

ISSN 1830-463X

eurostat
Pocketbooks

Agricultural statistics

Main results — 2007–08

2009 edition

Agricultural statistics
Main results — 2007–08

2009 edition

*Europe Direct is a service to help you find answers
to your questions about the European Union*

Freephone number (*):

00 800 6 7 8 9 10 11

(*) Certain mobile telephone operators do not allow access
to 00 800 numbers or these calls may be billed.

More information on the European Union is available on the Internet (<http://europa.eu>).

Luxembourg: Office for Official Publications of the European Communities, 2009

ISBN 978-92-79-12436-5

ISSN 1830-463X

DOI 10.2785/26984

Cat. No. KS-ED-09-001-EN-C

Theme: Agriculture and fisheries

Collection: Pocketbooks

© European Communities, 2009

© Cover photo: Phovoir

Eurostat is the Statistical Office of the European Communities. Its mission is to provide the European Union with high-quality statistical information. For that purpose, it gathers and analyses figures from the national statistical offices across Europe and provides comparable and harmonised data for the European Union to use in the definition, implementation and analysis of Community policies. Its statistical products and services are also of great value to Europe's business community, professional organisations, academics, librarians, NGOs, the media and citizens.


Eurostat's publications programme consists of several collections:

- **News releases** provide recent information on the Euro-Indicators and on social, economic, regional, agricultural or environmental topics.
- **Statistical books** are larger A4 publications with statistical data and analysis.
- **Pocketbooks** are free of charge publications aiming to give users a set of basic figures on a specific topic.
- **Statistics in focus** provides updated summaries of the main results of surveys, studies and statistical analysis.
- **Data in focus** present the most recent statistics with methodological notes.
- **Methodologies and working papers** are technical publications for statistical experts working in a particular field.

Eurostat publications can be ordered via the EU Bookshop at <http://bookshop.europa.eu>.

All publications are also downloadable free of charge in PDF format from the Eurostat website <http://ec.europa.eu/eurostat>. Furthermore, Eurostat's databases are freely available there, as are tables with the most frequently used and demanded short- and long-term indicators.

Eurostat has set up with the members of the 'European statistical system' (ESS) a network of user support centres which exist in nearly all Member States as well as in some EFTA countries. Their mission is to provide help and guidance to Internet users of European statistical data. Contact details for this support network can be found on Eurostat Internet site.



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

Authors:

1. Agricultural holdings, structural data – Pol Marquer
2. Agricultural accounts and prices – Iulia Pop, Ole Olsen
3. Main agricultural products
 - Crop production – Fausto Cardoso, Céline Ollier
 - Animal production – Rodrigo Ataíde Dias
4. Agriculture and environment – Ludivine Baudouin

Coordinators:

Catherine Coyette

Herta Schenk

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 and 2008, mostly) showing the situation in the 27 Member States and at the European level (EU-27 and EU-25 aggregates).

More particularly, this edition provides a good insight of the complete results of the Farm Structure Survey conducted in 2007. Country reports were published regularly on the Eurostat website under the form of 'Statistics in Focus' as soon as the data were available at Eurostat. This publication is the only one showing the results at the European level.

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

Chapter 1 focuses on the results of the Farm Structure Survey 2007;

Chapter 2 covers the economy of the agricultural industry and presents data on output and input volumes, 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 wine production;

Finally, chapter 4 provides some important indicators related to agri-environment;

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
I The agricultural holdings – Structural data	11
1.1 Labour force	17
1.2 Agricultural holdings	24
<i>Utilised Agricultural Area (UAA)</i>	25
<i>Livestock Units (LU)</i>	27
<i>Legal personality of holdings and tenure</i>	29
<i>Economic size</i>	32
<i>Other gainful activities of the holdings</i>	33
1.3 Types of farming	35
1.4 Land use and livestock	39
1.5 Small units	45
II Agricultural accounts and prices	49
2.1 Agricultural income	52
<i>Introduction</i>	52
<i>Long term trends</i>	53
<i>Recent trends</i>	54
2.2 Final output	58
2.3 Inputs	61
2.4 Agricultural Labour Input	63
2.5 Price indices	65
III Main agricultural products	71
3.1 Crop production	73
<i>Main crops</i>	74
<i>Cereals</i>	77
<i>Main fruit and vegetables</i>	83
<i>Vineyard and olive trees</i>	88
<i>Land use</i>	91

3.2	Animal production.....	93
	<i>Livestock and meat</i>	94
	<i>Milk</i>	101
IV	Agriculture and the environment	105
4.1.	Irrigation areas.....	108
4.2.	Consumption of mineral fertilisers.....	111
4.3.	Spending on inputs	114
4.4.	Livestock density	118
4.5.	Greenhouse gas emissions of agriculture.....	122

Units, abbreviations and symbols used

Units

ha	hectare = 10 000 m ²
kg	kilogram
t	tonne
€	Euro

Abbreviations

AWU	Annual work unit
EAA	Economic accounts for agriculture
ESA	European System of Accounts
ESU	European Size Unit
EU-SILC	European Survey on Income and Living Conditions
FAO	Food and Agriculture Organization of the United Nations
FSS	Farm Structure Survey
GIP	Gross indigenous production
GVA	Gross value added
LU	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
UAA	Utilized agricultural area
EU	European Union
EU-27	European Union of 27 Member States
EU-25	European Union of 25 Member States
EU-15	European Union of 15 Member States)
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

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

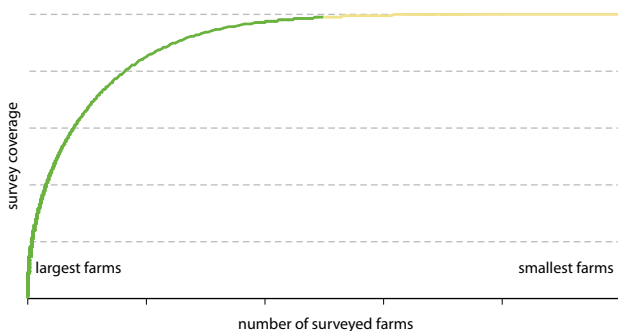


**Agricultural holdings
Structural data**

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 regularly to 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 (the last time was in 1999/2000), 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 Member States.

The smallest farms are not surveyed: the number of farms increases sharply as they become smaller, while at the same time the progress in marginal coverage is limited (see chart below). A threshold is therefore defined under which a unit is too small to be counted as an agricultural holding.



The national FSS have to cover 99 % of agricultural activity and their thresholds refer to a fixed number of units per item (e.g. 5 pigs, 50 m² under glass or 100 m² under vineyard). Each Member State defines its own set of thresholds in order to meet the targeted coverage. The different thresholds make the FSS results most relevant in a national context. But 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 ESU¹**. A brief overview of small holdings is nevertheless given in section 1.5.

¹ 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.

The latest data stem from the FSS 2007. It was the third FSS to be carried out in all Member States of the EU-27. This chapter of the agricultural pocketbook presents its main results at EU-27 level with some useful figures displayed in tables and charts.

The table below presents the main indicators for the whole population of the FSS in the 27 Member States, and broken down into two groups based on the 1-ESU threshold.

Table 1.0.1: Main results of the FSS 2007, EU-27

	Total	< 1 ESU	>= 1 ESU	< 1 ESU	>= 1 ESU
	absolute figures			% of total	
Regular Labour force (1000 person)	26 669.4	10 290.6	16 378.8	38.6%	61.4%
Regular labour force (1000 AWU)	10 796.0	2 616.4	8 179.6	24.2%	75.8%
Holders with... (1000)	13 441.2	6 358.8	7 082.4	47.3%	52.7%
... at least 65 years	4 584.0	2 542.1	2 041.9	55.5%	44.5%
... another major gainful activity	4 558.4	2 454.9	2 103.6	53.9%	46.1%
Number of sole holdings (1000)	13 367.2	6 356.2	7 010.9	47.6%	52.4%
... producing mainly for self-consumption	5 910.3	4 533.5	1 376.8	76.7%	23.3%
... with another gainful activity	1 361.6	373.8	987.8	27.5%	72.5%
... saling mainly directly to the consumers	1 851.2	783.4	1 067.8	42.3%	57.7%
SGM (1000 ESU)	154 375.9	2 490.9	151 884.9	1.6%	98.4%
Agricultural area (1000 ha)	172 485.0	11 657.6	160 827.4	6.8%	93.2%
... own farmed	96 915.2	10 666.9	86 248.3	11.0%	89.0%
Livestock (1000 LU)	135 982.3	3 423.6	132 558.7	2.5%	97.5%

Source: FSS

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 Member States.

The basic unit underlying the farm structure survey (FSS) is the **agricultural holding**. A holding is defined as a technical-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 a 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.

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, 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.

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 covered by the survey during the 12 months up to the date of the survey. The figures include the holders, even when not working on the holding; their spouses, on the other hand, are only accounted for if they work 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 also 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.

There is a structural difference between the agricultures of Member States shaped by decades of the CAP (**EU-15**) and the others. The 10 ‘new Member States’ having joined the EU in 2004 are called the ‘**NMS-10**’ whereas Bulgaria and Romania constitute the ‘**NMS-2**’.

The FSS records data on the land use, livestock and labour force of farms in order to select or describe them. The national areas or livestock numbers may therefore be obtained by more relevant and specific surveys.

1.1 Labour force

The results of the Farm Structure Survey 2007 for the EU-27 show that 14.6 million persons worked regularly on the 7.3 million agricultural holdings of at least 1 ESU.

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.

Table 1.1.1: Agricultural labour force, EU-27, 2007

EU Farm Labour Force ¹				
Family labour force persons: 14.6 million of which 41% women AWUs: 6.8 million			Non family labour force AWUs: 2.2 million	
Holders	Spouses of the holders	Other family members	Regular non family labour force	Non regular labour force
persons: 7.1 million of which 24% women AWUs: 3.8 million	persons: 3.7 million of which 78% women AWUs: 1.6 million	persons: 3.8 million of which 35% women AWUs: 1.3 million	persons: 1.8 million of which 28% women AWUs: 1.4 million	AWUs: 0.9 million

Source: FSS

¹ Labour Force of holdings of less than 1 ESU not included

The bulk of work on farms was provided by the holder and his/her family and nine out of ten persons working on agricultural holdings (89 %) were family labour force. The percentage of family labour force varied significantly across Member States. While Poland, Ireland and Slovenia had the vast majority of their labour input in this labour category (each with over 90 % of their total AWUs), the Czech Republic and Slovakia had much lower percentages (22 % and 20 % respectively).

Table 1.1.2: Farm labour force¹ by Member State, EU-27, 2007¹

	Total labour force²	Family labour force		Non-family labour regularly employed		Non regular non family labour force
	1000 AWU	1000 persons	1000 AWU	1000 persons	1000 AWU	1000 AWU
EU-27	8 179.6	14 610.4	6 780.1	1 768.4	1 399.5	805.0
BE	61.7	73.3	51.4	13.3	10.4	3.0
BG	198.4	254.2	149.9	51.6	48.5	22.8
CZ	125.2	54.2	28.4	110.1	96.8	3.3
DK	53.6	63.3	34.1	21.5	19.5	2.2
DE	545.9	714.3	409.6	166.8	136.3	54.1
EE	24.5	28.7	12.8	14.0	11.7	0.7
IE	137.5	214.7	130.3	14.6	7.2	3.1
EL	469.7	1 271.6	448.6	29.3	21.1	78.3
ES	755.0	1 754.9	592.6	203.3	162.4	176.7
FR	708.7	588.8	367.6	425.8	341.2	85.5
IT	1 084.2	2 612.3	1 007.6	114.7	76.7	131.3
CY	22.3	57.5	17.4	5.5	4.9	1.5
LV	69.2	93.4	54.9	18.6	14.4	0.7
LT	108.3	191.2	84.4	28.1	23.9	2.9
LU	3.6	4.7	3.1	0.5	0.5	0.1
HU	196.2	289.1	120.9	85.8	75.3	12.5
MT	4.0	12.7	3.5	0.7	0.5	0.1
NL	151.0	150.2	100.4	73.9	50.6	14.1
AT	144.6	332.3	131.8	22.1	12.8	3.9
PL	1 675.3	2 770.1	1 622.7	59.9	52.6	63.2
PT	245.3	436.9	207.8	44.6	37.5	21.3
RO	876.7	1 870.0	829.1	62.1	47.6	88.9
SI	71.7	167.0	69.2	3.0	2.5	3.3
SK	59.8	33.9	12.9	54.6	46.9	3.8
FI	67.4	127.8	59.6	13.6	7.8	4.6
SE	55.0	98.9	41.8	19.7	13.2	2.1
UK	264.8	344.7	187.8	111.0	77.0	21.1
NO	53.1	119.8	44.9	22.8	8.2	3.1
EU-15	4 748.0	8 788.4	3 774.0	1 274.6	974.0	601.3
NMS-10	2 356.6	3 697.8	2 027.1	380.1	329.5	92.0
NMS-2	1 075.1	2 124.3	979.0	113.7	96.1	111.7

Source: FSS

¹ Labour Force of holdings of less than 1 ESU not included² Non regular non family labour force (seasonal workers) excluded

Table 1.1.3: Agricultural holdings by labour input size, EU-27, 2007

	Total	Holdings with labour force (in terms of AWU)				
		<0.5	0.5 - <1	1 - <2	2 - <3	>=3
Total number of holdings (1000) of which:	7311	2177	1512	1621	2403	361
Holdings where holder is the manager (% of total)	90.7	91.6	93.2	93.1	93.0	67.5
Holdings with regular non-family labour force (% of total)	7.4	2.0	2.1	4.9	5.4	52.5
Average AWU per person working on the holding ¹	0.5	0.1	0.3	0.6	0.6	0.8
Agricultural area per holding (ha)	22.0	8.2	9.9	22.8	22.5	118.7
Average economic size (ESU)	20.8	5.3	7.5	18.8	19.4	139.8
%						
Regular labour force (pers.)	100.0	21.1	18.8	19.9	32.2	12.7
Labour force (AWU)	100.0	5.8	12.0	21.0	36.0	24.4
Agricultural area (ha)	100.0	11.1	9.3	22.9	33.5	26.6
Livestock (LSU)	100.0	2.8	5.1	23.0	35.4	30.9
SGM of the holding (ESU)	100.0	7.5	7.4	20.1	30.7	33.3
Family farms - sole holder's holdings	100.0	30.6	21.3	22.4	33.2	3.6
Holdings without regular employees	100.0	31.5	21.8	22.8	33.5	2.5

Source: FSS

¹ Non-regular family labour force (seasonal workers) is excluded in the calculation of AWU

Of the 7.3 million holdings surveyed, half made use of less than 1 AWU (1 full-time worker), 33 % used 1 to 2 AWUs, and 17 % of holdings 2 or more AWUs.

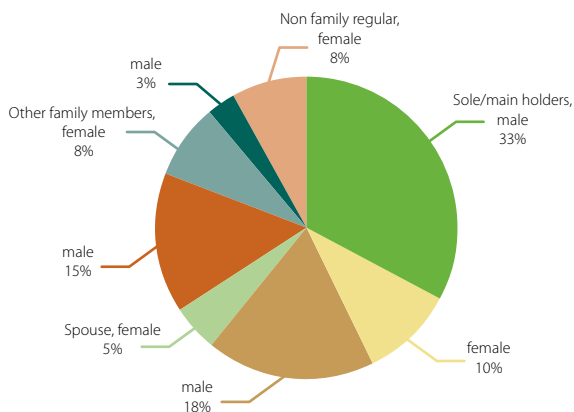
However, this latter group of holdings accounted for half (46 %) of the agricultural labour force (AWU) and agricultural land and more than half (57 %) of the livestock. More than half (54 %) of the total SGM originated from these holdings. Farms with a labour input of 2 or more AWUs were also significantly bigger in terms of both physical and economic size. Workers on these holdings were more frequently working full time (on average: 0.79 AWU per person).

In contrast, smaller-sized holdings in terms of labour input (i.e. using less than 1 AWU) were the place of work for 38 % of persons working on agricultural holdings. These persons mainly belong to the family labour force and were working part time (one fifth of a full-time equivalent, on average).

The average time worked per person in the EU-27 was half that of a full-time worker (0.50 AWU).

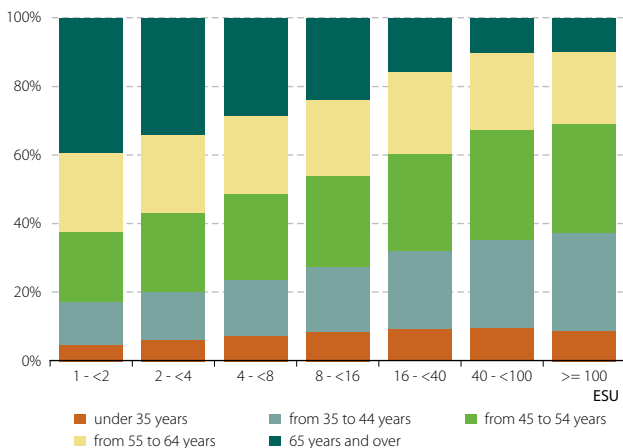
Sole holders were those most involved in work on the holding, with an average of 0.54 AWU/person. Their spouses worked on average less than half time (0.44 AWU/person), and the work of other family members amounted to an average of 0.34 AWU per person.

Figure 1.1.1: Regular labour force (persons) by category and gender, EU-27, 2007



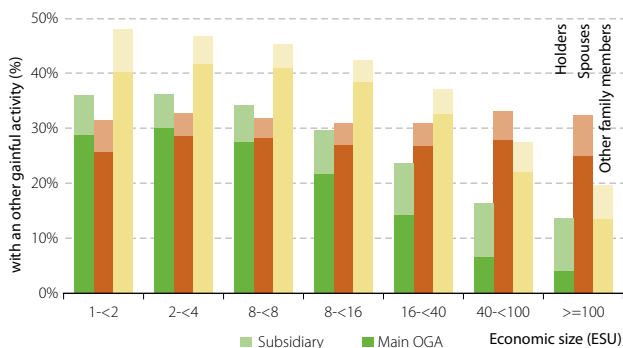
In family farms, holders and their spouses were the main labour force. More than half of the agricultural workers were either holders or spouses of the holder.

Men made up 52 % of the labour force. The majority of men working on the holding (64 %) were holders (only 1 % were spouses of the holder). Among the women working on agricultural holdings, 15 % were recorded as spouses of the holders.

Figure 1.1.2: Age structure of sole/main holders by economic size of the holding, EU-27, 2007

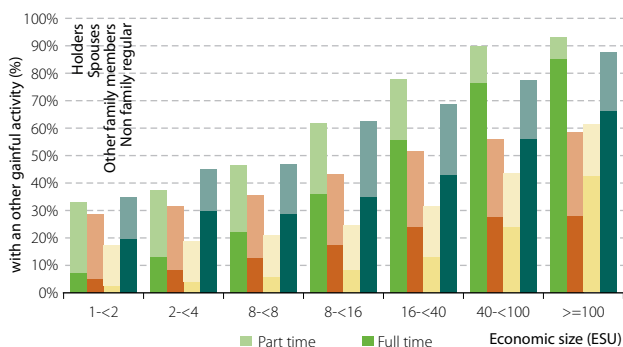
One holder out of three (29 %) was at least 65 years old in the EU-27. This proportion reaches 39 % for small farms of less than 2 ESU and falls to 10 % in farms of at least 100 ESU.

