate	Share of (in %)	
	EU-27 (-UK) population	Increase of population aged 65 and over
	2006	2001–2006
PR EU-15 (-UK)	12.8	12.6
PR NMS-12	8.6	3.9
IN EU-15 (-UK)	27.0	31.1
IN NMS-12	11.3	6.5
PU EU-15 (-UK)	36.3	43.7
PU NMS-12	4.0	2.3

Source: Eurostat ([reg\\_pjanagegr3](#))

**Figure 5.2.2:** Distribution of the increase of population aged 65 and over by type of area, 2001–2006



Source: Eurostat ([reg\\_pjanagegr3](#))

### 5.3 Specific effects are visible

As maps 5.3.2–5.3.5 show, the population of Spain grew significantly from 2001 to 2006, and in particular the NUTS3 areas in the north east and along the Mediterranean coast have shown high growth rates. This is visible in all three age groups and mainly due to immigration.

The south and the west of France also show considerable population growth. The two most probable factors involved are the relatively high fertility rates in France during recent years and immigration.

Also, in Northern Italy, a remarkable population growth rate can be observed, which can mainly be attributed to immigration rather than to an increase in fertility.

Although population growth in Ireland is almost a tradition, the growth observed has also to an extent been influenced by immigration boosted by the good economical evolution at the beginning of the millennium.

On the other hand, most of the NMS-12 have lost a considerable percentage of their population within the observed period. This phenomenon appears especially in Bulgaria (map 5.3.2), where the population decreased by more than 5 % overall, with rural areas having lost more than 10 %. Most significant is the fact that in many of these countries the percentage of children diminished considerably (up to 17 %).

While in most old Member States the 65 years and over group grew a lot – by almost 10 % – the same group did not grow to that extent in the NMS (map 5.3.4), although the observed differences are huge (>17 % in Cyprus, >12 % in Malta, –0.2 % in Bulgaria).

In rural areas of Bulgaria, the oldest age group diminished by more than 4 %. This means that more people left this age group (most probably they died) than those who entered it from the working age population. This is a unique phenomenon for the European Union.

#### East-west contrast observed in Germany

Germany is a special case because within the country there is a clearly visible east west divide. While most of the NUTS3 areas in the east lost population to a big extent – only Berlin and its surroundings seem to form an island of growth – the south and the north west of the country gained. The most alarming fact

for the demographic future of the eastern German NUTS3 areas – including Berlin and surroundings - is the evolution of the youngest age group, which decreased in some NUTS3 areas by more than 30 % (map 5.3.2).

### **North-south contrast observed in Italy**

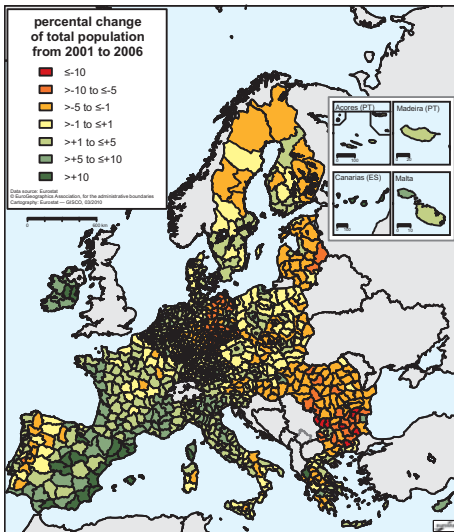
In Italy, as in Germany, there was a clear geographical divide but this time on a north south basis, the population of the north increasing while that of the south decreased. However, this divide is by far less significant than that of Germany.

### **European champion for the increase of the population aged 65 and over is Germany**

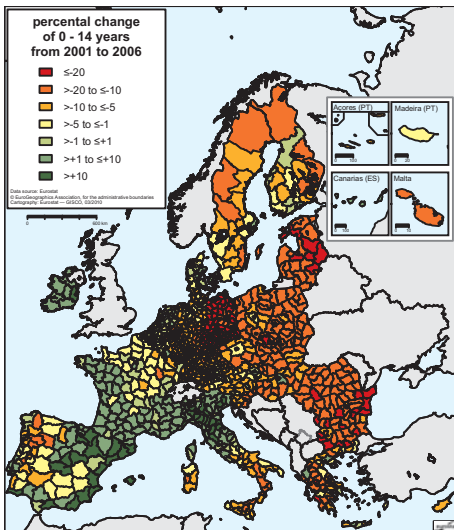
Map 5.3.4 shows that a common feature of the demographic development in Germany is the high increase of the oldest age group which is not limited only to the east, but also covers big parts of the territory of former West Germany.