One in five holding managers in the EU-27 was a woman. However, the ratio varies across Member States, from over a third in the three Baltic States and Austria to less than 10 % in Ireland, Germany, Malta and the Netherlands.

Figure 1.1.3: Share of persons with another gainful activity by economic size of the holding, EU-27, 2007

More than one third (36 %) of the family labour force (holders*, their spouses and other family members) in the EU-27 had another gainful activity, besides work in the agricultural holding. The share of holders* and other family members with another gainful activity (OGA) decreases when the economic size grows, which is not the case for spouses. Also, the proportion of subsidiary OGAs is higher in the biggest farms, because the farm work provides a sufficient income and/or takes more time.

* Only holders who are also managers.

Figure 1.1.4: Share of persons working at least half time, EU-27, 2007

Similarly, full-time work increases with the farm economic size, but for all labour force categories. For the non-family labour force, full-time farm work is even more frequent in the smallest farms than for the holder's family.

Table 1.1.4: Farm holders, EU-27, 2007

	Sex	Age (years)		Other gainful activity ¹		Working time		
	Female	<35	>=65	main	subsidiary	<50%	100%	average
	% persons							AWU / pers
EU-27	23.9	7.0	28.8	24.3	7.4	50.1	26.8	0.54
BE	14.4	6.0	19.8	8.5	7.1	21.7	69.1	0.81
BG	13.2	5.7	26.9	28.8	14.9	33.2	31.6	0.66
CZ	15.7	12.0	15.0	34.2	5.8	30.7	45.4	0.70
DK	11.8	6.0	20.3	39.8	8.3	46.2	40.0	0.59
DE	9.1	7.9	6.7	43.5	6.0	32.1	45.7	0.70
EE	36.7	5.6	28.3	32.2	8.2	51.5	24.7	0.56
IE	9.7	6.9	24.2	27.5	18.2	21.7	55.0	0.77
EL	29.0	7.8	35.1	18.3	3.3	66.4	12.8	0.40
ES	27.6	4.8	34.7	27.1	5.2	64.4	22.2	0.41
FR	22.6	8.4	12.6	17.6	10.0	32.4	56.7	0.71
IT	30.9	3.3	42.7	22.7	4.6	64.6	21.1	0.44
CY	21.8	2.3	30.0	45.9	1.9	73.0	10.9	0.38
LV	43.4	7.1	24.6	27.7	5.0	32.2	26.0	0.66
LT	38.2	5.7	29.2	30.3	3.1	55.5	10.0	0.50
LU	21.0	5.5	15.5	11.9	5.7	19.2	60.3	0.77
HU	13.8	7.2	19.9	34.7	1.4	51.4	18.6	0.53
MT	9.7	4.6	23.3	44.8	3.9	76.4	13.9	0.33
NL	5.4	3.9	18.2	13.4	15.4	19.0	62.9	0.81
AT	32.8	10.3	8.8	21.0	13.0	33.6	43.4	0.63
PL	23.2	16.8	7.9	23.8	7.9	28.0	38.1	0.71
PT	26.2	2.5	43.3	21.8	2.4	39.9	26.6	0.62
RO	19.2	2.9	45.9	17.8	11.7	59.7	3.5	0.47
SI	24.7	4.1	33.8	56.1	18.9	50.3	17.1	0.53
SK	14.3	7.1	24.1	38.2	7.3	50.3	19.4	0.53
FI	10.6	9.1	6.0	33.1	12.3	50.6	37.4	0.57
SE	11.6	4.9	22.1	49.4	17.9	53.3	27.2	0.52
UK	14.4	2.8	28.8	23.0	15.2	41.0	43.2	0.63
NO	13.1	7.5	7.8	43.6	40.9	40.8	30.1	0.61
EU-15	25.1	5.5	31.2	24.4	6.4	54.2	29.1	0.51
NMS-10	23.7	14.0	12.5	27.4	7.3	34.0	32.8	0.66
NMS-2	18.5	3.3	43.6	19.1	12.1	56.5	6.9	0.50

Source: FSS

¹ Only the holders who are also managers

One out of five agricultural holders was a woman in the EU-27. However, this proportion reaches one third in the three Baltic countries.

Young farm holders under 35 years are more numerous than holders aged at least 65 years in only four Member States (Poland, Finland, Germany and Austria). There are 4.1 old holders per young one in the EU-27. This ratio is over 40 to 1 in Italy, Romania and Portugal.

1.2 Agricultural holdings

Table 1.2.1: Some important characteristics of agricultural holdings

Agricultural holdings	2005	2007			
	EU-27	EU-15	NM S-10	NM S-2	EU-27
Total number (1000)	7 822.7	4 775.9	1 550.4	984.5	7 310.8
By legal personality of the holder (%)					
sole holder	96.2	94.4	98.9	98.6	95.9
legal person	3.0	4.2	1.1	1.4	3.2
group holders	0.9	1.5	0.0	0.0	1.0
By employed labour force (%)					
under 1 AWU	49.1	55.2	35.0	51.6	50.5
from 1 to less than 2 AWU	34.0	29.5	40.2	37.8	32.9
from 2 to less than 3 AWU	12.2	10.3	19.0	7.9	11.8
3 AWU and over	4.7	5.1	5.7	2.8	4.9
By utilised agricultural area (%)					
< 5 ha	50.2	48.00	36.9	67.1	48.20
5 - < 20 ha	30.8	26.30	49.7	29.0	31.70
20 - < 50 ha	10.3	13.00	9.5	1.9	10.80
50 - < 100 ha	5.0	7.30	2.1	0.7	5.30
100 =< ha	3.7	5.40	1.8	1.4	4.10
By economic size (%)					
from 1 to less than 8 ESU	66.2	53.2	79.0	96.4	64.5
from 8 to less than 16 ESU	12.0	14.18	11.8	1.8	12.4
from 16 to less than 40 ESU	11.0	15.1	6.8	1.0	11.5
from 40 to less than 100 ESU	7.1	10.8	1.6	0.5	7.4
100 ESU and over	3.7	6.1	0.8	0.3	4.2
By farming methods (%)					
organic farming	1.8	3.2	1.2	0.3	2.4
animal production	0.6	0.8	0.7	0.2	0.7
crops	1.6	2.8	0.9	0.1	2.0
with crops under glass	2.8	2.4	2.8	2.2	2.5
irrigating	21.8	34.0	2.9	4.5	23.4
mainly direct sales	15.4	9.9	18.4	31.5	14.6
mainly own unproductive land	21.7	8.0	26.4	59.7	18.8
with inly unproductive land	0.7	0.9	0.6	0.5	0.8
Located in (%)					
Mountainous area	16.8	26.0	4.1	18.5	20.4
Other less favoured area	42.3	53.4	45.1	28.5	48.3
By land tenure (%)					
With only own land	15.4	9.9	18.4	31.5	14.6
Without own land	21.7	1.5	26.4	59.7	18.8

Source: FSS

The renewal of farms and technological progress is causing the smallest holdings to disappear and be replaced by larger ones. This process is faster in the event of sudden changes in the economic or legal context. The distribution of agricultural holdings by size classes therefore tends to 'migrate' from the lower to the higher size classes. The number of agricultural holdings decreased by 600 000 in the EU-27 between FSS 2005 and 2007; this figure includes 370 000 Romanian farms.

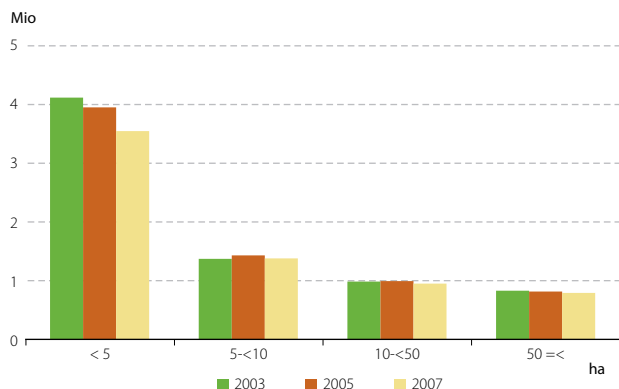
Irrigation is more frequent in the EU-15 than in the other Member States, where own-consumption and direct sales are frequent.

Utilised agricultural area (UAA)**Table 1.2.2:** Number of agricultural holdings by UAA size classes, 2007

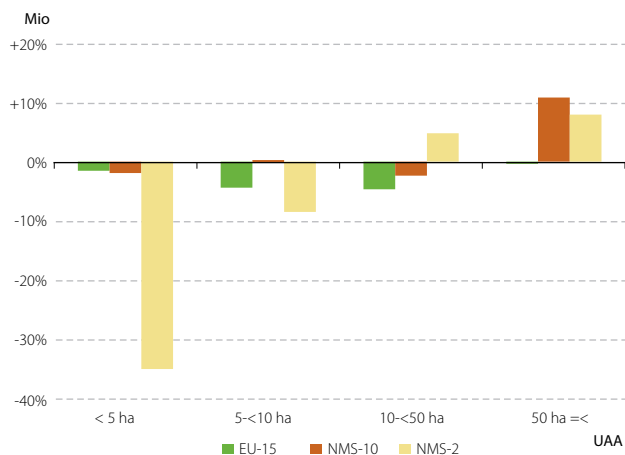
Size (UAA)	Total	<5 ha	5-<20 ha	20-<50 ha	50-<100 ha	>=100 ha	Average
		in 1000					ha/hold
EU-27	7 310.8	3 523.3	2 314.0	786.3	387.5	299.6	22.0
BE	46.2	10.4	13.7	13.3	6.8	2.0	29.7
BG	117.8	93.6	14.5	3.5	2.0	4.2	24.3
CZ	25.9	8.0	7.0	4.4	2.3	4.3	134.6
DK	44.4	1.7	17.0	10.5	7.1	8.2	60.0
DE	348.5	63.4	117.8	81.9	53.4	32.0	48.4
EE	12.8	1.9	5.6	2.7	1.0	1.6	66.5
IE	117.9	4.8	41.3	49.3	18.0	4.5	34.1
EL	711.1	506.5	167.3	30.2	5.9	1.3	5.6
ES	939.5	462.1	269.6	109.7	49.2	48.8	25.4
FR	491.1	99.5	95.6	99.0	106.6	90.4	55.7
IT	1 383.3	939.6	320.6	83.2	27.0	13.0	9.0
CY	28.1	22.8	4.1	0.8	0.2	0.1	4.9
LV	44.4	5.6	24.6	9.2	2.8	2.2	32.2
LT	85.3	19.3	46.5	12.6	3.9	3.0	25.0
LU	2.2	0.4	0.4	0.4	0.7	0.4	58.4
HU	140.8	76.6	39.9	12.3	5.7	6.5	28.8
MT	7.6	7.3	0.3	0.0	-	-	1.2
NL	76.7	21.5	23.1	21.0	9.2	2.0	24.9
AT	130.9	30.7	59.5	31.8	7.1	1.8	19.7
PL	1 128.1	391.3	612.1	101.2	15.8	7.8	12.3
PT	181.6	109.9	50.0	12.0	4.4	5.4	18.3
RO	866.7	566.5	271.5	14.9	4.5	9.4	11.0
SI	61.5	31.6	26.7	2.8	0.3	0.1	7.5
SK	15.8	7.8	3.9	1.3	0.7	2.2	119.2
FI	66.6	5.4	22.9	24.2	10.9	3.2	34.3
SE	57.5	5.1	19.1	15.4	10.0	7.9	51.9
UK	178.5	30.4	39.6	38.8	32.1	37.6	80.3
NO	49.8	6.1	24.1	16.6	2.7	0.4	20.7
% holdings							
EU-27	100.0	48.2	31.7	10.8	5.3	4.1	22.0
EU-15	100.0	48.0	26.3	13.0	7.3	5.4	25.2
NMS-10	100.0	36.9	49.7	9.5	2.1	1.8	18.3
NMS-2	100.0	67.1	29.0	1.9	0.7	1.4	12.6
% UAA							
EU-27	100.0	4.9	14.2	15.4	16.9	48.5	
EU-15	100.0	3.8	10.8	16.6	20.4	48.3	
NMS-10	100.0	5.7	26.6	15.3	7.9	44.6	
NMS-2	100.0	16.3	18.9	4.3	3.4	57.1	

Source: FSS

The FSS 2007 covered 7.3 million agricultural holdings in the EU-27. About half of them have a utilised agricultural area of at least 5 ha and one fifth larger than 20 ha. Five southern Member States (Greece, Italy, Cyprus, Malta and Slovenia) have the smallest average size and account for 30 % of agricultural holdings but only 10.6 % of the utilised agricultural area. At the other end of the scale the seven Member States with the highest average size (the Czech Republic, Slovakia, the United Kingdom, Estonia, Denmark, Luxembourg and France) have 31.5 % of the UAA for 10.5 % of the holdings.

Figure 1.2.1: Number of agricultural holdings by UAA size classes, EU-27

The general trend in the concentration of UAA continued between 2005 and 2007, especially in the new Member States. For instance, seven out of eight farms of less than 5 ha which disappeared between 2005 and 2007 were Romanian. At EU-27 level the average agricultural area increased by 5.6 % and reaches 22 ha.

Figure 1.2.2: Change in the number of agricultural holdings by UAA size classes between 2005 and 2007

Livestock units (LSU)**Table 1.2.3:** Number of agricultural holdings by livestock unit size classes and average size, 2007

Size (LSU)	Total	0	0-<5 LSU	5-<50 LSU	50-<100 LSU	>=100 LSU	Average ¹
Country	in 1000						LSU/hold
EU-27	7 310.8	3 006.4	2 214.8	1 530.0	275.2	284.3	18.1
BE	46.2	11.2	3.9	11.8	7.4	11.8	82.0
BG	117.8	16.6	73.5	26.0	1.1	0.7	7.8
CZ	25.9	7.2	7.8	7.7	1.0	2.3	78.7
DK	44.4	16.4	5.8	10.4	2.3	9.4	103.3
DE	348.5	97.1	42.9	119.8	42.0	46.8	51.5
EE	12.8	4.3	5.0	2.7	0.2	0.4	24.2
IE	117.9	3.0	4.7	72.2	24.8	13.2	50.0
EL	711.1	371.3	254.2	76.6	6.7	2.4	3.7
ES	939.5	667.9	115.3	103.5	25.1	27.7	15.3
FR	491.1	180.8	61.9	110.4	70.9	67.1	45.8
IT	1 383.3	1 100.9	138.7	110.1	17.5	16.1	7.1
CY	28.1	18.3	7.4	1.7	0.3	0.4	8.7
LV	44.4	5.9	24.7	12.8	0.5	0.4	10.3
LT	85.3	6.2	47.5	30.3	0.8	0.5	10.6
LU	2.2	0.5	0.1	0.5	0.5	0.7	72.1
HU	140.8	43.5	65.8	28.3	1.4	1.8	14.9
MT	7.6	5.2	1.9	0.2	0.1	0.2	6.5
NL	76.7	23.7	5.9	17.9	11.0	18.3	83.6
AT	130.9	28.6	23.9	67.4	7.3	3.7	18.8
PL	1 128.1	205.6	508.0	389.9	16.6	8.1	9.5
PT	181.6	44.5	101.2	28.8	3.6	3.5	10.9
RO	866.7	40.2	650.1	172.2	3.0	1.2	4.8
SI	61.5	8.1	29.2	23.2	0.8	0.3	8.8
SK	15.8	3.8	8.8	2.0	0.3	1.0	44.6
FI	66.6	39.4	4.3	16.8	3.9	2.2	17.3
SE	57.5	27.5	4.3	16.6	4.9	4.2	30.3
UK	178.5	28.9	17.9	70.1	21.5	40.2	77.8
NO	49.8	14.5	3.6	25.1	4.5	2.2	25.4
	% holdings						
EU-27	100.0	41.1	30.3	20.9	3.8	3.9	18.1
EU-15	100.0	55.3	16.4	17.4	5.2	5.6	22.9
NMS-10	100.0	19.9	45.6	32.2	1.4	1.0	11.7
NMS-2	100.0	5.8	73.5	20.1	0.4	0.2	5.2
	% livestock (LSU)						
EU-27	100.0	-	3.4	19.6	14.7	62.3	
EU-15	100.0	-	1.0	15.5	16.2	67.3	
NMS-10	100.0	-	8.8	39.0	8.2	44.1	
NMS-2	100.0	-	33.7	39.8	5.2	21.2	

¹ Average size per holding with livestock

Source: FSS

About half of the EU holdings with animals have at least 5 LSU and one eighth at least 50 LSU. Four Member States (Greece, Romania, Malta and Italy) have the smallest average herd size and account for 40.6 % of the agricultural holdings with livestock but only 12.6 % of the livestock. On the other side of the ranking the

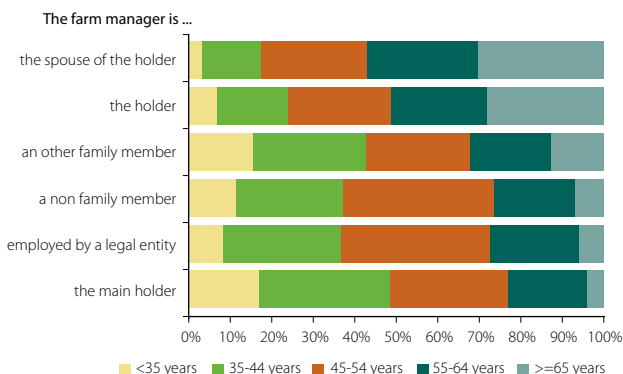
six Member States with the highest average size (Luxembourg, the United Kingdom, the Czech Republic, Belgium, the Netherlands and Denmark) have 23.3 % of the livestock for 5.1 % of the holdings.

In these last countries the farms with at least 100 LSU manage between 78 % and 92 % of the national livestock. At EU-27 level one out of 250 agricultural holdings (one out of 150 holdings with livestock) has at least 100 LSU and manages more than three fifths of the livestock.

Legal personality of holdings and land tenure

The farm **holder** draws the benefit whereas the **manager** takes the everyday decisions. The agricultural holding may be a family farm (the manager being the holder, his spouse or another member of his family), a farm held by another individual (belonging to the holder's family), a legal entity or a group holding, where several 'group holders' manage jointly the agricultural production.

Figure 1.2.3: Age of the manager and relationship with the holder, EU-27, 2007



The managers of family farms are often over 55 years, more often than in non-family farms.

Figure 1.2.4: Legal personality of agricultural holdings by economic size classes, EU-27, 2007

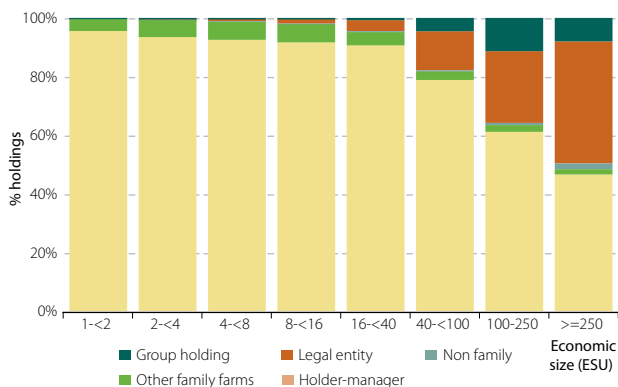


Table 1.2.4: Legal personality of agricultural holdings and legal entities, 2007

	Legal entities in total as percentage of...					Average economic size			
	Number of holdings	SGM	UAA	Live-stock	Labour force	Family farms	Legal entities	Other status	All farms
	%					ESU/holding			
EU-27	3.2	22.2	25.5	21.8	12.6	15.2	144.1	111.6	20.5
BE	8.0	14.9	9.5	11.8	14.2	67.6	135.7	58.0	73.1
BG	2.7	45.6	56.0	29.5	20.3	4.4	132.0	92.8	7.9
CZ	11.0	76.2	71.2	83.1	72.3	16.6	432.4	142.5	62.4
DK	2.1	7.5	4.6	6.4	8.0	75.4	281.8	196.8	80.6
DE	1.4	12.9	17.5	11.9	9.9	40.3	468.5	152.2	52.5
EE	9.6	60.1	51.3	74.1	44.3	6.0	85.2	11.0	13.6
IRL	0.1	0.5	0.3	1.0	0.3	20.9	87.7	40.3	21.1
EL	0.1	1.2	0.3	5.3	0.5	8.5	110.3	6.7	8.5
ES	5.5	31.4	30.4	42.9	21.7	16.5	131.2	28.0	22.9
FR	20.2	41.6	32.2	33.3	36.0	32.5	118.2	118.5	57.5
IT	1.1	8.7	13.6	13.0	4.4	16.3	148.0	268.2	18.0
CY	1.6	17.4	8.9	62.3	9.3	9.4	121.9	:	11.2
LV	0.2	0.9	0.7	1.4	0.9	5.4	38.7	128.9	6.9
LT	0.6	24.3	16.8	35.8	17.7	4.4	224.2	96.0	5.8
LU	1.8	1.7	0.5	0.3	4.6	53.4	51.5	:	53.4
HU	4.2	54.7	53.7	67.1	36.2	6.3	172.3	12.0	13.3
MT	0.4	5.4	1.2	14.8	5.2	6.0	94.0	24.3	6.8
NL	5.2	18.2	4.9	9.5	19.4	93.8	390.2	188.9	111.3
AT	0.5	2.9	4.0	1.4	3.0	20.3	128.9	30.3	21.1
PL	0.3	9.2	10.6	8.9	2.0	6.6	225.9	93.4	7.3
PT	3.3	24.7	29.1	35.5	10.4	7.5	72.7	13.5	9.7
RO	1.3	30.8	48.1	15.3	6.5	2.1	73.0	8.0	3.0
SI	0.2	9.5	5.5	13.3	3.7	6.4	319.8	:	7.1
SK	11.9	81.3	81.8	87.6	76.6	6.3	205.0	85.0	30.1
FI	2.0	6.4	1.8	6.5	5.7	34.8	122.8	49.1	37.6
SE	11.7	33.8	24.8	31.4	22.2	38.8	152.7	72.9	52.6
UK	6.7	22.7	16.7	11.7	18.3	61.2	258.7	149.6	76.1
NO	0.9	3.6	0.6	2.5	2.9	45.5	214.5	107.7	54.6
EU-15	4.2	21.4	21.5	20.5	13.9	21.2	141.4	112.2	27.9
NMS-10	1.1	26.7	30.1	30.2	11.8	6.6	226.2	94.8	9.0
NMS-2	1.4	34.7	49.9	17.8	9.0	2.4	86.4	27.1	3.6

Source: FSS

Nine out of ten EU agricultural holders are also the managers and only 4.4 % of holdings are not family farms, i.e. they are legal entities, group holdings or the manager is not a member of the holder's family.

But these few non-family farms are the largest ones. Legal entities are about 10 times larger than family farms at EU-27 level in terms of economic size. This ratio reaches 50 in Lithuania and Slovenia. Its value is higher in the countries having recently joined the EU, except Latvia (7) and Cyprus (13), than in the other Member States. Therefore, legal holdings are about 35 times larger than family farms in the first group of countries but only 7 times larger in the second one.

Table 1.2.5: Share of utilised agricultural area own-farmed, EU-27, 2007

	Total	<5 ha	5-<20 ha	20-<50 ha	50-<100 ha	>=100 ha
		%				
EU-27	53.6	89.8	81.1	64.0	48.6	40.4
BE	32.1	70.8	45.9	31.7	28.2	28.5
BG	17.0	85.3	61.4	31.1	21.6	9.7
CZ	16.2	84.9	70.9	52.8	42.0	11.5
DK	70.7	89.2	89.8	83.7	77.0	63.8
DE	36.7	73.1	65.7	54.1	40.8	24.3
EE	41.7	90.7	87.6	74.8	55.6	30.7
IE	81.3	87.5	90.0	84.9	78.4	71.2
EL	64.5	90.4	68.4	46.1	41.6	29.4
ES	68.1	92.1	84.2	69.3	58.1	65.2
FR	24.9	76.4	61.1	44.6	27.7	15.9
IT	70.6	91.5	78.1	64.7	59.0	63.1
CY	40.9	80.9	47.6	21.7	14.4	8.0
LV	67.9	88.8	92.2	85.1	71.7	49.3
LT	43.7	77.3	70.9	55.8	40.8	23.8
LU	42.7	49.2	51.8	53.6	48.8	34.7
HU	36.8	93.2	84.5	71.6	61.1	19.2
MT	20.0	21.4	15.3	:	:	:
NL	58.6	79.2	64.4	59.8	57.2	50.4
AT	66.4	82.8	79.5	65.6	51.2	60.4
PL	77.3	91.6	90.1	76.9	68.1	46.8
PT	69.5	87.3	81.5	68.3	62.3	65.8
RO	63.7	90.9	88.7	60.9	41.5	45.6
SI	69.8	90.3	79.3	51.4	35.1	10.7
SK	9.1	89.1	73.5	45.3	34.3	5.5
FI	66.3	80.5	82.8	72.5	61.2	53.9
SE	59.7	92.1	84.2	70.7	59.5	52.4
UK	65.9	83.1	81.3	76.9	71.7	62.4
NO	63.4	84.6	74.9	63.4	51.2	35.5
EU-15	53.4	89.3	76.1	62.2	47.8	44.7
NMS-10	55.0	90.5	87.8	73.2	60.1	23.8
NMS-2	52.9	90.4	87.2	55.1	35.4	34.1

Source: FSS

In all countries the share of own-farmed land is higher in the smallest farms. Nevertheless, the national averages display big differences, with less than 20 % of own-farmed UAA in Bulgaria, the Czech Republic and Malta, less than 10 % in Slovakia and more than 75 % in Poland and Ireland.

The smallest farms tend to be family farms, run by a holder who is also the farm manager and the land owner. Conversely, the largest ones are often legal entities or group holdings renting land.

Economic size

In the Community typology, each holding is classified by its economic size and the type of farming it is engaged in. The economic size, expressed in European Size Units (ESU), reflects the economic power of agricultural holdings based on their structural means of production. It therefore also enables comparisons to be drawn between different types of production, although area and livestock are not directly comparable.

Table 1.2.6: Number of agricultural holdings by economic size classes, 2007, EU-27, 2007

	Economic size (ESU)						Average SGM
	Total	1-<8	8-<16	16-<40	40-<100	>=100	
Country	in 1000						ESU/hold
EU-27	7 310.8	4 714.5	906.9	837.2	544.4	307.8	22.0
BE	46.2	8.8	4.7	7.5	12.8	12.4	73.1
BG	117.8	106.5	4.8	3.2	1.7	1.7	7.9
CZ	25.9	15.1	3.3	3.2	1.8	2.5	62.4
DK	44.4	11.6	7.5	8.8	6.4	10.2	80.6
DE	348.5	117.1	44.3	68.1	74.8	44.3	52.5
EE	12.8	10.3	1.0	0.8	0.4	0.3	13.6
IE	117.9	52.3	25.9	22.5	14.6	2.7	21.1
EL	711.1	493.9	124.9	76.1	14.2	1.9	8.5
ES	939.5	490.7	167.7	164.4	82.5	34.3	22.9
FR	491.1	116.0	48.7	100.9	142.3	83.2	57.5
IT	1 383.3	915.7	188.3	159.6	79.8	39.9	18.0
CY	28.1	21.3	3.1	2.1	1.1	0.5	11.2
LV	44.4	38.8	2.9	1.7	0.7	0.3	6.9
LT	85.3	76.7	4.6	2.6	0.9	0.5	5.8
LU	2.2	0.5	0.3	0.4	0.8	0.3	53.4
HU	140.8	111.8	13.6	9.6	3.7	2.2	13.3
MT	7.6	6.1	0.7	0.6	0.1	0.0	6.8
NL	76.7	8.5	9.0	12.8	19.5	27.0	111.3
AT	130.9	56.0	24.1	33.2	14.4	3.2	21.1
PL	1 128.1	882.8	146.3	80.3	14.6	4.2	7.3
PT	181.6	143.7	17.5	12.6	5.6	2.2	9.7
RO	866.7	842.7	13.0	6.4	2.9	1.8	3.0
SI	61.5	49.8	7.2	3.7	0.7	0.2	7.1
SK	15.8	12.4	1.0	0.9	0.6	1.0	30.1
FI	66.6	25.5	12.2	16.2	10.6	2.0	24.8
SE	57.5	30.4	8.1	8.5	7.0	3.4	31.1
UK	178.5	69.8	22.5	30.7	30.0	25.5	52.6
NO	49.8	12.2	10.3	12.6	11.6	3.2	35.2
% holdings							
EU-27	100.0	64.5	12.4	11.5	7.4	4.2	11.0
EU-15	100.0	53.2	14.8	15.1	10.8	6.1	14.1
NMS-10	100.0	79.0	11.8	6.8	1.6	0.8	4.5
NMS-2	100.0	96.4	1.8	1.0	0.5	0.3	1.8
% SGM							
EU-27	100.0	16.9	9.2	17.3	23.5	33.1	
EU-15	100.0	6.6	6.0	13.8	24.3	49.4	
NMS-10	100.0	25.2	14.7	18.0	10.3	31.8	
NMS-2	100.0	50.3	5.4	6.7	8.2	29.4	

Source: FSS

The national average economic size is highest in the Benelux and Denmark and lowest in Bulgaria, Romania and Latvia.

Other gainful activities of holdings

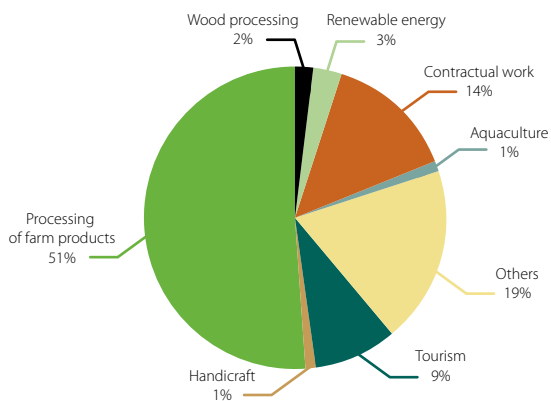
Table 1.2.7: Other gainful activities of holdings, 2007

	Holdings with an other gainful activity								
	Any	Tour- ism	Handi- craft	Process- ing of farm products	Wood proces- sing	Aqua- culture	Renewa- ble energy produc- tion	Con- tractual work	Others
	% of all holdings								
EU-27	13.5	1.4	0.1	8.0	0.3	0.1	0.5	2.1	2.9
BE	4.0	0.9	0.3	0.8	0.2	0.0	0.1	1.1	1.5
BG	5.3	0.1	0.1	0.1	0.0	0.1	0.0	4.4	0.6
CZ	15.1	2.0	1.1	3.2	1.3	0.1	0.1	2.4	6.3
DK	23.5	1.1	2.9	0.8	0.0	0.0	2.7	11.1	8.8
DE	22.6	4.0	0.2	7.8	0.7	0.3	6.5	4.7	4.2
EE	10.8	1.6	0.9	1.3	2.6	0.2	0.2	4.3	1.8
IE	5.3	1.0	0.2	0.2	0.2	0.1	0.2	2.1	1.8
EL	1.7	0.1	0.0	0.9	0.0	0.0	0.0	0.7	0.0
ES	3.8	0.5	0.0	1.4	0.0	0.0	0.1	0.6	1.2
FR	24.7	3.2	0.3	9.3	0.9	0.0	0.0	4.9	17.0
IT	7.2	1.3	0.1	5.8	0.1	0.0	0.2	0.2	0.0
CY	8.0	0.0	0.0	7.5	0.0	0.0	0.0	0.5	0.0
LV	13.4	0.7	0.2	0.2	0.7	0.2	0.0	3.1	10.3
LT	1.0	0.1	0.0	0.1	0.1	0.0	0.0	0.3	0.3
LU	17.5	2.7	0.4	4.0	1.8	0.0	9.4	2.2	0.4
HU	12.2	0.6	0.0	8.8	0.0	0.1	0.0	1.4	2.7
MT	5.6	0.0	0.0	4.5	0.0	0.0	0.0	1.6	0.0
NL	18.5	2.9	0.0	0.9	0.0	0.0	2.4	2.8	14.1
AT	25.0	8.4	0.1	11.2	1.8	0.2	1.5	7.2	0.0
PL	5.3	0.5	0.1	0.2	0.3	0.7	0.0	1.6	2.2
PT	8.4	0.3	0.1	6.6	0.2	0.0	0.0	0.5	0.9
RO	43.2	0.1	0.1	41.4	0.3	0.0	0.0	1.8	2.2
SI	4.9	1.0	0.2	1.4	0.6	0.0	0.1	1.1	1.5
SK	16.3	0.9	0.7	2.5	0.6	0.1	2.1	4.7	10.7
FI	27.9	1.7	0.2	0.7	0.7	0.1	0.6	13.4	10.6
SE	24.1	5.3	0.9	2.4	2.0	0.3	1.9	13.0	4.8
UK	27.8	11.7	0.3	1.7	0.7	0.2	0.4	11.0	10.6
NO	27.5	5.2	1.0	1.5	6.8	:	:	16.3	3.9
EU-15	10.7	2.0	0.2	4.3	0.3	0.0	0.7	2.3	3.3
NMS-10	6.3	0.5	0.1	1.3	0.3	0.5	0.0	1.6	2.4
NMS-2	38.7	0.1	0.1	36.4	0.3	0.0	0.0	2.1	2.0

Source: FSS

Besides agricultural activity, other gainful activities may be conducted by agricultural holdings with their resources. Processing of the farm products is the main one and concerns 41 % of Romanian farms and 11 % of Austrian holdings.

Figure 1.2.5: Holdings with other gainful activities, EU-27, 2007



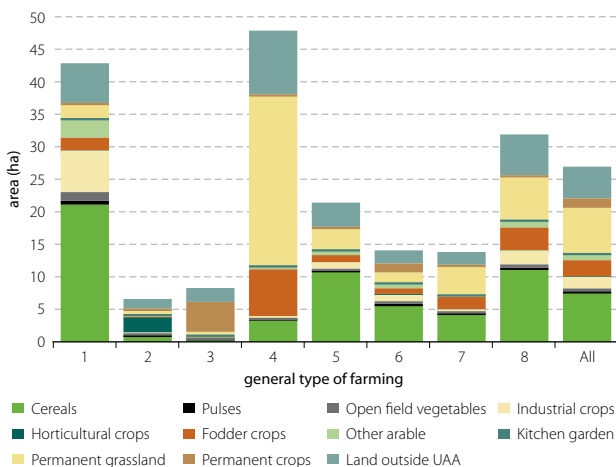
1.3 Types of farming

The Community typology of agricultural holdings classifies farms into up to 70 types of farming based on the share of each production in the farms' SGM. They are displayed at the first level as **8 general types of farming (FT)** (see table 1.3.1).

In this section the description of Community farms does not take into account the diversity of farm size among the Member States. But each category reflects a type of farming with its specific character. This presentation highlights the differences between the types of agricultural production while ignoring the variety in farm structure between the Member States or the size classes as already reported.

The table on the next pages highlights some obvious facts, such as the large area under cereals for specialist field crops (FT 1). But less redundant information is also displayed, such as the fact that the highest share of the UAA under cereals is for the specialist granivores (pigs, poultry, rabbits — FT 5). The following chart shows this too.

Figure 1.3.1: Structure of the utilised agricultural area, 2007



Similarly, the livestock is five times larger in the holdings in FT 5 (specialist granivores, 225 LSU) than in the others, even in FT 4 (specialist grazing livestock, 42 LSU).

Table 1.3.1: Description of the agricultural holdings by general type of farming, EU-27, 2007

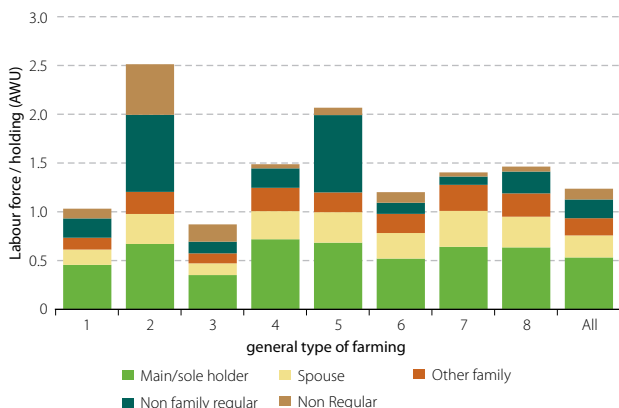
General type of farming	All farms	Specialist crops		
		Field crops	Horticulture	
		1	2	
Land use				
ha/holding				
Agricultural area	22.00	36.66	5.08	1
Arable land	13.61	34.32	4.26	2
Cereals	7.58	21.05	1.06	3
Pulses	0.18	0.58	0.02	4
Open field vegetables ¹	0.42	1.34	0.22	5
Industrial crops ²	1.77	6.37	0.12	6
Fodder crops ³	2.49	2.00	0.19	8
Horticultural crops ⁴	0.09	0.01	2.28	7
Other arable land	1.09	2.97	0.37	9
Kitchen garden	0.02	0.02	0.01	10
Permanent grassland	6.92	2.13	0.48	11
Permanent crops	1.45	0.19	0.33	12
Fruit, berries, citrus	0.39	0.05	0.10	13
Olive trees	0.58	0.08	0.10	14
Vineyard	0.45	0.6	0.11	15
Other permanent crops	0.03	0.00	0.01	16
Land outside the UAA	4.87	6.09	1.49	17
of which, woodland	3.58	4.47	0.83	18
Total area	26.87	42.75	6.57	19
... of which				
Area under glass (100 m ²)	1.8	0.1	56.0	20
Unproductive UAA	1.18	2.88	0.38	21
Fodder area	9.25	4.00	0.64	22
Irrigated area	1.40	2.99	1.71	23
Livestock				
LSU/holding				
Total livestock	18.1	3.2	0.9	24
Grazing livestock	10.6	1.9	0.5	25
Bovine animals	8.8	1.4	0.3	26
Granivores	7.5	1.4	0.4	27
heads/holding				
Grazing livestock				
Equidae	0.4	0.2	0.1	28
Bovine animals, of which	12.1	2.1	0.4	29
Dairy cows	3.2	0.2	0.1	30
Other cows	1.7	0.4	0.1	31
Sheep	13.8	2.6	1.0	32
Goats	1.6	0.1	0.2	33
Granivores				
Pigs, of which	20.9	3.5	0.9	34
Breeding sows	2.2	0.2	0.1	35
Poultry (1000 heads)	0.2	0.0	0.0	36
Rabbit, breeding females	0.6	0.1	0.1	37
Beehives (hives)	0.8	0.1	0.2	38
Labour force				
AWU/holding				
Farm labour force	1.23	1.02	2.50	39
Family labour force	0.93	0.73	1.20	40
Non Family labour force	0.30	0.30	1.30	41
Regularly employed	0.19	0.20	0.79	42
Seasonal	0.11	0.10	0.52	43

¹ Including potatoes. ² Including sugar beet. ³ Including fodder roots.