No other Member State is affected by this evolution to that extent. Only in Northern Greece is a similar concentration of ageing NUTS3 areas visible. This evolution is also reflected in tables 5.2.1, and 5.3.1.

**Map 5.3.1:** Development of the EU\* population from 2001 to 2006

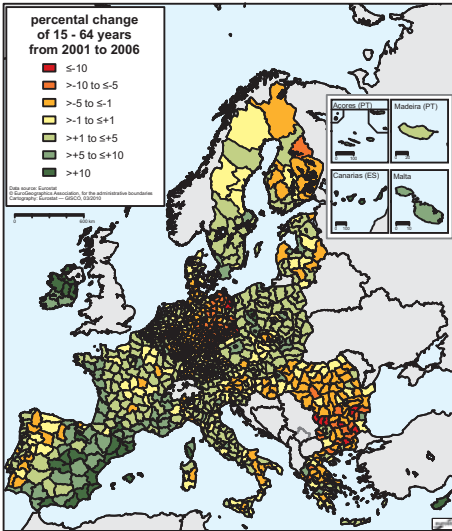


**Map 5.3.2:** Development of the EU\* population aged 0–14 from 2001 to 2006



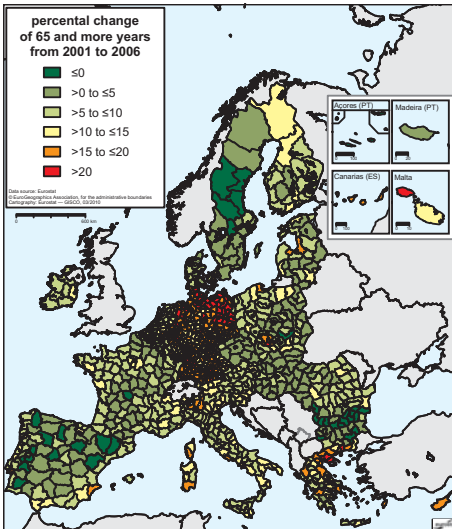


**Map 5.3.3:** Development of the EU\* population aged 15–64 from 2001 to 2006



\*Data for UK not available

**Map 5.3.4:** Development of the EU\* population aged 65 and over from 2001 to 2006



Source: Eurostat

**Table 5.3.1:** Population changes in percent from 2001–2006, by aggregate, Member State and TOA\* and the share of the population aged 65 and over 2001 and 2006

Aggregate/ Member State	TOA*	No. of NUTS 3 areas	% change from 2001 to 2006				Share of population aged 65+ (%)	
			tot. pop.	0–14 y	15–64 y	65+ y	2001	2006
<b>EU-27 (-UK)</b>	total	1 158	1.9	-4.4	1.9	8.9	15.9	16.9
	PR	392	0.3	-9.0	1.2	6.5	16.2	17.2
	IN	430	2.0	-5.2	2.3	8.8	15.7	16.8
	PU	336	2.8	-0.6	1.8	10.3	15.8	16.9
<b>EU-15 (-UK)</b>	total	944	3.0	-0.9	2.3	9.8	16.6	17.7
	PR	294	1.6	-4.5	1.4	7.6	18.2	19.3
	IN	336	3.5	-1.2	3.1	9.8	16.8	17.8
	PU	314	3.2	0.7	2.1	10.8	15.9	17.1
<b>NMS-12</b>	total	214	-1.4	-14.0	0.5	5.3	13.5	14.4
	PR	98	-1.6	-14.7	1.0	4.6	13.4	14.2
	IN	94	-1.4	-13.8	0.5	5.9	13.3	14.2
	PU	22	-1.3	-12.5	-0.3	5.4	14.2	15.2
<b>BE</b>	national	43	2.4	-0.5	2.6	4.6	16.9	17.2
	PR	6	3.2	-1.7	4.7	3.2	16.6	16.6
	IN	10	2.5	-1.9	3.5	3.5	16.8	17.0
	PU	27	2.4	-0.2	2.5	4.8	16.9	17.3
<b>BG</b>	national	28	-5.3	-17.3	-3.8	-0.2	16.3	17.2
	PR	11	-10.0	-21.1	-8.9	-4.1	17.9	19.1
	IN	16	-4.7	-16.9	-3.3	1.2	16.1	17.1
	PU	1	0.8	-11.5	2.8	2.3	14.6	14.8
<b>CZ</b>	national	14	-0.2	-9.8	1.6	2.4	13.9	14.2
	PR	1	-0.6	-11.7	1.3	4.0	13.8	14.4
	IN	12	-0.2	-9.8	1.4	3.4	13.5	14.0
	PU	1	0.0	-9.0	2.8	-4.3	16.3	15.6
<b>DK</b>	national	15	1.5	2.2	0.7	3.9	14.8	15.2
	PR	8	0.7	-0.4	0.1	4.5	15.7	16.2
	IN	4	2.8	3.7	1.7	6.7	14.0	14.5
	PU	3	1.1	4.0	0.5	0.3	14.5	14.4
<b>DE</b>	national	429	0.2	-8.8	-1.6	15.9	16.6	19.3
	PR	89	-1.1	-13.1	-2.5	17.0	16.4	19.4
	IN	151	-0.2	-10.6	-2.0	17.3	16.5	19.4
	PU	189	0.7	-6.8	-1.1	14.9	16.8	19.1