Source: FSS

	Specialist animals			Mixed farming		
	Permanent crops	Grazing livestock	Granivores	Various crops	Animals	Mixed
	3	4	5	6	7	8
	Land use					
	ha/holding					
1	6.12	37.98	17.65	11.99	11.82	25.55
2	1.09	11.73	14.19	9.09	7.24	18.71
3	0.55	3.55	10.90	5.67	4.41	11.15
4	0.02	0.05	0.11	0.15	0.05	0.23
5	0.01	0.08	0.20	0.40	0.22	0.49
6	0.08	0.25	1.02	0.98	0.32	2.17
8	0.10	7.21	1.07	0.86	1.87	3.50
7	0.01	0.00	0.01	0.16	0.02	0.02
9	0.33	0.59	0.87	0.88	0.36	1.17
10	0.01	0.02	0.02	0.04	0.04	0.03
11	0.42	26.15	3.13	1.51	4.31	6.48
12	4.60	0.08	0.31	1.35	0.22	0.33
13	1.21	0.02	0.12	0.41	0.08	0.11
14	1.85	0.05	0.13	0.48	0.09	0.15
15	1.45	0.01	0.05	0.43	0.06	0.06
16	0.08	0.00	0.00	0.02	0.00	0.00
17	2.12	9.77	3.72	2.03	1.96	6.25
18	1.35	7.39	2.37	1.20	1.38	5.14
19	8.24	47.75	21.37	14.02	13.78	31.81
20	0.3	0.0	0.1	1.5	0.0	0.1
21	0.35	1.02	0.99	0.91	0.54	1.25
22	0.50	32.92	4.03	2.30	5.99	9.82
23	1.35	0.77	1.16	1.13	0.25	0.75
	Livestock					
	LSU/holding					
24	0.3	41.5	225.4	4.0	19.8	23.2
25	0.2	40.6	2.7	2.0	8.7	12.2
26	0.1	33.5	2.1	1.4	7.1	10.4
27	0.1	0.9	222.7	2.0	11.1	11.0
	heads/holding					
28	0.0	1.3	0.2	0.2	0.5	0.5
29	0.1	46.1	3.2	2.0	9.8	14.4
30	0.0	12.7	0.3	0.6	3.0	3.7
31	0.0	6.4	0.6	0.2	1.1	1.9
32	0.7	54.4	3.6	3.0	9.8	12.2
33	0.2	5.9	0.4	0.6	1.5	1.9
34	0.2	2.5	582.2	6.0	34.7	36.1
35	0.0	0.2	67.1	0.6	3.3	3.0
36	0.0	0.0	7.0	0.0	0.2	0.2
37	0.1	0.2	14.4	0.4	1.0	0.7
38	0.1	0.1	0.1	1.1	0.5	4.6
	Labour force					
	AWU/holding					
39	0.86	1.48	2.06	1.19	1.40	1.46
40	0.57	1.24	1.19	0.97	1.27	1.18
41	0.30	0.24	0.87	0.22	0.13	0.27
42	0.12	0.20	0.79	0.11	0.08	0.22
43	0.18	0.04	0.08	0.11	0.04	0.05

⁴ Market gardening vegetables, vegetables under glass, flowers and ornamental plants.

Figure 1.3.2: Labour force per holding, EU-27, 2007

The distribution of the labour force by type of farming reflects the needs in terms of non-family labour force of the different agricultural production sectors. Non-family labour can be employed because of the potential income of the farms, indicated by the SGM.

Table 1.3.2: Key variables by general type of farming, EU-27, 2007

Main type of farming	Agricultural holdings	Utilised agricultural area	Live-stock	SGM	Labour force
	1000	1000 ha	1000 LSU	1000 ESU	1000 AWU
Specialist field crops	1 493	54 747	4 817	33 540	1 530
Specialist horticulture	200	1 018	172	12 225	501
Specialist permanent crops	1 891	11 581	592	29 560	1 635
Specialist grazing livestock	1 415	53 730	58 698	36 346	2 093
Specialist granivores	153	2 697	34 431	12 354	314
Mixed cropping	741	8 889	2 952	7 835	885
Mixed livestock holdings	586	6 921	11 578	5 679	817
Mixed crops-livestock	831	21 244	19 318	14 346	1 210
Total	7 311	160 827	132 559	151 885	8 985
%					
Specialist field crops	20.4	34.0	3.6	22.1	17.0
Specialist horticulture	2.7	0.6	0.1	8.0	5.6
Specialist permanent crops	25.9	7.2	0.4	19.5	18.2
Specialist grazing livestock	19.4	33.4	44.3	23.9	23.3
Specialist granivores	2.1	1.7	26.0	8.1	3.5
Mixed cropping	10.1	5.5	2.2	5.2	9.8
Mixed livestock holdings	8.0	4.3	8.7	3.7	9.1
Mixed crops-livestock	11.4	13.2	14.6	9.4	13.5
Total	100.0	100.0	100.0	100.0	100.0

Source: FSS

1.4 Land use and livestock

Table 1.4.1: Farm land by UAA size class, EU-27, 2007

UAA in ha	Total	<5	5-<20	20-<50	50-<100	>=100
in million ha						
Agricultural area	160.83	7.91	22.89	24.85	27.15	78.03
Arable land	99.49	3.86	13.23	14.71	17.33	50.36
Cereals	55.42	2.31	8.22	8.00	8.92	27.98
Pulses	1.32	0.04	0.15	0.16	0.20	0.77
Open field vegetables ¹	3.06	0.38	0.68	0.46	0.47	1.07
Industrial crops ²	12.90	0.23	0.94	1.21	1.70	8.83
Fodder crops ³	18.21	0.52	2.24	3.68	4.50	7.27
Horticultural crops ⁴	0.64	0.17	0.17	0.11	0.08	0.12
Other arable land	9.25	0.26	0.99	1.26	1.66	5.09
Kitchen garden	0.16	0.08	0.05	0.01	0.01	0.01
Permanent grassland	50.57	1.32	6.26	8.16	8.72	26.11
Permanent crops	10.61	2.65	3.35	1.96	1.09	1.56
Fruit, berries, citrus	2.88	0.75	1.02	0.49	0.25	0.37
Olive trees	4.27	1.32	1.24	0.65	0.37	0.68
Vineyard	3.28	0.54	1.04	0.79	0.45	0.47
Other permanent crops	0.18	0.03	0.05	0.03	0.03	0.04
Land outside the UAA	35.64	3.00	6.84	5.85	4.40	15.54
of which, woodland	26.18	1.81	5.05	4.43	3.21	11.69
Total area	196.46	10.91	29.73	30.70	31.55	93.57
in %						
Agricultural area	100.0	4.9	14.2	15.4	16.9	48.5
Arable land	100.0	3.9	13.3	14.8	17.4	50.6
Cereals	100.0	4.2	14.8	14.4	16.1	50.5
Pulses	100.0	2.9	11.2	12.4	14.9	58.5
Open field vegetables ¹	100.0	12.4	22.1	14.9	15.5	35.1
Industrial crops ²	100.0	1.8	7.3	9.4	13.2	68.4
Fodder crops ³	100.0	2.9	12.3	20.2	24.7	39.9
Horticultural crops ⁴	100.0	26.2	26.5	16.6	11.9	18.8
Other arable land	100.0	2.8	10.7	13.6	17.9	55.0
Kitchen garden	100.0	52.0	33.5	7.9	3.6	3.1
Permanent grassland	100.0	2.6	12.4	16.1	17.2	51.6
Permanent crops	100.0	24.9	31.6	18.5	10.3	14.7
Fruit, berries, citrus	100.0	26.1	35.4	17.0	8.6	12.9
Olive trees	100.0	31.0	29.1	15.2	8.7	16.0
Vineyard	100.0	16.5	31.6	24.0	13.7	14.2
Other permanent crops	100.0	17.9	27.5	18.6	13.9	22.1
Land outside the UAA	100.0	8.4	19.2	16.4	12.4	43.6
of which, woodland	100.0	6.9	19.3	16.9	12.3	44.6
Total area	100.0	5.6	15.1	15.6	16.1	47.6

¹ Including potatoes. ² Including sugar beet. ³ Including fodder roots.

⁴ Market gardening vegetables, vegetables under glass, flowers and ornamental plants.

Source: FSS

Some areas are directly linked with the UAA size classes, and horticulture and permanent crops are concentrated in the smallest farms. The relationship is less exclusive with more extensive land use, i.e. permanent grassland, industrial crops and other arable land (including here fallow land).

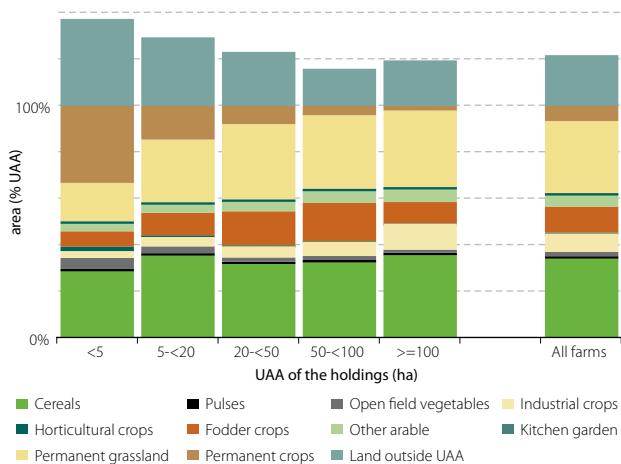
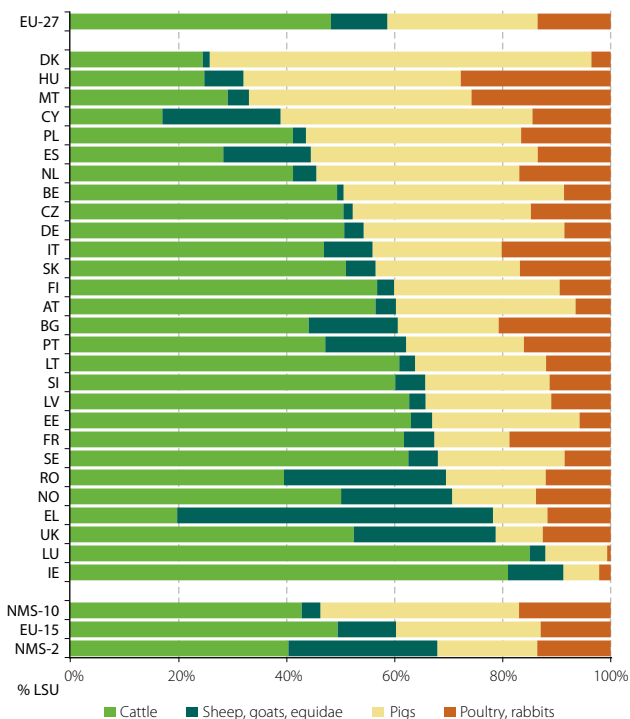
Figure 1.4.1: Farm land by UAA size class, EU-27, 2007


Figure 1.4.2: Composition of livestock (LSU), EU-27, 2007

Land areas may be compared in hectares but the numbers of heads of different species need to be converted into livestock units (LSU) before any comparison can be made.

In order to make the analysis clearer livestock species have been split into two groups: grazing livestock (equidae, bovine animals, sheep and goats) and granivores (pigs, poultry and rabbits). Feeding of the first group uses fodder (grass, hay, silage, etc.) whereas the second group are fed on the basis of cereals. Beehives and other animals have been excluded.

Livestock units are used here to compare animals of different ages or species. For instance, 59 % of the livestock were grazing animals in the EU-27. This share varied from a quarter in Denmark to nine tenths in Luxembourg and Ireland. Cattle account for most of the livestock in Belgium against less than a quarter in Greece. Of course, the proportion of grazing livestock is reflected in the share of UAA dedicated to fodder production, with some variations due to productivity.

Table 1.4.2: Composition of livestock (LSU), EU-27, 2007

	Livestock					Grazing in total livestock	Fodder area ¹ in UAA
	Total	Grazing livestock		Granivores			
		Cattle	Sheep, goats, equidae	Pigs	Poultry, rabbits		
	Mio LSU					% LSU	%
EU-27	132.56	63.98	13.82	36.83	17.93	58.7	42.0
BE	3.79	1.87	0.05	1.54	0.33	50.6	55.4
BG	0.92	0.41	0.15	0.17	0.19	60.6	10.0
CZ	2.04	1.03	0.04	0.67	0.30	52.3	36.7
DK	4.58	1.13	0.06	3.23	0.16	25.9	25.3
DE	17.95	9.11	0.64	6.66	1.54	54.3	40.7
EE	0.31	0.19	0.01	0.08	0.02	67.0	49.7
IE	5.90	4.78	0.60	0.39	0.13	91.2	92.0
EL	2.61	0.52	1.52	0.26	0.31	78.2	26.6
ES	14.33	4.07	2.32	6.01	1.93	44.6	34.4
FR	22.50	13.90	1.26	3.13	4.21	67.4	45.7
IT	9.89	4.64	0.89	2.36	1.99	56.0	41.0
CY	0.25	0.04	0.05	0.11	0.04	39.0	31.0
LV	0.46	0.29	0.01	0.11	0.05	65.8	50.8
LT	0.90	0.55	0.03	0.22	0.11	63.8	38.7
LU	0.16	0.14	0.00	0.02	0.00	87.9	69.6
HU	2.10	0.52	0.15	0.84	0.58	32.1	17.6
MT	0.05	0.01	0.00	0.02	0.01	33.1	40.7
NL	6.42	2.65	0.28	2.41	1.08	45.6	64.9
AT	2.46	1.39	0.09	0.82	0.16	60.3	53.3
PL	10.74	4.43	0.26	4.27	1.78	43.7	25.3
PT	1.99	0.94	0.30	0.43	0.32	62.2	62.8
RO	4.20	1.66	1.26	0.77	0.50	69.5	34.2
SI	0.54	0.33	0.03	0.12	0.06	65.7	68.6
SK	0.71	0.36	0.04	0.19	0.12	56.5	38.4
FI	1.15	0.65	0.04	0.35	0.11	59.9	30.2
SE	1.74	1.09	0.09	0.41	0.15	68.0	50.3
UK	13.88	7.29	3.64	1.21	1.74	78.7	67.3
NO	1.27	0.64	0.26	0.20	0.18	70.7	65.7
EU-15	109.35	54.15	11.78	29.24	14.17	60.3	46.2
NMS-10	18.10	7.76	0.62	6.65	3.07	46.3	30.2
NMS-2	5.12	2.07	1.41	0.95	0.70	67.9	28.6
	% LSU						
EU-27	100.0	48.3	10.4	27.8	13.5		
EU-15	100.0	49.5	10.8	26.7	13.0		
NMS-10	100.0	42.9	3.4	36.7	17.0		
NMS-2	100.0	40.4	27.5	18.5	13.6		

¹ Fodder area: root crops, forage plots and productive permanent grassland.

Source: FSS

The split between grazing livestock and granivores (pigs, poultry and rabbits) highlights the specialisation of agricultural holdings. Most of the livestock (83 % of LSU) is managed in farms with either only grazing animals or only granivores. Other farms may be classified according to the share of the grazing animals in their livestock.

Table 1.4.3: Distribution of livestock (LSU), EU-27, 2007

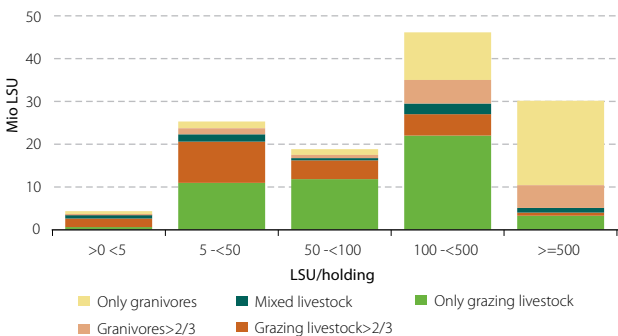
	Livestock per holding (LSU)					
	Total	>0 <5	5 -<50	50 -<100	100 -<500	>=500
Proportion of types ¹	Total livestock (million LSU)					
Only grazing livestock	48.10	0.54	10.83	11.70	21.84	3.18
Grazing livestock>2/3	21.68	1.99	9.60	4.37	4.98	0.73
Mixed livestock	6.66	0.87	1.70	0.52	2.48	1.08
Granivores>2/3	13.11	0.18	1.41	0.74	5.48	5.30
Only granivores	34.34	0.66	1.58	1.34	11.09	19.47
Total	123.90	4.25	25.12	18.68	45.88	29.96
	%					
Only grazing livestock	38.8	0.4	8.7	9.4	17.6	2.6
Grazing livestock>2/3	17.5	1.6	7.8	3.5	4.0	0.6
Mixed livestock	5.4	0.7	1.4	0.4	2.0	0.9
Granivores>2/3	10.6	0.1	1.1	0.6	4.4	4.3
Only granivores	27.7	0.5	1.3	1.1	9.0	15.9
Total	100.0	3.4	20.3	15.1	37.0	24.2

¹ Types of livestock split into grazing livestock (equidae, bovine animals, sheep and goats) and granivores (pigs, poultry and rabbits)

Source: FSS

But holdings with only granivores are larger in terms of LSU size than those with only grazing animals. Most farms with less than 100 LSU have mainly grazing livestock, whereas farms with mainly granivores have often at least 100 LSU.

Figure 1.4.3: Distribution of livestock (LSU), EU-27, 2007



And indeed, 90 % of poultry and 80 % of pigs are in agricultural holdings with at least 100 LSU, *versus* 50 % of bovine animals.