Aggregate/ Member State	TOA*	No. of NUTS 3 areas	% change from 2001 to 2006				Share of population aged 65+ (%)	
			tot. pop.	0-14 y	15-64 y	65+ y	2001	2006
EE	national	5	-1.6	-16.5	0.1	8.4	15.2	16.7
	PR	1	-1.9	-19.4	2.2	4.0	15.5	16.4
	IN	3	-1.3	-15.6	0.2	8.8	15.0	16.5
	PU	1	-3.4	-19.3	-2.7	9.6	16.0	18.2
IE	national	8	8.2	4.5	9.6	7.3	11.1	11.0
	PR	7	9.2	5.7	10.8	7.3	11.5	11.3
	PU	1	5.7	1.1	6.7	7.5	10.2	10.3
EL	national	51	2.2	-3.9	0.8	13.5	16.7	18.6
	PR	37	-0.4	-9.4	-1.4	10.3	19.3	21.4
	IN	13	4.0	-1.7	2.4	16.8	15.6	17.6
	PU	1	3.5	0.6	1.7	15.4	14.8	16.5
ES	national	52	8.8	9.1	9.3	6.4	17.1	16.7
	PR	17	4.0	-0.4	6.0	1.1	21.7	21.1
	IN	25	9.5	8.1	10.3	7.4	16.8	16.5
	PU	10	9.5	12.9	9.2	7.5	16.0	15.7
FR**	national	96	3.6	0.9	3.7	6.3	16.1	16.6
	PR	36	3.2	0.9	3.1	5.4	20.3	20.8
	IN	49	3.9	0.6	4.0	7.0	16.1	16.6
	PU	11	3.4	1.2	3.6	5.6	13.6	13.9
IT	national	103	3.1	2.0	1.4	10.4	18.4	19.7
	PR	19	1.7	-2.9	0.9	7.7	19.8	20.9
	IN	50	2.6	-0.7	1.5	9.0	19.0	20.2
	PU	34	3.8	4.8	1.4	12.0	17.8	19.2
CY	national	1	9.9	-9.2	15.0	17.4	11.3	12.1
LV	national	6	-3.0	-19.8	-0.9	7.0	15.2	16.8
	PR	3	-0.8	-19.6	2.3	9.8	14.3	15.8
	IN	2	-4.8	-22.0	-2.1	4.0	15.6	17.0
	PU	1	-3.8	-17.5	-3.5	6.8	16.1	17.8
LT	national	10	-2.4	-18.4	0.5	6.2	14.1	15.3
	PR	4	-3.7	-20.1	0.1	2.1	16.0	16.9
	IN	5	-2.9	-18.5	0.0	6.3	14.0	15.3
	PU	1	-0.3	-16.6	2.0	10.0	12.9	14.2
LU	national	1	6.9	4.1	7.3	8.3	13.9	14.1
HU	national	20	-1.2	-8.2	-0.4	3.0	15.1	15.8
	PR	11	-2.2	-10.6	-1.2	2.8	15.1	15.9
	IN	8	0.8	-6.2	1.5	5.6	14.0	14.7
	PU	1	-3.5	-7.0	-3.3	-1.7	17.8	18.1
MT	national	2	3.3	-10.4	5.6	12.7	12.3	13.4

Aggre- gate/ Member State	TOA*	No. of NUTS 3 areas	% change from 2001 to 2006				Share of population aged 65+ (%)	
			tot. pop.	0-14 y	15-64 y	65+ y	2001	2006
NL	national	40	2.2	0.2	1.7	7.2	13.6	14.3
	PR	1	2.1	0.3	1.3	8.1	15.3	16.1
	IN	12	3.3	1.5	3.1	6.9	13.9	14.4
	PU	27	2.0	0.0	1.5	7.2	13.5	14.2
AT	national	35	2.4	-2.5	2.1	8.7	15.5	16.4
	PR	25	1.0	-5.6	0.8	9.3	15.5	16.8
	IN	8	2.6	-1.5	2.1	9.3	15.6	16.6
	PU	2	5.2	4.7	5.2	5.5	15.8	15.8
PL	national	66	-0.1	-13.9	2.3	7.4	12.4	13.3
	PR	34	0.4	-14.0	3.8	5.9	11.8	12.5
	IN	20	-0.1	-14.8	2.3	8.0	12.4	13.4
	PU	12	-1.0	-12.0	-0.7	9.5	13.4	14.9
PT	national	30	3.1	0.2	2.5	7.9	16.4	17.1
	PR	15	0.0	-5.7	0.3	2.7	22.1	22.7
	IN	8	4.0	-0.9	4.3	8.0	16.1	16.7
	PU	7	3.8	2.9	2.5	11.3	14.1	15.1
RO	national	42	-3.7	-17.0	-2.0	6.0	13.5	14.8
	PR	23	-3.4	-16.8	-1.4	5.3	14.2	15.5
	IN	18	-3.9	-17.1	-2.6	7.5	12.8	14.3
	PU	1	-3.3	-17.8	-1.6	1.7	13.8	14.5
SI	national	12	0.7	-9.6	0.9	11.2	14.1	15.6
	PR	8	0.0	-10.8	0.5	9.3	14.2	15.5
	IN	4	1.6	-8.1	1.3	13.8	14.0	15.7
SK	national	8	0.2	-11.2	2.7	3.3	11.4	11.7
	PR	2	-0.6	-12.1	1.8	2.2	12.3	12.7
	IN	5	0.4	-10.8	3.1	3.9	10.9	11.3
	PU	1	0.8	-11.6	3.0	2.7	12.0	12.2
FI	national	20	1.4	-3.1	1.2	8.2	15.0	16.0
	PR	16	0.5	-4.6	0.1	7.9	16.0	17.2
	IN	3	0.5	-3.7	0.3	6.0	16.9	17.8
	PU	1	4.2	0.5	4.0	11.5	11.4	12.2
SE	national	21	1.9	-4.3	3.5	2.3	17.2	17.3
	PR	18	0.6	-7.1	2.3	2.2	18.4	18.7
	IN	2	2.8	-3.9	5.0	2.1	17.4	17.3
	PU	1	3.7	1.8	4.3	2.9	14.2	14.1

Source: Eurostat (reg\_pjanagegr3)

\*TOA: type of area (PR = predominatly rural, IN = intermediate or PU = predominantly urban)  
 \*\* FR: excluding overseas territories

Areas with a 65+ share above 20 % are highlighted

## 5.4 Extreme changes

To illustrate how varied the situation in different NUTS3 areas can be, the following tables display extreme values for the percentage change of total population for the three age groups.

Table 5.4.1 shows the situation for the NUTS3 areas which increased or decreased the most. Not surprisingly, the list with the highest population gains is dominated by Spanish and Irish NUTS3 areas. The other extreme is dominated by Bulgarian and German NUTS3 areas. As map 5.3.1 already shows, the German NUTS3 areas in table 5.4.1 are exclusively situated in former East Germany.

A more in-depth analysis would be necessary in order to find out which age group mainly left the NUTS3 area. Very often, it is the working age group looking for employment. This age group also takes along their children (0–14 years of age) and as a result the oldest age group is left behind. This explains partly that in these NUTS3 areas their share in percent in the total population rises.