Table 1.4.4: Distribution of livestock (heads) by LSU size classes, EU-27, 2007

Livestock Unit size classes	Total	>0-<5	5-<50	50-<100	>=100	
	1000 heads					%
Grazing livestock (1000 heads)						
Equidae	3 175.7	633.0	1 850.0	365.2	327.5	10.3
Bovine animals	88 344.9	2 416.2	21 698.4	19 719.3	44 511.1	50.4
Under 1 year	25 101.0	632.0	5 903.3	5 237.7	13 328.0	53.1
From 1 to less than 2 years	18 466.8	327.2	4 448.5	4 022.8	9 668.4	52.4
Dairy cows	23 691.3	1 201.6	5 833.6	5 309.4	11 346.8	47.9
Other cows	12 326.5	148.4	3 514.4	3 015.4	5 648.5	45.8
Other bovine animals 2 years and older	8 759.2	107.0	1 998.6	2 134.1	4 519.5	51.6
Sheep	100 915.2	3 777.5	36 458.7	20 478.6	40 200.5	39.8
Goats	11 836.0	1 096.9	6 912.0	2 407.0	1 420.0	12.0
Granivores						
Pigs	152 944.3	3 814.7	15 703.8	8 284.5	125 141.4	81.8
Piglets < 20 kg	44 726.6	1 227.6	5 326.2	2 821.8	35 351.0	79.0
Breeding sows	15 776.9	399.9	1 806.1	970.2	12 600.6	79.9
Other pigs	92 440.9	2 187.1	8 571.5	4 492.5	77 189.8	83.5
Rabbits (breeding females)	4 399.2	1 249.6	2 363.2	329.8	456.6	10.4
million heads						%
Poultry	1 443.1	44.6	46.4	50.4	1 301.6	90.2
Broilers	780.1	12.3	16.4	33.1	718.4	92.1
Laying hens	469.0	25.3	21.2	12.1	410.5	87.5
Other poultry	194.0	7.1	8.9	5.3	172.8	89.1
Beehives (1000)	5 507.6	1 914.5	477.2	31.7	29.7	0.5

Source: FSS

In general, where the average size of the herds increases, i.e. the smallest ones disappear (they stop rearing these animals), the size of the largest ones increases. Nevertheless, for laying hens the increases in the number of mean units has the reverse effect.

Table 1.4.5: Average size of herds²

	2003 ¹	2005	2007			
	EU-27		EU-15	NMS-10	NMS-2	
	(heads/holding ²)					
Equidae	2.7	3.0	3.7	6.1	2.5	1.7
Cattle	28.7	29.6	34.2	68.6	12.5	3.9
Dairy cows	10.8	11.1	12.8	37.4	5.9	2.2
Other cows	17.9	18.3	20.1	21.1	10.9	3.2
Sheep	97.9	105.3	118.4	167.6	60.1	31.4
Goats	24.8	28.0	31.1	45.0	11.3	7.8
Pigs	57.7	65.1	79.4	255.0	35.9	5.6
Breeding sows	18.2	18.3	22.1	86.0	6.5	3.5
Other pigs > 20 kg	38.8	45.9	58.9	169.6	24.6	4.9
Laying hens	853	766	562	1540	325	47
Broilers	156	161	186	441	86	26
Rabbits (breeding females)	10.7	12.2	13.3	18.3	6.5	7.9

¹ Data refers to 2002 in PL and RO. ² Only holdings with the specified animal species/category

Source: FSS

The average size of herds results from the distribution of the animals concerned between all farms (number of herds) and from the maximum concentration of livestock (if any) for efficient production. The differences between the national averages reflect rather the first factor (specialisation), whereas the differences in size between species reflect also the second one.

1.5 Small units

Holdings below 1 ESU in economic size account for a significant number of holdings in the new Member States and even contribute a significant share of production (including own-consumption), as reflected by the SGM in some of them. Given their share of the number of workers they should not be overlooked in a social approach to agriculture. Nevertheless, reference to their absolute number will be avoided because this figure is meaningless. 48 % of EU-27 holdings were considered as small units in 2007 but their number could be significantly changed by a marginal adjustment to the survey design.

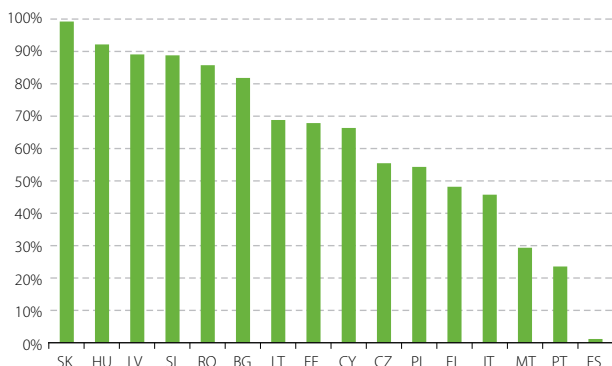
These units use a small share of the utilised agricultural area and of the livestock and, incidentally, do not contribute significantly to agricultural output. However, they provide work for 39 % of regular farm workers and generate 24 % of total farm work (in AWU).

The following table shows the distribution of these small holdings among the Member States, together with some of their main characteristics.

Table 1.5.1: Significance of small units by Member State, 2007

	Number of sole holdings	SGM	Holder with an other gainful activity	Regular labour force (person)	Regular labour force (AWU)	Agricultural area (ha)	Livestock (LSU)
	% of total						
EU-27	47.6	1.6	53.9	38.6	24.2	6.8	2.5
BE	4.0	0.0	6.5	2.7	1.4	0.1	0.0
BG	76.6	11.9	72.3	67.8	57.5	6.0	26.2
CZ	36.7	0.4	45.5	14.4	6.5	0.8	0.6
DK	0.6	0.0	0.8	0.4	0.2	0.1	0.0
DE	6.2	0.1	8.8	3.7	1.7	0.4	0.2
EE	47.4	3.1	51.3	34.7	21.7	6.5	1.6
IE	8.1	0.2	10.9	6.2	4.8	2.9	0.3
EL	17.3	1.4	23.6	13.7	3.8	2.0	0.5
ES	10.1	0.2	10.5	7.9	4.4	4.1	0.3
FR	9.3	0.1	11.0	4.3	1.4	0.4	0.2
IT	17.7	0.7	19.1	14.1	7.3	2.3	0.1
CY	30.3	1.9	33.1	25.5	8.3	5.1	0.3
LV	58.9	8.1	67.0	48.5	33.4	19.5	6.0
LT	63.1	12.2	61.2	54.4	38.5	19.4	12.4
LU	3.1	0.0	8.3	1.9	1.1	0.5	0.0
HU	78.2	7.6	79.2	70.3	49.6	4.1	12.8
MT	31.5	2.7	29.7	24.1	4.6	13.4	0.8
NL	-	-	-	-	-	-	-
AT	18.7	0.3	29.1	15.8	9.2	19.2	0.6
PL	52.9	5.1	62.2	43.9	23.6	10.5	3.4
PT	34.6	2.8	37.4	29.4	22.2	4.4	2.2
RO	78.1	31.4	82.3	70.1	57.1	30.9	30.5
SI	18.4	2.0	21.4	15.3	10.3	5.6	2.4
SK	79.1	4.1	78.7	58.4	31.7	2.4	5.3
FI	2.1	0.1	3.1	1.5	0.5	0.3	0.0
SE	23.1	0.4	26.8	20.9	13.2	4.1	2.5
UK	38.8	0.2	44.5	30.0	16.7	11.1	0.4
NO	0.2	0.0	0.2	0.2	0.1	0.0	0.0
EU-15	16.1	0.3	18.3	12.3	6.2	3.5	0.3
NMS-10	57.3	5.0	63.0	47.5	26.9	9.1	4.8
NMS-2	78.0	27.1	81.2	69.8	57.2	26.4	29.8

Source: FSS

Figure 1.5.1: Share of small units producing mainly for self-consumption, 2007

Except in Malta, most small farms produced mainly for own-consumption by the holder's household². These units are called *subsistence farms*.

In the non-‘Mediterranean’³ EU-15 countries the percentage of farms without SGM reflects mainly farms with grassland and no livestock. These contribute to the structure but without engaging in actual production. It therefore makes sense to keep them outside the framework of the economic analysis. One out of four small EU-15 units is a subsistence farm recorded in one of the four ‘Mediterranean’ EU-15 countries.

² According to the definition, 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).

³ Here referring to Greece, Spain, Italy and Portugal, which covered *subsistence farming* in FSS 2007.

Table 1.5.2: Description of small units, 2007

	Utilised agricultural area	Live-stock	SGM	Regular labour force		Over 65 years	With a main OGA	Self-consumption
	ha / holding	LSU / holding	ESU / holding	persons /holding	AWU / holding	% / holding	% / holding	% holdings / holding
EU-27	1.83	0.54	0.39	1.61	0.41	40.0	32.1	71.0
BE	0.98	0.99	0.55	1.29	0.48	55.9	19.7	:
BG	0.49	0.87	0.34	1.72	0.71	50.9	31.1	81.8
CZ	2.11	0.92	0.51	2.05	0.65	24.6	54.8	55.0
DK	8.88	1.50	0.35	1.46	0.42	26.9	61.5	-
DE	3.23	1.54	0.70	1.55	0.42	19.6	69.8	-
EE	5.57	0.48	0.52	2.15	0.64	38.8	43.0	66.4
IE	11.62	1.81	0.42	1.45	0.66	32.0	50.4	-
EL	0.54	0.10	0.59	1.39	0.13	48.4	30.4	48.1
ES	9.75	0.45	0.51	1.60	0.34	52.8	32.0	1.0
FR	2.93	1.19	0.59	1.26	0.27	45.4	31.5	:
IT	0.99	0.05	0.56	1.51	0.29	53.1	28.5	45.5
CY	0.63	0.07	0.50	1.79	0.17	28.2	55.1	66.3
LV	5.44	0.46	0.42	1.67	0.55	32.8	42.4	88.4
LT	3.55	0.88	0.48	1.80	0.47	47.4	30.1	68.8
LU	9.43	1.14	0.43	1.43	0.57	42.9	42.9	:
HU	0.36	0.64	0.32	1.82	0.40	30.0	37.2	91.8
MT	0.41	0.12	0.43	1.25	0.06	30.0	46.0	29.1
NL	-	-	-	-	-	:	-	:
AT	17.76	0.41	0.27	1.92	0.42	20.5	49.8	-
PL	1.28	0.30	0.35	1.75	0.41	23.7	41.5	54.3
PT	1.63	0.47	0.54	2.15	0.75	57.7	25.7	23.4
RO	1.39	0.60	0.39	1.48	0.38	44.8	26.5	85.6
SI	1.98	0.96	0.64	2.21	0.60	40.1	78.5	88.8
SK	0.89	0.75	0.38	2.33	0.52	35.2	40.9	98.9
FI	4.58	0.22	0.68	1.51	0.25	16.3	60.4	-
SE	8.07	2.77	0.42	1.96	0.52	20.0	75.3	-
UK	15.38	0.53	0.13	1.67	0.46	38.7	42.2	-
NO	2.30	3.40	0.50	2.20	0.60	11.1	77.8	-
EU-15	4.98	0.38	0.49	1.60	0.35	47.7	33.6	26.0
NMS-10	1.37	0.44	0.36	1.79	0.42	27.6	40.1	66.7
NMS-2	1.29	0.63	0.38	1.51	0.42	45.4	27.1	85.1

Source: FSS

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 collections of agricultural statistics: Economic accounts for agriculture (EAA), agricultural price indices (API) and absolute agricultural prices.

The EAA is a satellite account of the European System of Accounts (ESA 1995). It covers the agricultural products and services produced over the accounting period sold by agricultural units, held in stocks on farms, or used for further processing by agricultural producers. The concepts of the EAA are adapted to the particular nature of the agricultural industry: for example, the EAA includes not only the production of grapes and olives but also the production of wine and olive oil by agricultural producers. It includes information on intra-unit consumption of crop products used in animal feed, as well as output accounted for by own-account production of fixed capital goods and own final consumption of agricultural units. EAA data can be used to calculate income indicators for the agricultural sector.

Agricultural price statistics provide information on the trend 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.

Long-term trends

Figure 2.1.1: Agricultural income indicator, 1999-2008



In most EU Member States, the trend in income Indicator A has been positive the last 10 years. However, recent data show that this overall trend may be about to change. The average increase in income per work unit since 2000 is significantly higher in the new Member States than in the EU-15.

For the EU-27, the recent fall brings Indicator A down to 115.2 (2000 = 100), after a significant 9.3 % rise in 2007. For the EU-15, Indicator A was slightly lower in 2008 than in 2000 (-0.2 %), after a rise to 104.2 % in 2007.

Member States can be divided into two groups according to the trend in Indicator A.

The first group includes countries whose agricultural income in 2008 was above the level recorded for 2000. This group comprises sixteen Member States, in which real agricultural income per labour unit has more than doubled in the Baltic States, Hungary and the Czech Republic.

The second group includes the other eleven Member States, where agricultural income in 2008 was below the level recorded for 2000. Within this group of countries, the sharpest falls were recorded in Belgium, Italy and Greece.

Recent trends

Indicator A is estimated to have decreased by 3.5 % in the European Union (EU-27) in 2008, following a 9.3 % rise in 2007.

Agricultural income in 2008 developed differently in the north and south of the EU-27. The largest increases were recorded in Bulgaria (+28.9 %), Romania (+28.4 %), Hungary (+18.6 %) and the United Kingdom (+16.5 %). The largest decreases were in Denmark (-24.7 %), Estonia (-23.0 %), and Belgium (-22.6 %).

Figure 2.1.2: Agricultural income (indicator A) in the EU, % 2008/2007

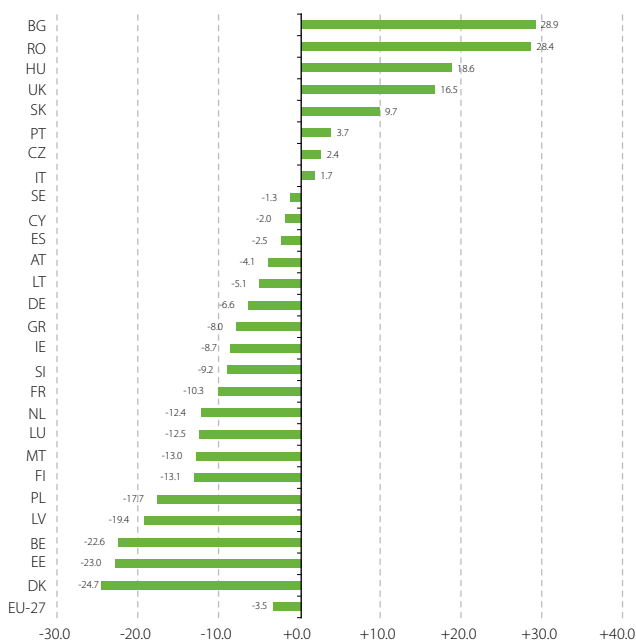


Figure 2.1.3: Main components of agricultural income, EU-27, % 2008/2007



The value of agricultural output in producer prices has increased by 4.1 % in real terms. This rise is due to increases in the output values of both crop production (+3.1 %) and animal production (+5.6 %). For crop production, the increase in the average output volume (+6.9 %) is offset by the fall in average prices (-3.6 %). For animal production, the average output volume remained stable, while producer prices increased by 5.6 %.

The output value of agricultural services grew by 4.0% while the value of inseparable non-agricultural secondary activities increased by 2.0 % compared to 2007.

The value of intermediate consumption of goods and services increased by 10.3 % in 2008. This is explained mainly by higher prices (+8.3 %). Steep increases in prices were observed for fertilisers (+42.8 %), energy (+12.2 %) and feedstuffs (+9.7 %).

Consumption of fixed capital ('depreciation') was higher (+2.5 %) than in 2007. The value of overall subsidies (product-specific subsidies and other subsidies on production) increased by 0.3 %, while taxes fell by 1.1 %.

As a consequence, agricultural factor income, an Indicator A component, decreased by 5.7 % compared to 2007. With the continuous reduction in agricultural labour input (-2.3%), Indicator A fell by 3.5 %.

Table 2.1.1: Agricultural income indicator A

	ø 2000-2004	ø 2005-2007	2008
	index year 2000 = 100		
EU-27	105.6	107.7	115.2
EU-15	100.7	97.8	99.8
BE	90.6	91.6	80.1
BG	96.6	92.2	124.4
CZ	103.5	131.7	201.8
DK	97.5	92.7	81.6
DE	100.3	104.1	129.6
EE	124.8	205.8	251.9
IE	89.2	92.2	93.4
EL	96.4	86.7	80.1
ES	107.6	101.9	94.0
FR	98.6	94.9	98.2
IT	97.8	87.9	81.1
CY	107.0	97.8	103.9
LV	124.4	233.6	280.2
LT	93.8	154.4	287.5
LU	99.3	94.7	89.7
HU	97.5	133.3	207.2
MT	109.2	106.5	89.2
NL	89.6	86.1	81.5
AT	108.3	112.6	125.5
PL	103.7	147.0	182.5
PT	103.3	106.0	108.9
RO	152.6	158.9	150.7
SI	97.9	122.1	135.0
SK	105.4	123.3	171.4
FI	99.0	103.9	94.4
SE	110.6	114.3	135.3
UK	113.8	128.4	157.9

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	2008	2000	2005	2008
	million €					
EU-27	130 958.6	129 932.8	142 799.5	38 641.7	49 295.1	53 455.0
EU-15	116 401.5	112 388.7	120 692.4	37 462.8	43 810.5	45 305.2
BE	2 484.0	2 135.0	1 973.1	351.2	486.2	601.4
BG	1 634.1	1 544.3	1 767.2	5.4	86.7	150.9
CZ	831.4	885.7	829.6	170.1	669.5	1 319.0
DK	2 495.5	2 297.0	2 117.4	788.8	974.3	1 001.4
DE	13 570.7	13 000.5	14 375.5	5 600.7	6 093.0	6 496.0
EE	137.5	186.4	176.8	22.2	89.6	148.4
IE	1 616.7	1 642.1	1 592.0	1 284.0	2 225.0	1 998.0
EL	6 239.8	6 580.9	5 575.7	2 134.3	2 241.8	2 962.6
ES	19 225.1	20 344.7	20 427.2	4 895.2	6 550.5	7 365.4
FR	23 889.7	21 251.6	24 583.6	8 152.3	9 742.9	9 885.5
IT	24 526.8	24 403.8	25 743.1	4 794.1	4 315.1	4 186.9
CY	324.6	343.6	337.0	3.0	:	4.0
LV	182.4	221.9	236.5	15.1	175.1	262.9
LT	394.1	407.1	511.6	17.8	228.4	301.5
LU	102.9	102.3	110.5	48.4	62.0	65.1
HU	1 814.5	1 886.6	2 738.9	172.2	1 087.7	1 112.3
MT	64.5	45.3	43.9	1.0	19.0	16.5
NL	9 052.8	7 828.5	8 048.5	408.4	801.3	907.4
AT	2 126.8	2 166.9	2 669.4	1 409.5	1 725.2	1 644.0
PL	4 597.5	5 160.7	6 256.6	214.4	2 111.4	3 151.6
PT	2 159.9	1 997.7	1 867.3	663.7	1 071.8	993.9
RO	4 121.3	6 083.3	8 334.6	228.3	548.8	938.7
SI	399.4	397.4	375.9	93.9	232.2	276.6
SK	310.7	381.7	498.5	235.4	236.1	467.2
FI	669.7	602.4	673.0	1 967.3	2 095.3	2 126.3
SE	1 093.5	1 060.3	1 296.5	881.9	1 018.0	1 004.6
UK	7 147.4	6 975.0	9 639.6	4 083.0	4 408.3	4 066.8

Source: Eurostat - Economic accounts for agriculture

In 2008, the gross value added (GVA) at producer prices amounted to €143 billion in the EU-27. More than 80 % of this value is generated in the 15 old Member States (EU-15), although the share has declined since 2000. Around 70 % of the GVA of agriculture in the EU-15 is produced by France, Italy, Spain and Germany.