**Table 5.4.1:** 20 NUTS3 areas with highest increase/decrease of the total population, 2001–2006

NUTS3 code	Name	TOA*	Increase in %	NUTS3 code	Name	TOA*	Decrease in %
ES424	Guadalajara	IN	24.5	BG425	Kardzhali	PR	-21.3
ES521	Alicante	IN	19.7	BG313	Vratsa	PR	-17.4
ES514	Tarragona	IN	19.3	BG324	Razgrad	PR	-15.2
ES611	Almeria	IN	19.3	DED23	Hoyerswerda	PU	-15.1
ES512	Girona	IN	18.6	BG311	Vidin	PR	-13.5
ES522	Castellón	IN	15.4	BG343	Yambol	IN	-12.2
IE022	Mid-East	PR	15.2	BG325	Silistra	PR	-11.7
ES620	Murcia	IN	15.1	DE411	Frankfurt/Oder	PU	-11.6
ES425	Toledo	PR	14.8	BG312	Montana	PR	-11.5
ES617	Málaga	PU	14.5	DEG04	Suhl	PU	-11.1
ES530	Islas Baleares	IN	14.5	DE429	Spree-Neiße	IN	-11.0
DE423	Potsdam	PU	14.1	BG322	Gabrovo	IN	-10.9
ES702	Santa Cruz de Tenerife	IN	13.4	BG415	Kyustendil	IN	-9.6
ES230	La Rioja	IN	13.3	NL333	Delft en Westland	PU	-9.4
GR222	Kerkyra	IN	12.9	BG424	Smolyan	PR	-9.4
NL230	Flevoland	IN	12.7	DE801	Uecker-Randow	PR	-9.3
ES300	Madrid	PU	11.8	DE427	Oberspreewald-Lausitz	IN	-9.0
IE012	Midland	PR	11.7	DED26	Bautzen	PR	-8.8
ES513	Lleida	PR	11.6	BG315	Lovech	PR	-8.7
ES701	Las Palmas	IN	10.8	BG332	Dobrich	IN	-8.5

Source: Eurostat ([reg\\_pjanagegr3](#))

\* TOA: type of area (PR = predominantly rural, IN = intermediate or PU = predominantly urban)

# VI

**Agriculture  
in coastal regions**





## 6 Agriculture in coastal regions

### Introduction

On 10 October 2007, the Commission presented its vision for an Integrated Maritime Policy for the European Union. The vision document – also called the Blue book<sup>(1)</sup> – was accompanied by a detailed Action Plan<sup>(2)</sup>.

‘An EU Integrated Maritime Policy will focus its action primarily in the following five areas;

- Maximising the sustainable use of oceans and seas
- Building a knowledge and innovation base for the Maritime Policy
- Delivering the highest quality of life in coastal regions
- Promoting Europe’s leadership in international maritime affairs
- Raising the visibility of maritime Europe’

For the sake of greater coherence, this policy gives preference to a holistic approach, i.e. all areas or sectors concerned are taken into account. For example, the economic issues must incorporate environmental aspects and vice versa. Similarly, the development of a sector of activity will have to take account of all the sectors developed on the same territory or using the same maritime areas.

As natural boundaries between the land and the sea, the coastal regions of Europe fall quite naturally under this policy. Coastal regions inhabitants, visitors and economic activities located in these areas have a direct or indirect impact on the sea. Therefore, agricultural activities in those regions have an influence on the marine environment whereas the closeness of the sea has an impact on agriculture.

The purpose of this chapter is to present coastal regions and set out the main characteristics of their agricultural sectors. For the sake of availability consistency, most of the data relate to 2007.

(1) COM(2007)575

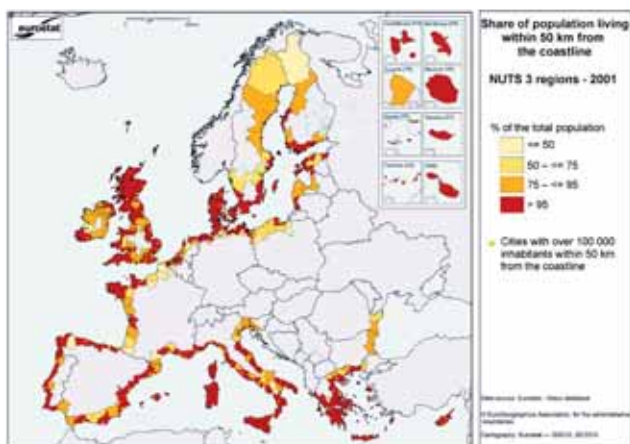
(2) SEC(2007)1278

## 6.1 Coastal regions population

In 2007, a total of 196 million<sup>(3)</sup> people lived in the 446 coastal regions of the European Union, i.e. 43 % of the population of the 22 EU countries which have a coastline.

As Map 6.1.1 shows, in 97 % of these regions more than 50 % of the inhabitants live less than 50 km from the sea. The population concentration in this coastal strip exceeds 75 % of the region's population in the case of 88 % of these regions. On average, 91 % of coastal regions inhabitants reside within 50 km of the coast. 194 cities with more than 100 000 inhabitants are also located less than 50 km from the sea. These major conurbations are home to 38 % of these regions' inhabitants. The biggest of them are London, Athinai, Napoli and Roma.

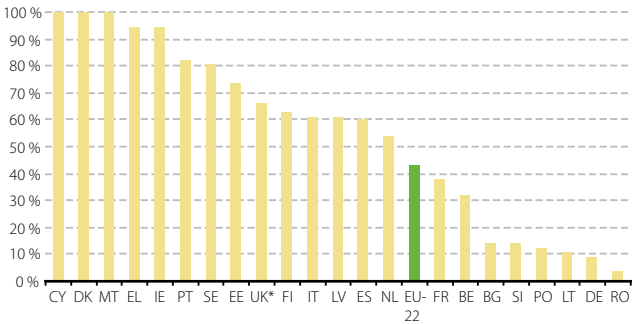
**Map 6.1.1:** Share of population living within 50 km from the coastline, NUTS 3 regions, 2001\*



Source: Eurostat, GISCO database, grid of census data 2001

(3) Excluding Northern Ireland and Scotland, for which no data are available.

**Figure 6.1.1:** Share of coastal regions population in national total, 2007



Source: Eurostat, regional statistics ([reg-pjanagegr](#)), demographic statistics ([demo-pjan](#))

The proportion of the national population living in a coastal region depends to a great extent on the country's geographical characteristics, such as the length and shape of its coastline. Thus, in the case of the island states, such as Cyprus or Malta, or peninsular states, such as Denmark, this proportion is 100 %, because all the regions in these countries are regarded as coastal. In contrast, the inhabitants of coastal regions represent only 4 % of the population in Romania and 9 % in Germany.

It should be noted that the area of the geographical units included in the definition of coastal regions (NUTS3) varies considerably from one country to another. This may result in the population of the coastal regions being overestimated for certain countries, such as Sweden and Finland. However, this overestimation is fairly limited. Indeed, even if a large proportion of the area of a coastal region is far from the coast, in most cases the inhabitants are located close to it.

However, the great variability of these areas impacts on the agricultural sector analysis. Unlike the service sector, which is positively correlated to the population concentration, agricultural activities tend to be located in less populated areas. For instance, in the Swedish region of Norrbottens Län or in the Finnish region of Lappi, a large share of these areas is far away from the sea, so the agricultural activities established in these hinterland areas interact less directly with the sea.

## 6.2 Coastal regions areas

As shown in Table 6.2.1, the EU-22 coastal regions cover around 1.77 million km<sup>2</sup>. This area represents 43 % of the area of the 22 EU countries having a sea border. Like the population data, the share of the coastal regions area largely depends on the geographical characteristics of the countries. For instance, the coastal regions area represents 100 % of the surface area of Cyprus, Malta and Denmark. Conversely, this share represents 7 % of the area of Romania and Lithuania.

The coastal strip within 50 km of the sea accounts for 31 % of the surface of the 22 EU coastal Member States. In the case of Belgium, this coastal strip covers the entire coastal regions surface area. The gap between the share of the coastal regions surface area as compared with the national area and the share of the 50 km coastal strip depends on the coastal regions width. This gap is lower than 5 points for 12 coastal Member States out of 22. On other hand, for Sweden, the coastal regions area accounts for 69 % of the national area, whereas the 50km coastal strip accounts for only 29 % of the national area (gap = 40 points).