The value of all agricultural subsidies (product-specific subsidies and other production subsidies) recorded in 2008 amounted to €53 billion in the EU-27. The share of new Member States (which joined the EU in 2004 and 2007) of the total value of subsidies paid to agricultural producers increased from 3 % to 15 % between 2000 and 2008.

The type of subsidies has changed over time. In 2000, product subsidies accounted for 69 % of total subsidies, while the share in 2008 was 16 %.

2.2 Final output

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

	2000	2005	2008	2000	2008
	million €			% of EU-27	
EU-27	295 313.4	308 725.2	373 479.6	100.0	100.0
EU-15	258 867.9	263 464.0	310 854.3	87.7	83.2
BE	6 844.6	6 540.3	7 314.3	2.3	2.0
BG	3 389.3	3 356.0	4 461.0	1.1	1.2
CZ	2 819.1	3 424.2	4 161.4	1.0	1.1
DK	7 725.3	7 867.9	9 566.7	2.6	2.6
DE	39 203.4	38 946.0	48 454.8	13.3	13.0
EE	363.7	526.7	636.7	0.1	0.2
IE	5 141.7	5 302.6	6 169.3	1.7	1.7
EL	9 849.2	10 557.0	10 524.8	3.3	2.8
ES	32 693.5	35 406.9	40 370.4	11.1	10.8
FR	56 607.1	56 149.0	66 220.0	19.2	17.7
IT	40 995.9	42 169.6	47 006.5	13.9	12.6
CY	579.6	621.7	619.6	0.2	0.2
LV	459.8	693.1	1 007.5	0.2	0.3
LT	1 140.4	1 433.2	2 054.0	0.4	0.5
LU	237.9	256.0	294.3	0.1	0.1
HU	4 851.4	5 700.7	7 623.0	1.6	2.0
MT	130.4	109.7	123.9	0.0	0.0
NL	19 638.7	20 302.1	23 514.8	6.7	6.3
AT	5 183.4	5 311.4	6 613.6	1.8	1.8
PL	12 406.3	14 120.9	19 109.1	4.2	5.1
PT	5 996.8	6 110.6	6 719.5	2.0	1.8
RO	7 971.5	12 667.1	19 548.3	2.7	5.2
SI	952.3	982.8	1 162.5	0.3	0.3
SK	1 381.7	1 625.0	2 118.3	0.5	0.6
FI	3 440.0	3 618.1	4 320.6	1.2	1.2
SE	4 392.3	4 271.7	5 141.3	1.5	1.4
UK	20 918.2	20 654.7	28 623.3	7.1	7.7

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, 2007)
	2008 / 2007 (%)			%
Cereals	22.3	7.6	7.4	13.3
Oilseeds	11.1	24.3	22.7	2.1
Sugar beet	-12.1	-17.3	-15.4	1.0
Fresh vegetables	1.8	-2.2	-2.2	8.5
Plants and flowers	1.3	-0.5	-0.5	5.5
Potatoes	-4.0	-12.9	-12.9	3.1
Fruits	2.5	6.4	5.7	6.4
Wine	0.0	3.2	3.2	4.5
Olive oil	9.6	1.6	1.3	1.3
Crop output	6.9	3.1	2.9	53.3
Cattle	0.2	4.2	4.3	7.8
Pigs	-1.6	7.4	7.3	8.5
Sheep and goats	-6.0	-1.1	-1.0	1.4
Poultry	3.3	6.6	6.5	4.6
Milk	0.7	7.2	6.9	13.9
Eggs	1.1	4.4	4.5	2.1
Animal output	+0.1	+5.6	+5.5	39.8
Agricultural services	+2.0	+3.1	+3.1	4.1
Secondary activities	+1.8	+2.8	+2.7	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 €373 billion in 2008 for the EU-27. The new Member States contributed €63 billion (17 %) to this value. With an output value of €66 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 €40 and €47 billion.

EU-27 agricultural output at basic prices in 2008 grew by 3.9 %, mainly due to a significant increase in the value of animal production (+5.5 %), while the value of crop production increased by 2.9 %).

The rise in the value of crop production in 2008 was due to the growth in output volume (+6.9 %), which was only partly offset by a fall in producer prices (-3.6 %). Output volumes of the three largest crop products rose: cereals (+22.3%), fresh vegetables (+1.8 %) and fruits (+2.5 %). The sharpest increases in crop prices were recorded for oil seeds (+11.9 %) and fruit (+3.8 %). On the other hand, prices fell significantly for cereals (-12.0 %) and for potatoes (-9.3 %).

The increase in the value of animal output in 2008 was the result of a small rise in output volumes (+0.1 %) and a significant increase in producer prices (+5.6 %). The growth in the real value of milk production was driven by a rise in prices (+6.5 %), while volume remained nearly stable (+0.7 %). The fall in the volume of pig production (-1.6 %) was more than outweighed by sharply rising prices (+9.1 %). Cattle production volumes rose slightly (+0.2 %), and at the same time, producer prices increased by 4.0 %.

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 2000. There are also differences in the values taken into account in the weighing scheme and the reference period.

2.3 Inputs

Table 2.3.1: Intermediate consumption value by crop and animal production

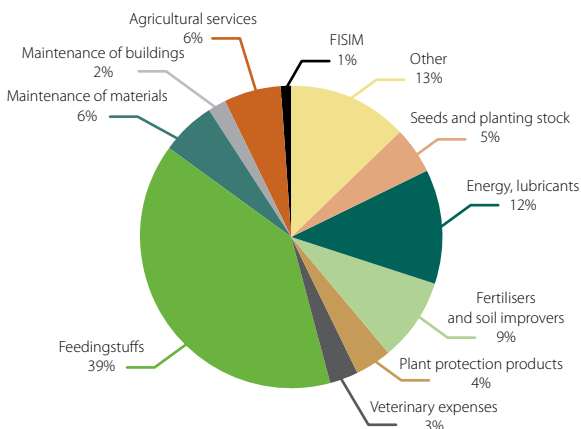
	Share of product specific inputs in			
	crop production ¹		animal production ²	
	2000	2008	2000	2008
	%			
EU-27	18.7	20.7	53.9	64.3
EU-15	18.9	20.8	52.8	62.9
BE	22.6	30.5	63.4	69.9
BG	:	16.8	:	72.9
CZ	18.8	26.7	82.7	81.6
DK	21.3	22.6	56.0	73.4
DE	21.7	22.2	59.4	69.8
EE	10.7	22.2	72.6	76.1
IE	37.9	41.3	42.9	54.7
EL	11.0	11.8	56.1	69.2
ES	14.6	14.3	54.5	71.9
FR	23.9	25.3	56.8	67.8
IT	9.9	13.9	51.2	54.8
CY	:	19.7	:	54.5
LV	20.0	34.9	54.3	61.5
LT	24.1	36.4	67.4	77.1
LU	26.0	42.0	38.3	41.0
HU	20.6	25.9	59.9	69.1
MT	10.1	11.7	51.2	66.1
NL	16.4	19.6	40.9	53.9
AT	16.1	16.9	50.9	55.4
PL	17.2	21.8	63.3	58.4
PT	10.2	14.1	70.6	83.1
RO	12.0	13.6	64.6	105.4
SI	17.2	19.8	67.4	84.3
SK	41.9	31.1	57.7	53.6
FI	24.4	34.3	67.5	75.2
SE	28.5	28.4	51.5	49.1
UK	38.2	36.6	35.3	41.1

Source: Eurostat - Economic accounts for agriculture

¹⁾ Inputs in crop production: seeds, fertilisers, plant protection products

²⁾ 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, 2008



In the EU-27, intermediate consumption eats up 61 % of the output value of the agricultural industry at producer prices. The main intermediate input to agriculture in value terms is animal feed, which accounts for 39 % of total intermediate consumption. Energy and lubricants contribute 12 % to the value of intermediate inputs consumed by the agricultural industry. The main intermediate input items for crop production are fertilisers, plant protection products and seeds and plantings, which together account for 18 % of total agricultural intermediate consumption.

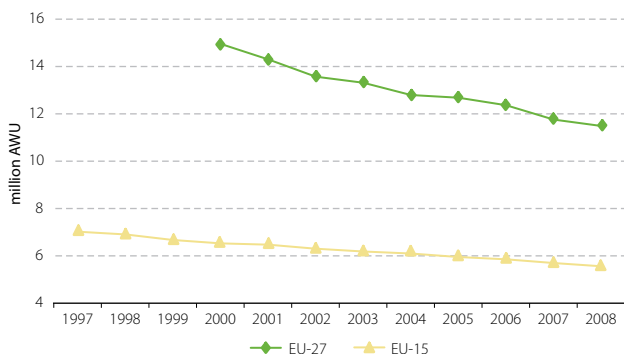
3.4 Agricultural Labour Input

Table 2.4.1: Agricultural labour input

	2000	2005	2008	2008/2007
	1000 AWU ¹			%
EU-27	14 944	12 668	11 474	97.7
EU-15	6 510	5 933	5 541	97.6
BE	75	70	65	98.1
BG	771	626	441	89.2
CZ	166	152	135	98.0
DK	76	63	57	97.7
DE	685	583	545	98.3
EE	65	38	31	94.8
IE	153	149	142	98.7
EL	586	607	573	99.6
ES	1 101	1 017	946	94.7
FR	1 028	936	884	98.1
IT	1 383	1 242	1 183	97.4
CY	31	29	24	96.4
LV	149	138	100	93.2
LT	187	150	94	82.5
LU	4	4	4	98.4
HU	676	522	434	94.4
MT	5	4	4	100.0
NL	220	198	190	99.2
AT	176	165	156	99.2
PL	2 495	2 292	2 349	102.2
PT	503	429	358	95.7
RO	3 645	2 596	2 152	97.1
SI	104	90	83	99.1
SK	143	99	85	93.1
FI	111	96	90	98.8
SE	77	76	66	96.1
UK	334	297	284	101.1

Source: Eurostat - Agricultural Labour input

¹⁾ Annual Work Units

Figure 2.4.1: Agricultural labour input, 1997-2008

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. Annual Work Unit (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.

Over the period 2000 to 2008, agricultural labour input fell by 23.2 % in the EU-27. The rate of change was slower in the EU-15 (-14.9 %) than in other parts of the EU.

In 2008, total agricultural labour input continued to fall in all Member States, with the exception of Poland (+2.2 %), and the United Kingdom (+1.1 %). The steepest decreases were recorded in Lithuania (-17.5 %), Bulgaria (-10.8 %), Latvia (-6.8 %), Hungary (-5.6 %) and Estonia (-5.2 %). Overall, EU agricultural labour input was down by 2.3 % in 2008.

2.5 Price indices

Table 2.5.1: Deflated agricultural price indices, crop and animal output (2001, 2005, 2008)

	Crop output*			Animal output		
	2001	2005	2008	2001	2005	2008
	index year 2000 = 100					
EU-27**	102.1	92.9	107.0	103.6	91.2	97.7
BE	115.9	96.2	90.3	101.2	88.5	92.0
BG	96.6	71.1	90.6	115.5	80.2	74.4
CZ	110.6	83.9	119.4	103.8	89.0	81.8
DK	97.7	86.8	114.0	107.7	84.5	89.9
DE	105.4	91.4	111.7	105.1	91.2	100.6
EE	:	101.8	120.2	:	111.6	109.0
IE	108.0	94.6	107.0	99.1	85.1	92.9
EL	101.7	108.8	118.5	103.9	96.5	95.5
ES	96.0	96.7	93.6	106.4	90.5	89.5
FR	102.7	86.9	108.7	100.5	89.4	95.5
IT	104.8	96.0	102.0	100.8	89.8	93.3
CY	:	99.7	138.4	:	116.2	114.9
LV	99.6	109.2	120.6	109.8	118.3	108.0
LT	111.6	115.1	146.6	114.5	106.7	110.7
LU	105.4	104.2	113.2	98.2	86.5	91.7
HU	83.7	73.4	86.9	111.1	85.3	87.7
MT	118.8	87.4	91.2	98.7	86.3	87.4
NL	102.9	91.4	97.9	98.8	84.3	93.6
AT	102.7	94.5	103.2	105.1	93.1	102.7
PL	92.3	87.0	105.8	100.9	94.4	94.6
PT	109.2	98.9	99.9	104.4	85.7	90.9
RO	89.0	81.3	119.6	129.2	108.9	102.7
SI	101.0	88.3	115.3	100.2	86.1	91.3
SK	104.2	77.3	89.1	99.5	75.9	70.4
FI	97.1	92.9	115.9	105.1	92.1	102.1
SE	106.8	94.4	117.2	99.6	86.5	87.8
UK	110.7	101.1	141.1	104.6	102.8	128.8

Source: Eurostat - Agricultural prices and price indices

* Crop output, including fruits and vegetables

** EU27 for 2001 does not include EE and CY

Figure 2.5.1: EU-27 output price indices of agricultural goods, 1998-2008

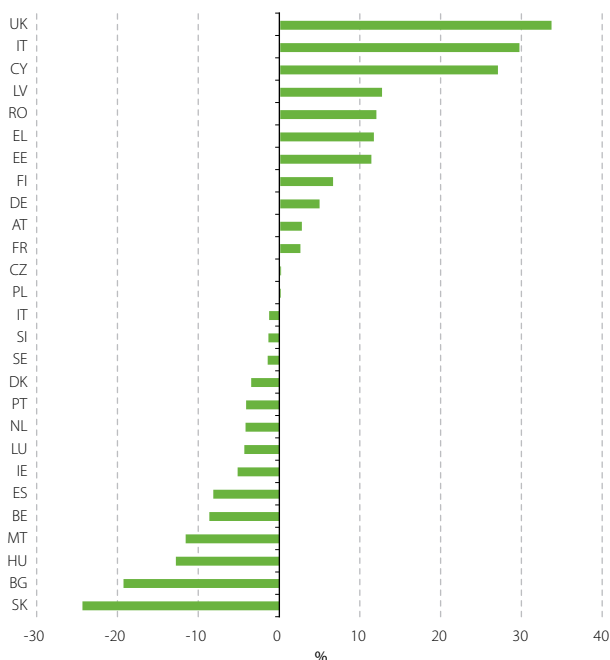
EU 27 for the period 1998-2003 does not include data for EE and CY; 1998-1999 data are missing for MT

The final data for 2008 reveal that the level of agricultural prices for crop output in real terms was 7 % higher than in 2000, while the prices for animal output fell by - 2.3 %.

The output price indices of agricultural goods for the European Union (EU-27) went up by 29.4 % in nominal terms compared to 2000. When adjusted to inflation (using the Harmonised Consumer Price Index HCPI), this makes the increase only 2.4 %.

Among the 27 Member States, eight countries (BE, BG, ES, HU, MT, NL, PT and SK) registered a decrease, the steepest with more than a 10 % decrease being recorded in HU (-13.2 %) and SK (-10.9 %) in the real crop output price index. In contrast, the animal output real price index was higher than in 2000 in only nine Member States DE, EE, CY, LV, LT, AT, RO, FI and UK. The highest increase was recorded in the UK (28.8 %) while the steepest decrease was recorded in SK, where animal output fell by 29.6 % in 2008 compared to 2000.

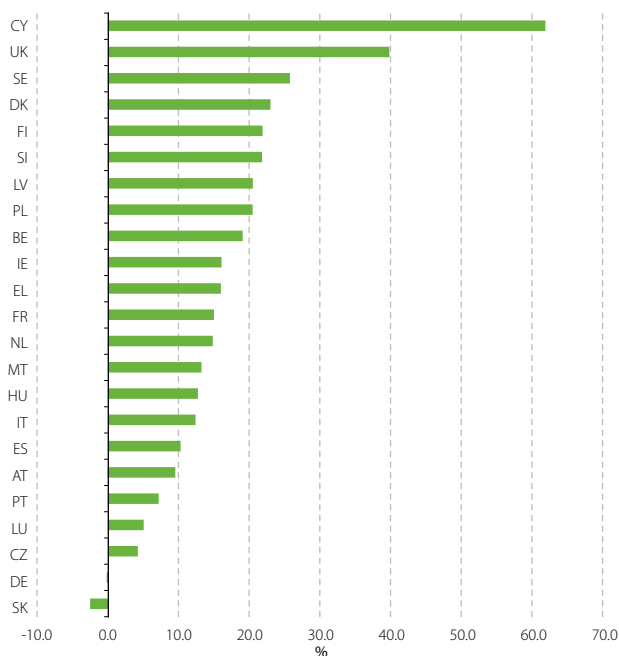
Figure 2.5.2: Deflated price indices of agricultural output, % change 2000-2008



Real price indices of agricultural output developed differently across Member States. The available data show that thirteen countries registered an increase in 2008 compared to 2000. The largest increases were recorded in the United Kingdom (33.7 %), Italy (29.7 %) and Cyprus (27.1 %). Among the other fourteen Member States that registered decreases, Slovakia, Bulgaria, Hungary and Malta recorded the steepest decreases, by 24.3 %, 19.3 %, 12.8 % and 11.6 % respectively.

The available data show that the real price indices of agricultural output for the EU-27 increased by only 1.7 % in 2008 compared with 2007, following an increase of 6.5 % in 2007 compared with 2006.

Figure 2.5.3: Deflated price indices of means of agricultural production, % change 2000-2008



Among the 23 Member States for which information related to input total is available for 2008, only two recorded negative change of -2.5 % in Slovakia and -0.2 % in Germany, in comparison with 2000. In contrast, the other 21 countries recorded positive developments, ranging from 61.9 % in Cyprus to 4.2 % in the Czech Republic.

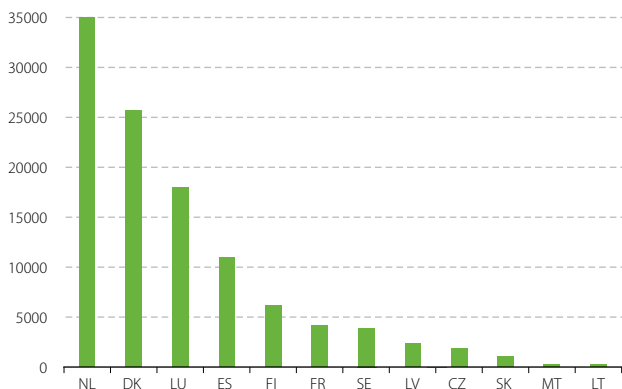
The data available for the EU-27 in 2008 show an 8.1 % increase in the deflated index of purchase prices of the means of agricultural production compared with the previous year.