**Table 6.2.1:** Coastal regions areas

EU countries with a sea border	Coastal regions areas km <sup>2</sup>	Share of coastal regions areas in national total	Share of coastal regions areas located within 50 km of the coastline
<b>EU-22</b>	1 773 165	43 %	31 %
Belgium	6 861	22 %	22 %
Bulgaria	16 294	15 %	12 %
Denmark	42 885	100 %	100 %
Germany	39 584	11 %	10 %
Estonia	27 921	62 %	53 %
Ireland	63 605	91 %	76 %
Greece	111 226	84 %	76 %
Spain	154 270	30 %	23 %
France	253 479	40 %	33 %
Italy	180 970	60 %	53 %
Cyprus	9 240	100 %	100 %
Latvia	24 054	37 %	30 %
Lithuania	4 773	7 %	7 %
Malta	315	100 %	100 %
Netherlands	17 765	43 %	38 %
Poland	47 960	15 %	8 %
Portugal	37 368	41 %	36 %
Romania	15 567	7 %	5 %
Slovenia	4 826	24 %	20 %
Finland	192 649	57 %	19 %
Sweden	306 466	69 %	29 %
United Kingdom	215 087	88 %	84 %

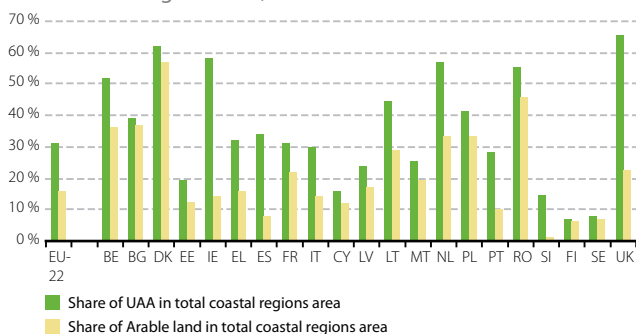
Source: Eurostat, Gisco database

### 6.3 Agricultural area in coastal regions

In 2007, the Utilised Agricultural Area (UAA) of EU-22 coastal regions was around 53.7 million <sup>(4)</sup> hectares. As shown in Figure 6.3.1, this UAA represents 31 % of the EU-22 coastal regions area. For the United Kingdom, the UAA accounts for 66 % of the national coastal regions surface. This share is 7 % for coastal regions of Finland and 8 % for coastal regions of Sweden. In view of the comments made in the previous paragraphs, the maritime influence between the agricultural sector and the sea has to take account of the remoteness of the sea from the hinterland surfaces of the coastal regions of Sweden, Finland and Ireland.

In 2007, the coastal regions arable land surface accounted for around 27.5 million hectares. This surface represents 16 % of the EU-22 coastal regions area. As the graph shows, the share of arable land in the coastal regions area reaches 57 % in Denmark and 37 % in Bulgaria. On the other hand, this share accounts for only 1 % for the coastal regions area in Slovenia and 6 % in Finland. In the same vein, coastal regions also show great variability between each other. For instance, arable land accounts for 70 % of the coastal region area of the East Riding of Yorkshire in the UK, around 39 % in the Dutch region of Noord-Drenthe, 15 % in the Spanish region of Gerona and 2 % for the region of Haute-Corse in France.

**Figure 6.3.1:** Share of UAA and arable land in total coastal regions area, 2007



Source: Eurostat, Structure of agricultural holdings (ef\_r\_nuts)

\*UK: excluding Northern Ireland and Scotland

<sup>(4)</sup> Excluding Germany, for which no data are available and 35 missing values in other coastal regions.

## 6.4 Agricultural holdings in coastal regions

Around 3.7 million<sup>(5)</sup> agricultural holdings were located in EU coastal regions in 2007. As shown in Table 6.4.1, 38 % of these holdings grow livestock. The share of holdings with livestock varies greatly between coastal Member States. Indeed, this share is around 95 % for the Irish holdings located in coastal regions, 60 % in the coastal regions of Estonia, 17 % in Malta and 6 % in the Italian coastal regions. Sea proximity can be an asset for livestock farming. For instance, in certain coastal regions the use of 'prés salés' (salt meadows) allows a very specific quality meat to be produced. On the other hand, intensive livestock breeding near the coast can generate water and marine environment pollution.

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<sup>(5)</sup> Excluding Germany, for which no data are available.

**Table 6.4.1:** Number of agricultural holdings in coastal regions, 2007

EU countries with a sea border	Number of holding in coastal regions, 2007	Number of holdings with livestock in coastal regions, 2007	Share of holdings with livestock in total number of holding in coastal region, 2007
<b>EU-22</b>	3 720 680	1 413 600	38 %
Belgium	19 360	14 360	74 %
Bulgaria	41 780	33 920	81 %
Denmark	44 460	28 350	64 %
Germany*	:	:	:
Estonia	11 920	7 160	60 %
Ireland	115 390	109 870	95 %
Greece	782 090	324 910	42 %
Spain	474 600	135 650	29 %
France	201 750	124 010	61 %
Italy	1 141 280	68 580	6 %
Cyprus	40 120	11 470	29 %
Latvia	30 610	19 290	63 %
Lithuania	20 430	15 460	76 %
Malta	11 020	1 860	17 %
Netherlands	32 910	18 510	56 %
Poland	134 220	79 770	59 %
Portugal	143 800	111 010	77 %
Romania	122 200	102 790	84 %
Slovenia	11 450	7 740	68 %
Finland	35 150	12 670	36 %
Sweden	53 920	30 860	57 %
United Kingdom	252 220	155 360	62 %

Source: Eurostat ([ef\\_r\\_nuts](#))

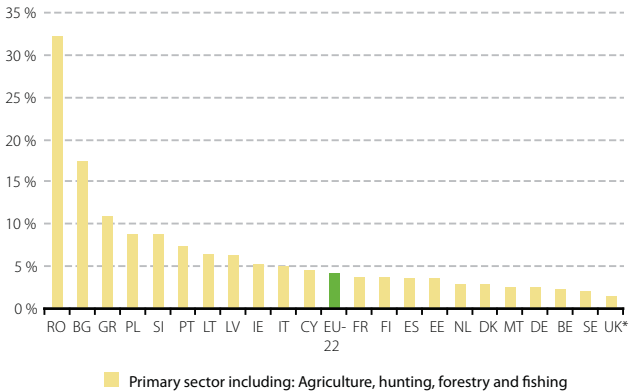
\* Germany: data not available



## 6.5 Primary sector employment in coastal regions

In 2007, around 88 million <sup>(6)</sup> people had a job in the EU coastal regions. As Figure 6.5.1 shows, employment in the primary sector (i.e. agriculture, hunting, forestry and fishing) accounted for 4 % of these jobs. The share of such employment varies greatly between the coastal countries. This share thus accounts for 32 % of the jobs in Romanian coastal regions and only 3 % in the German coastal regions. Moreover, this share varies greatly between the different coastal regions. Thus, the primary sector employs 46 % of persons in the coastal region of Rodopi in Greece, 14 % of persons in the Polish coastal region of Elblaski and 1.3 % of persons in the Italian region of Teramo.

**Figure 6.5.1:** EU coastal regions employment in the primary sector, 2007  
Ranking by share in coastal regions total employment



Source: Estat ([reg-e3empl95](#))

<sup>(6)</sup> Excluding Northern Ireland, for which no data are available.

## Methodological notes

### EU coastal regions

An EU coastal region is a statistical region defined at NUTS3 level, with a sea border or having more than half of its population within 50 km from the sea. According to this definition 446 EU coastal regions have been selected. These regions belong to the 22 Member States with a coastline. Among these 446 coastal regions, 372 have a coastline and 73 meet the second criterion. Finally, the German region of Hamburg, which does not correspond to the definition criteria, has been added to the EU coastal regions list, taking into account its strong maritime influence.

The 22 Member States with a sea border are: Belgium, Bulgaria, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Finland, Sweden and the United Kingdom.

The **Utilised Agricultural area (UAA)** is the total arable land, permanent grassland, land used for permanent crops and kitchen gardens. The UAA excludes unutilised agricultural land, woodland and land occupied by buildings, farmyards, tracks, ponds, etc.

See *FSS definition UAA, Holdings, Holdings with livestock*.

### Employment

Employment covers all persons — both employees and self-employed — engaged in some productive activity that falls within the production boundary of the system.

The employment data source and definition used in this chapter belong to the ‘European System of Accounts — ESA 1995’

<http://forum.europa.eu.int/irc/dsis/nfaccount/info/data/esa95/en/een00465.htm>

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