Table 2.5.2: Annual selling prices of agricultural products (absolute prices), 2008

(Euro)

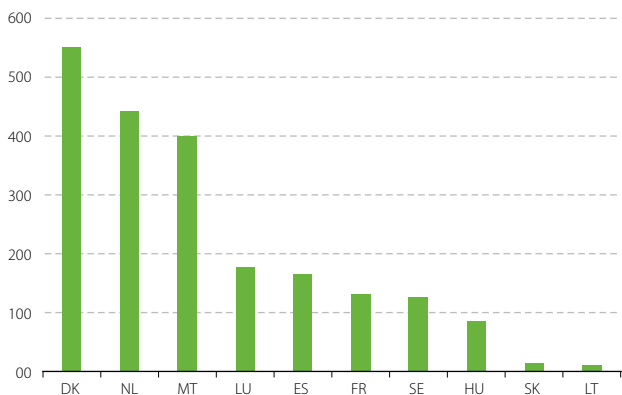
	Crop products			Animal products		
	Soft wheat	Sunflower	Main crop potatoes	Cows	Pigs (light)	Raw cows' milk actual fat content
	prices/ 100 kg	prices/ 100 kg	prices/ 1000 kg	prices/ 100 kg live weight	prices/ 100 kg live weight	prices per 100 l
BE	16.5	:	8.7	168.6	:	32.1
BG	16.0	22.6	22.6	61.5	111.7	:
CZ	20.5	26.9	14.2	108.1	121.8	:
DK	20.4	:	29.9	79.1	88.8	35.1
DE	:	89.4	:	:	:	:
EE	15.6	:	:	:	:	29.7
IE	12.8	:	:	:	:	31.2
EL	22.6	25.0	46.2	128.5	216.1	43.2
ES	19.0	39.4	22.2	107.7	115.7	37.9
FR	:	:	:	:	:	:
IT	:	:	:	:	:	:
CY	:	:	56.0	161.0	:	:
LV	15.5	:	14.1	79.2	130.7	:
LT	16.2	:	18.2	79.6	124.9	25.0
LU	14.0	:	36.2	162.8	:	37.7
HU	15.9	34.0	15.5	120.4	121.5	32.8
MT	:	:	24.0	:	:	47.5
NL	16.1	:	8.9	115.7	108.8	36.4
AT	13.6	32.6	10.6	111.8	124.7	38.9
PL	18.3	:	11.1	:	:	29.1
PT	21.6	32.5	17.4	104.1	:	40.2
RO	18.0	25.2	28.8	72.3	127.8	23.9
SI	17.8	:	18.5	88.2	:	32.8
SK	14.1	34.1	14.4	83.7	122.7	34.1
FI	18.9	:	22.4	:	:	45.6
SE	18.6	:	25.9	:	:	36.4
UK	19.1	:	18.6	:	119.1	31.6

Source: Eurostat - Agricultural prices and price indices

Figure 2.5.4: Agricultural land prices* (Euro/ ha), 2007

* The data collection method used by the MS is not completely harmonised

Data on agricultural land prices in 2007 differ widely between the Member States for which figures are available. The highest prices were recorded in the Netherlands, (34,969 Euro/ha), Denmark, (25,745 Euro/ha) and Luxembourg, (18,001 Euro/ha). Figure 2.5.4 shows that agricultural land prices in the new Member States are lower than in the other countries.

Figure 2.5.5: Rent of agricultural land (Euro/ha), 2007

In the 10 Member States for which data on agricultural land rents are available, the highest rents are found in Denmark (551 Euro/ha) and the Netherlands (444 Euro/ha). Lithuania has the lowest rents (12 Euro/ha).

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 by 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). Due to the very high price for cereals in 2007, 2008 was an exceptional year. In addition to the considerably increased area under cereals, the weather conditions were quite good. This leads to soaring EU cereal production in 2008.

Cereals are followed by forage plants, the volume of which varies considerably within each 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 crops are very widespread among the EU-27 (such as apples) whilst others are very specific to certain countries or regions (such as aubergines). Most crops are relatively concentrated in the EU Mediterranean countries, as in general, the climate conditions in the south of Europe are more favourable to such production.

Main crops

Table 3.1.1: Harvested production of some of the main crops, in million tonnes, 2008

	Cereals total (including rice) ¹	Field peas and others ²	Sugar beet ³	Rape ⁴	Sunflower ⁵
	1000 t				
EU-27	311,506	1,235	101,469	18,879	6,964
BE	3,109	4	4,372	29	0
BG	7,015	8	16	233	1,184
CZ	8,370	41	2,642	1,055	61
DK	9,041	14	2,011	637	0
DE	50,105	141	22,846	5,155	49
EE	862	3	0	110	0
IE	2,353	0	45	21	0
EL	5,252	6	903	0	16
ES	23,934	167	3,992	23	822
FR	70,482	449	30,160	4,731	1,615
IT	21,695	46	4,630	25	265
CY	57	0	0	0	0
LV	1,689	1	0	205	0
LT	3,422	29	339	330	0
LU	191	1	0	16	0
HU	16,951	44	532	656	1,492
MT	0	0	0	0	0
NL	2,063	4	5,219	9	0
AT	5,748	45	3,091	175	80
PL	27,664	29	8,715	2,106	5
PT	1,253	0	254	0	22
RO	16,799	37	784	682	1,159
SI	580	4	262	11	0
SK	4,078	14	679	424	192
FI	4,229	7	478	86	0
SE	5,211	29	1,975	264	0
UK	19,354	113	7,525	1,896	2

Source: Eurostat - agricultural products

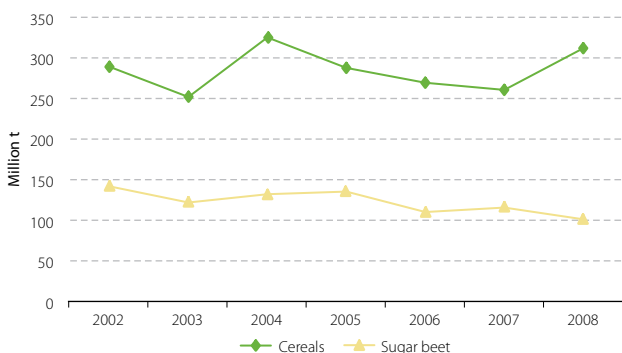
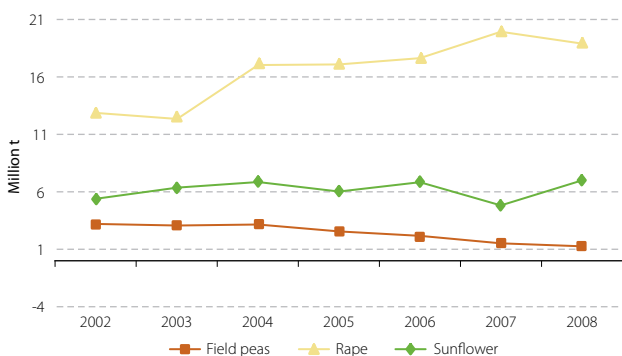
¹⁾ Cereals: 2007 data for UK

²⁾ Field peas and others: 2007 data for BG and UK

³⁾ Sugar beet: 2007 data for BG, IT and UK, 2006 data for SI

⁴⁾ Rape: 2007 data for UK

⁵⁾ Sunflower: 2006 data for UK

Figure 3.1.1: Evolution of the cereal and sugar beet production, EU-27, 2002-2008**Figure 3.1.2:** Evolution of the rape, sunflower, and field peas production, EU-27, 2002-2008

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 reaction to the very high cereal prices in 2007, production in 2008 increased by 19 % compared to 2007.

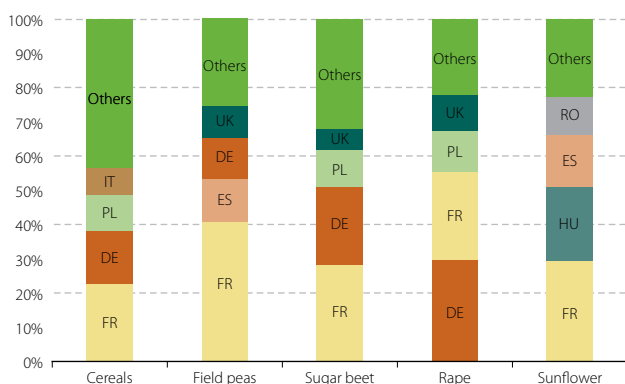
The downward trend in sugar beet production continued (-13 % from 2004-2007 and -12 % from 2007-2008).

Rape production increased massively (by 62 %) between 2003 and 2008. This was mainly in 2004 (up 42 % compared to 2003) and 2007 (up 13 % compared to 2006). Nevertheless, production fell slightly between 2007 and 2008 (by -5 %). This was essentially due to competition for land between rape and cereals in 2008. Not only was the price of cereals high but there was also political pressure to increase cereal production.

Sunflower production did not follow the same trend. Output roughly stabilised between 2003 and 2006. In 2007, due to very bad climate conditions in some producing countries, production decreased by 29 % compared with 2006. In 2008 production increased by 45 % compared with 2007. Bulgaria and Romania more than doubled sunflower seed production between 2007 and 2008.

Field peas production has fallen since 2001 (-61 % between 2002 and 2008). Most of this reduction (-30 %) took place between 2006 and 2007. Between 2007 and 2008 it fell by 17 %. The biggest producer of field peas (France) recorded a decrease of 40 % between 2006 and 2007 and of -27 % between 2007-2008. This crop is mainly used for animal feed and is increasingly replaced by other protein crops, such as soya.

Figure 3.1.3: Share of main crop production between Member States, 2007



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 major part of these productions.

Poland is the third largest producer of cereals in the EU-27. France and Spain produce more than half of the production of field peas, with the former accounting for almost 50 % of the total.

For sugar beet and rape, France and Germany account for more than 50 % of EU-27 production. It is interesting to be noticed that some of the former important sugar beet producers have almost disappeared (IE decrease by 99 % between 2005 and 2006, LV -98 % between 2006 and 2008 and no sugar beet production in 2009).

Sunflower seed production is almost equally distributed among France (23 % of the EU-27 production), Hungary (21 %), Bulgaria and Romania (17 % each). If in 2007 was a very bad year for Bulgaria and Romania, in 2008, production increased by 134 % and 123 % respectively.

Cereals

Table 3.1.2: Harvested production of the most important cereals, 2008

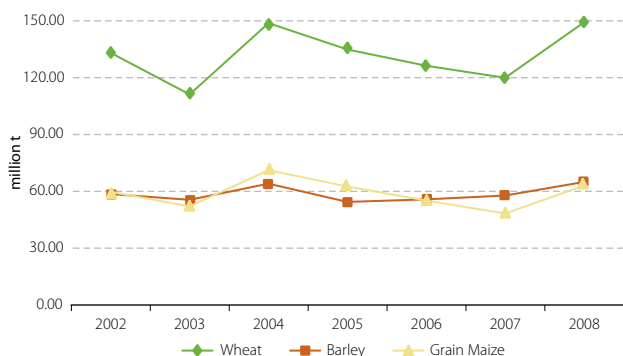
	Wheat	Barley	Grain maize	Rye and meslin ¹	Rice ²
	1000 t				
EU-27	149,057	65,096	62,814	9,583	2,736
BE	1,869	424	743	3	0
BG	4,632	878	1,368	15	39
CZ	4,632	2,244	858	210	0
DK	5,027	3,361	0	147	0
DE	25,989	11,967	5,106	3,798	0
EE	340	350	0	66	0
IE	948	1,207	0	0	0
EL	1,939	380	2,472	62	209
ES	6,714	11,261	3,600	324	665
FR	39,137	12,250	16,027	124	104
IT	8,845	1,233	9,461	11	1,493
CY	10	47	0	0	0
LV	990	307	0	195	0
LT	1,723	970	32	205	0
LU	98	53	2	9	0
HU	5,654	1,478	8,963	114	13
MT	0		0	0	0
NL	1,366	310	252	8	0
AT	1,690	968	2,147	230	0
PL	9,275	3,619	1,844	3,656	0
PT	173	129	632	23	164
RO	7,110	1,211	7,837	31	49
SI	160	77	320	2	0
SK	1,823	930	1,149	81	0
FI	788	2,129	0	61	0
SE	2,207	1,678	0	170	0
UK	15,920	5,636	0	38	0

Source: Eurostat - Agricultural products

¹⁾ Rye and meslin: 2007 data for UK

²⁾ Rice: 2007 data for IT

Figure 3.1.4: Evolution of the wheat, barley and grain maize production, EU-27, 2002-2008



In the EU-27 in 2008, the production of these crops closely mirrored the beginning of 2004, which was an exceptionally good year.

This graph shows some instability in production, except for barley production, 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 consequence, production increased sharply in 2008 (+24 % for wheat, +32 % for grain maize and +12 % for barley between 2007 and 2008). This was mainly due to the shortage of the world supply and the consequently high market prices that lead to the need to increase cereal production.

Barley production has exceeded grain maize since 2007.

This graph shows also that wheat and grain maize productions follow a parallel trend. Barley production is much more stable, probably due to the fact that it is less sensitive to weather conditions.

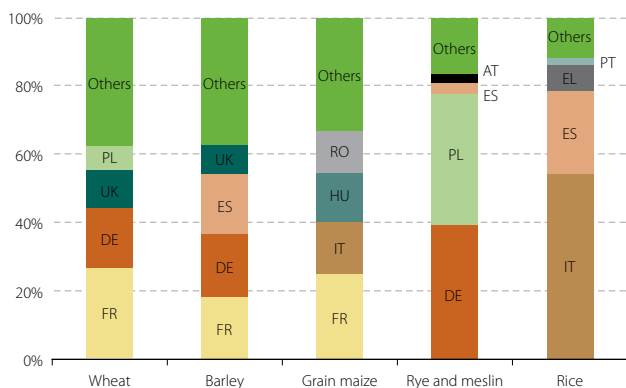
Figure 3.1.5: Evolution of the rye and rice production, EU-27, 2002-2008



Rye and maslin production fluctuates, decreasing by almost -24% between 2002 and 2003, and then increasing by 44 % between 2003 and 2004 (two extreme years). Between 2004 and 2006 it decreased by -34% and then increased by 40 % between 2006 and 2008.

Rice production remains fairly stable (slight increase of 3 % between 2002 and 2008 but no change between 2007 and 2008). Rice needs specific growing conditions and cannot be easily replaced by other crops.

Figure 3.1.6: Share of cereal production between Member States, 2007



The four main cereals producing countries presented in the figure account for more than 60 % of EU-27 production. For rye and maslin and rice, this share exceeds 75 %.

France and Germany, the two main wheat producers, account for almost 45 % of EU-27 production.

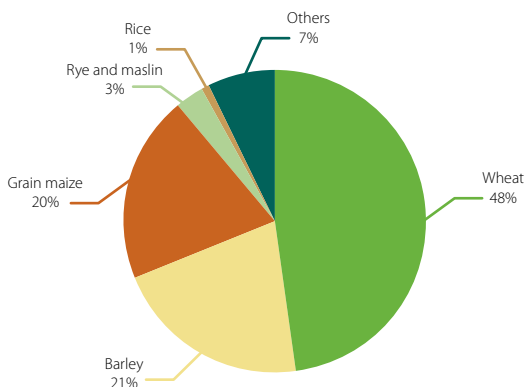
With an increase of 30 % between 2006 and 2007, France has become the biggest producer of barley, accounting for 19 % of EU-27 production, closely followed by the second biggest producer, DE, with 18 %.

France and Italy, the two main producers of grain maize, account for more than 40 % of EU-27 production. Hungary and Romania, the third and fourth biggest producers are responsible for respectively 14 % and 13 % of EU production. Both countries doubled their grain maize production between 2007 and 2008. 2007 was a very bad year for grain maize production in Eastern Europe.

Germany and Poland account for almost 80 % of EU-27 rye production.

Only eight countries produce rice in the European Union, of which Italy accounts for more than 50 % of EU-27 rice production.

Figure 3.1.7: Harvested production of cereals by type of cereals, EU-27, 2007



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

With a cereals' harvested production of around 312 million tonnes, 149 millions of tonnes come from the wheat production which represents almost the half of the whole cereals production (48%). The share of the wheat production compared to 2007 increased by 2%.

Barley production totalled almost 65 million tonnes, accounting for 21 % of all cereal production. Grain maize production totalled around 63 million tonnes, or 20 % of the cereal harvested.

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

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

Main Fruits and vegetables

Table 3.1.3: Harvested production of some fruits and vegetables, 2008

	Toma- toes¹	Carrots²	Onions³	Apples⁴	Peaches⁵	Oranges⁶
	1000 t					
EU-27	13,995	5,287	5,474	12,079	3,409	6,875
BE	238	236	55	348	0	0
BG	133	10	11	26	19	
CZ	10	27	45	152	4	0
DK	18	69	56	32	0	
DE	65	547	408	1,047	1	0
EE	1	14	0	2	0	0
IE	:	:	:	:	0	0
EL	1,339	48	200	235	734	802
ES	3,783	478	1,093	682	1,269	3,370
FR	740	625	321	2,080	225	1
IT	5,414	591	383	2,249	1,025	2,491
CY	34	2	7	10	2	30
LV	0	30	17	31	0	0
LT	1	52	27	64	0	0
LU	0	0	0	9	0	7,276
HU	228	78	68	568	36	0
MT	15	1	7	0	1	2
NL	730	496	1,238	375	0	0
AT	42	81	123	551	8	0
PL	250	800	600	2,515	11	0
PT	:	:	:	223	48	180
RO	777	176	378	457	12	0
SI	4	3	5	114	9	0
SK	29	8	9	42	5	0
FI	40	61	20	4	0	0
SE	17	101	29	21	0	0
UK	86	752	376	243	0	0

Source: Eurostat - Crop production

¹⁾ Tomatoes: 2006 data for BE, DK, FR, 2006 data for BG, EE, LV, HU, SI, SK, UK,

²⁾ Carrots: 2005 data for ES, 2006 data for BE, DK, FR, 2007 data for BG, CZ, LV, HU, SI, SK, UK

³⁾ Onions: 2006 data for SE, 2006 data for BE, DK, FR, 2007 data for BG, EE, LV, SI, SK, UK

⁴⁾ Apples: 2006 data for DK, FR, 2007 data for BE, BG, EE, LV, SI, UK

⁵⁾ Peaches: 2005 data for DE, 2006 data for FR, 2007 data for BG, SI

⁶⁾ Oranges: 2006 data for FR

In the European Union, the most important vegetables in terms of production are tomatoes (around 14 million tonnes), carrots (around 5.3 million tonnes) and onions (around 5.5 million tonnes). The main fruits are apples (around 12 million tonnes), oranges (around 6.9 million tonnes) and peaches (around 3.4 million tonnes).

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

Main results of the 2007 Orchard survey

A basic survey on plantations of certain species of fruit trees (table apples, table pears, peaches, apricots, oranges, lemons and small citrus fruit) is carried out every five years to measure and characterise the production potential of fruit plantations intended to produce for the market. The total survey area is therefore smaller than the overall area of Member States' orchards as registered in the annual statistics, as these are supposed to cover all production areas.

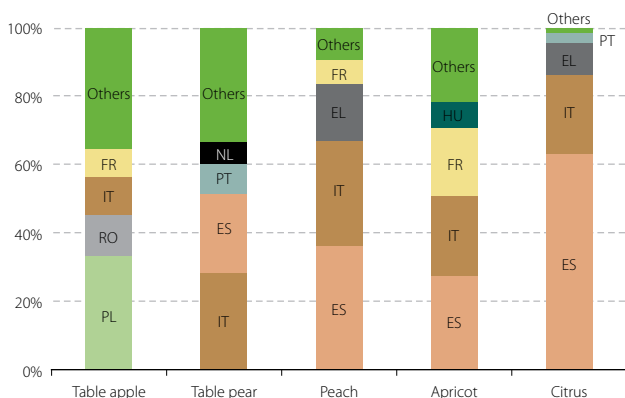
The 2007 survey was the first survey covering all 27 EU Member States.

Data were collected on areas under fruit trees broken down by country, region (production zone), specie, variety, density class (number of trees/ha) and age class.

Table 3.1.4: Area under the seven species of fruit trees, 2007

	Total	Table Apple	Table Pear	Peach	Apricot	Orange	Lemon	Small citrus fruit
	hectares							
EU-27	1,365,096	485,100	112,258	206,957	67,369	279,048	62,855	151,509
EU-15	1,028,745	200,644	95,772	189,943	52,958	277,494	62,190	149,744
NMS-12	336,351	284,456	16,487	17,015	14,410	1,554	666	1,765
BE	14,058	6,833	7,225	-	-	-	-	-
BG	10,518	4,121	298	3,488	2,610	-	-	-
CZ	13,548	9,895	716	1,149	1,788	-	-	-
DK	1,886	1,486	401	-	-	-	-	-
DE	29,469	27,888	1,581	-	-	-	-	-
EE	690	690	-	-	-	-	-	-
IE	150	150	-	-	-	-	-	-
EL	94,771	9,337	3,127	34,127	3,929	32,440	5,180	6,632
ES	459,524	24,822	25,976	75,118	18,700	158,824	39,859	116,225
FR	76,638	40,113	6,707	14,308	13,804	29	23	1,654
IT	279,120	55,225	32,075	63,754	15,649	73,786	16,634	21,998
CY	5,937	925	146	614	268	1,554	666	1,765
LV	1,557	1,300	258	-	-	-	-	-
LT	2,459	2,428	32	-	-	-	-	-
LU	39	30	9	-	-	-	-	-
HU	47,183	33,793	2,812	5,578	4,999	-	-	-
MT	215	-	-	215	-	-	-	-
NL	16,662	9,380	7,282	-	-	-	-	-
AT	8,541	7,229	506	211	594	-	-	-
PL	176,730	165,715	7,048	2,907	1,060	-	-	-
PT	39,792	11,711	9,228	2,424	283	12,416	494	3,235
RO	70,659	60,494	4,834	1,897	3,434	-	-	-
SI	3,089	2,438	196	431	23	-	-	-
SL	3,765	2,656	148	734	227	-	-	-
FI	437	437	-	-	-	-	-	-
SE	1,313	1,194	119	-	-	-	-	-
UK	6,346	4,810	1,536	-	-	-	-	-

Figure 3.1.8: Area share of apples, pears, peaches, apricots and citrus among EU-27, 2007



Four countries account for almost three quarters of the EU-27 surveyed species orchard area. They are: Spain (459,524 ha), Italy (279,120 ha), Poland (176,730 ha) and Greece (94,771 ha).

Poland has the third largest area, accounting for 13 % of the EU-27 area. Over 90 % of the surveyed orchard area in Poland is under apple trees, making it the largest apple tree orchard in the EU-27. In Spain, the country with the largest orchard area, citrus fruit accounts for 68 % of its surveyed area. Spain therefore has the largest area under oranges, small citrus fruit and lemons in the EU-27.

The two most recent enlargements have led to a considerable increase in the area under table apples in EU-27. The two largest areas of apple trees are found in Poland (165,715 ha) and Romania (60,494 ha). Italy (55,225 ha) and France (40,113 ha) are ranked third and fourth respectively.

Italy has the largest area under pear trees, accounting for almost 30 % of the area under pear trees in EU-27. The Netherlands has now become the fourth largest area of pear trees within the EU-27. Peach trees occupy the third largest orchard area in EU-27. Two countries alone (Spain and Italy) account for over 65 % of the total EU-27 area.

Spain, Italy and France each account for more than 20 % of the total EU area under apricots. Hungary has the fourth largest area, with a share of over 7 % of the EU-27 area.

Citrus fruits are concentrated in the Mediterranean countries (Spain, Italy, Greece, Portugal, Cyprus and France). Spain accounts for more than 60% of the whole EU-27 citrus area. Of the newly acceding countries, only Cyprus has citrus trees, but takes up less than 1% of the total EU-27 area.

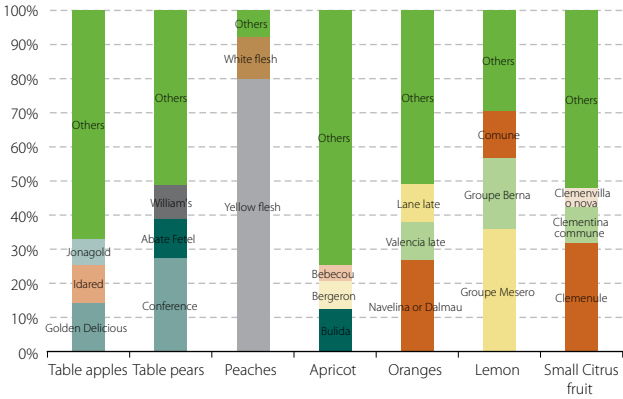
Figure 3.1.9: Main varieties or groups of varieties by specie

Figure 3.1.9 presents the share of the most important varieties or group of varieties by specie. The more important is the category others the higher is the diversity of the varieties of the corresponding specie.

Orange varieties can be divided into two groups: sweet oranges (navel oranges and non-blood oranges) and blood oranges. They represent 90 % and 10 % respectively of the area under orange trees.

Navelina or Dalmau and Lane late varieties belong to the navel orange group which represent more than the half of the oranges. The fifth most represented variety is Tarocco (8%), which belongs to the blood orange group.

The most common variety of yellow-flesh peaches is Andros, which belongs to the Cresthaven group. This variety accounts for 6 % of the area under peach trees.

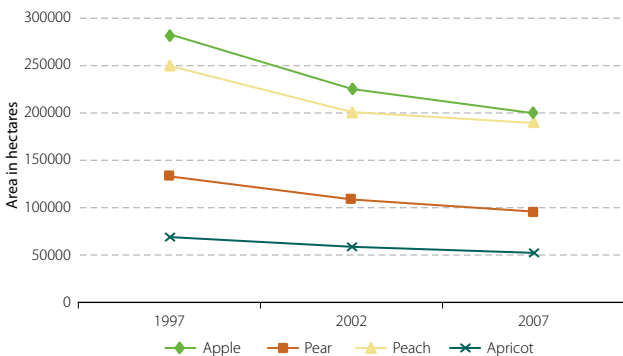
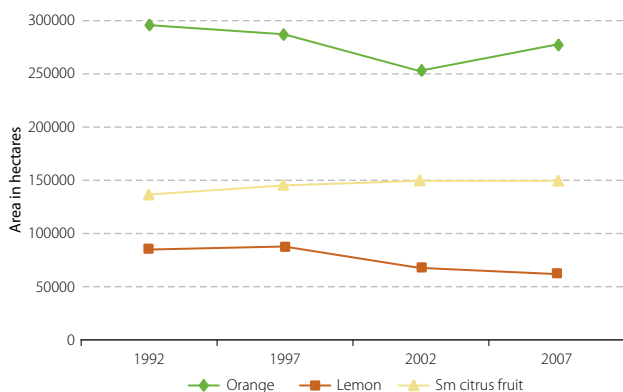
Figure 3.1.10: Evolution of the area under apple, pear, peach and apricot trees in EU-15

Figure 3.1.11: Evolution of the area under citrus fruit trees in EU-27



Although the area under apple, pear, peach and apricot trees in the EU-15 is constantly shrinking, the downward trend over the past five years appears to be flattening out. In some Member States, the trend is actually being reversed.

Since 2002, the area under table apple trees has decreased by almost 10%.

Peach tree plantations have decreased since 2002 in the EU-15 (-6%). Only in Spain, there has been an increase in the area under peach trees (+8%).

In EU-15, the area under table pear trees has fallen by 11% since 2002. However, the situation regarding pear tree plantations differs from one Member State to another. While the three countries with the biggest pear plantations (Italy, Spain and Portugal) the area have significantly reduced (-17%, -17% and -8% respectively), some countries – such as Netherlands and Belgium – have increased (+24% and +13% respectively). Netherlands has become the fourth country with the biggest area under pear trees.

Apricot tree plantations have decreased by -10% since 2002. Most prominently it happens in Portugal, Greece and Spain (-42%, -21% and -17% respectively). The area under apricot trees in Italy (the second biggest area) is stable.

Apart from Cyprus, no other new Member States produce citrus fruit. Given that Cyprus represents 0.8% of the total citrus area of EU-27, this analysis considers the trends in EU-15 representative of the trends for EU-27.

The different sub-species of citrus fruit production show a different area evolution pattern.

Small citrus fruits at EU-27 level are continuing to increase. Nevertheless, the Member States show contrasting trends in terms of the area with small citrus fruit trees. While Italy (the second biggest area under small citrus fruit trees), Portugal and France have reduced their areas (-42%, -23% and -24% respectively), in Spain and Greece the areas have increased (by + 21%, i.e. 116,225 ha and + 46%, i.e. 6,632 ha respectively).

Until 2002, the EU-27 area planted with orange trees decreased, but between 2002 and 2007 it rose by +10%.

This increase is due to the sharp rise of Spain (+21%) which accounts for more than 56% of the EU-27 area under orange trees.

The area under lemon trees in the EU-27 fell by almost -29% between 1997 and 2007. The biggest producers, Spain and Italy, which together account for almost 90% of all lemon tree plantations, have significantly reduced their area (-15% and -47% respectively).

Vineyard and olive trees

Table 3.1.5: Vineyard area in production, EU-27, 2008

	Vineyard total ¹	Vineyard for wine ²	Vineyard for table grape ³	Vineyard for raisin ⁴
	1000 ha			
EU-27	3,673	3,518	134	37
BE	-	-	-	-
BG	111	114	9	0
CZ	16	16	0	-
DK	-	-	-	-
DE	100	100	0	-
EE	-	-	-	-
IE	-	-	-	-
EL	87	49	5	33
ES	1,160	1,136	21	2
FR	842	834	8	-
IT	782	712	71	0
CY	9	9	1	0
LV	-	-	-	-
LT	-	-	-	-
LU	1	1	0	-
HU	82	79	3	-
MT	-	-	-	-
NL	-	-	-	-
AT	46	46	0	-
PL	-	-	-	-
PT	223	216	6	2
RO	188	178	10	0
SI	16	16	0	0
SK	10	11	0	0
FI	-	-	-	-
SE	-	-	-	-
UK	0	-	-	-

Source: Eurostat - Crop production database

¹⁾ Vineyard total: 2005 data for ES; 2006 data for FR; 2007 data for IT, HU, RO, SI

²⁾ Vineyard for wine: 2005 data for ES; 2006 data for FR; 2007 data for BG, IT, HU, RO, SI, SK

³⁾ Vineyard for table grape: 2005 data for ES; 2006 data for BG, FR; 2007 data for IT, HU, PT, RO, SK

⁴⁾ Vineyard for raisin: 2005 data for ES; 2006 data for PT

The vineyard area in the EU 27 totalled 3.67 million hectares in 2008, of which 95 % is dedicated to wine production. The European Union is the largest wine production 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 desert 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.

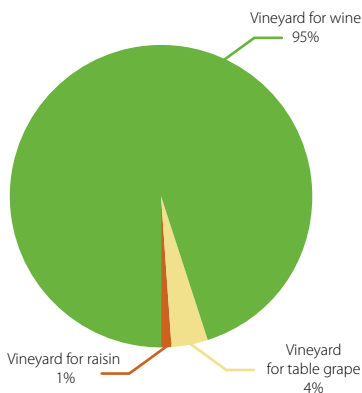
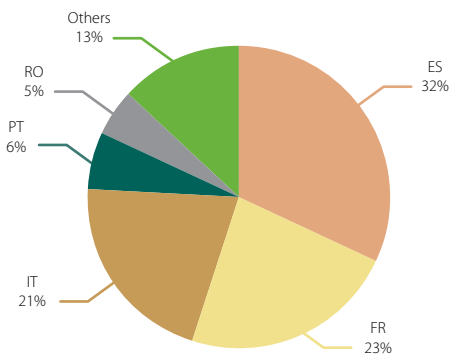
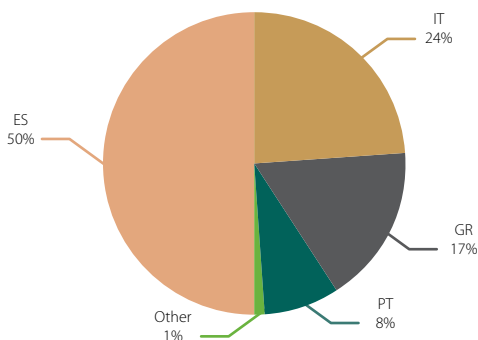
Figure 3.1.12: Allocation of the EU-27 vineyard area, 2008**Figure 3.1.14-3:** Distribution of the EU-27 vineyard area, 2008

Figure 3.1.14: Distribution of the EU-27 Olive trees area, 2008



Olive oil is another key EU Mediterranean product. 99 % of the area planted with olive trees is concentrated in 4 countries, of which Spain accounts for over half.

Land use

Table 3.1.6: Agricultural Land use, 2008:

	Area Total	UAA ¹	Arable Land ²	Land under permanent crop ³	Land under permanent grassland ⁴
	1000 ha	%			
EU-27	432,525	41.3	24.4	2.8	12.7
BE	3,053	44.9	27.6	0.7	16.5
BG	11,100	46.0	27.6	1.7	16.5
CZ	7,887	45.3	33.0	0.5	11.8
DK	4,310	62.5	57.5	0.2	5.4
DE	35,710	47.4	33.4	0.6	13.4
EE	4,523	17.8	13.2	0.2	4.4
IE	7,029	60.8	15.1	0.0	45.7
EL	13,196	30.2	15.7	8.6	2.1
ES	50,537	47.5	24.7	9.5	13.5
FR	54,909	50.0	33.3	1.9	18.0
IT	30,132	48.1	24.5	8.5	14.8
CY	925	15.2	11.1	3.6	0.5
LV	6,459	28.3	18.1	0.1	10.0
LT	6,530	40.9	28.5	0.4	12.0
LU	259	50.7	23.9	0.6	26.1
HU	9,303	62.2	48.2	2.1	10.9
MT	32	32.7	25.2	4.2	0.0
NL	3,735	51.6	28.3	0.9	22.2
AT	8,387	37.8	16.3	0.8	20.6
PL	31,268	51.7	38.3	1.2	10.2
PT	9,191	40.0	12.6	8.4	19.4
RO	23,839	57.5	36.3	1.5	18.9
SI	2,027	24.3	8.9	1.3	14.1
SK	4,904	39.9	27.5	0.5	11.2
FI	33,842	6.8	6.7	0.0	0.1
SE	45,030	6.8	5.8	0.0	1.0
UK	24,410	68.7	22.5	0.1	46.1

Source: Eurostat - Crop production database

¹⁾ 2003 data for UK; 2007 data for DK, IE, GR, IT²⁾ 2003 data for UK; 2007 data for DK, IE, GR, ES, IT³⁾ 2004 data for UK; 2007 data for DK, IE, GR, IT⁴⁾ 2003 data for UK; 2007 data for DK, IE, GR, IT

Utilised Agricultural Area (UAA) represents 41 % of the whole EU-27 territorial area. The size of UAA varies greatly from country to country, from only 7 % in Finland and Sweden to almost 70 % in the United Kingdom.

Belonging to the UAA, arable land represents almost $\frac{1}{4}$ of the whole EU-27 territory. DK has the highest share of arable land (57 %).

Permanent grassland represents 13 % of EU-27 territory. While more than 45 % of the land in Ireland and the UK 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, almost 10 % of land in Spain is under permanent crops.

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 is obtained directly from the EU Member States in line with the requirements of EU legislation and specific agreements on animal production statistics. The data are then used not only by European and national institutions but also by third country administrations, stakeholders, scientists and the general public for policy making, 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.

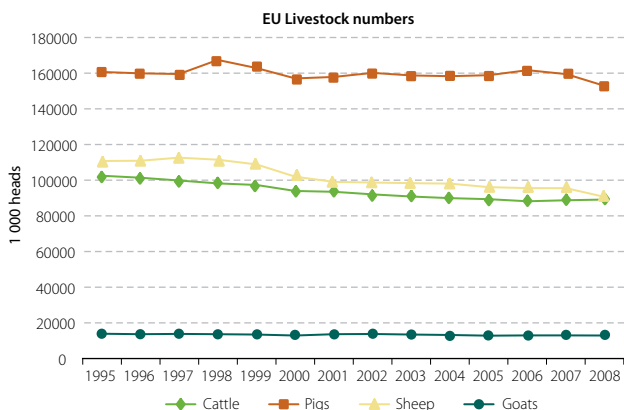
Serious animal disease outbreaks, such as the BSE crisis in 1996 and 2000, Foot-and-Mouth disease in 2001 or avian influenza in 2005, had disturbing effects not only on EU animal production but also on society and the economy in general. Trade globalisation, consumer demands and EU enlargement also bring new challenges to EU animal production. To face 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', which aimed to modernise, simplify and streamline the CAP, thereby removing production restrictions to farmers. 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 vulnerable types of farming.

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, 1000 heads, 1995 – 2008

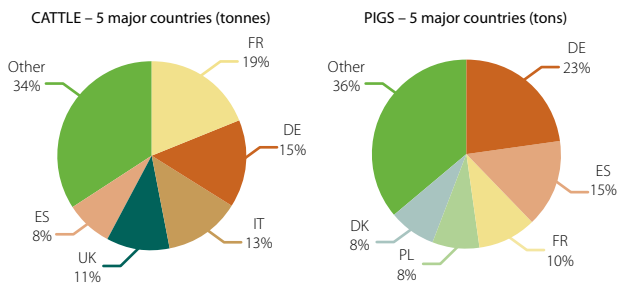


Cattle and sheep livestock numbers have slightly fallen over the past decade, while the numbers of pigs and goats have stabilised.

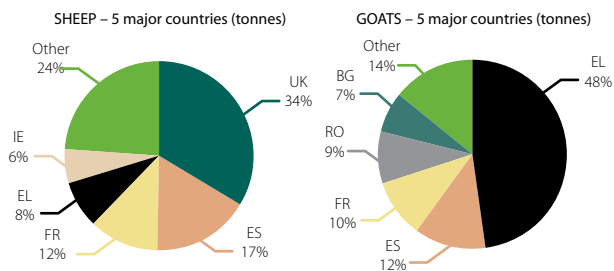
From 2007 to 2008 the number of cattle, pigs and sheep in the EU decreased by 0.2 %, 4.4 % and 5.4 % respectively, while the number of goats increased by 0.4 %.

Table 3.2.1: Animals slaughtered by species, 1000t, 2008

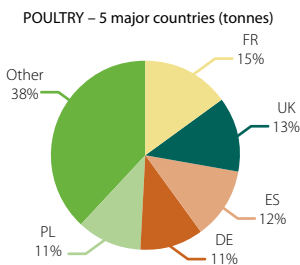
	Cattle	Pigs	Sheep	Goats	Equidae	Poultry
	1000t					
EU27	8,080.4	22,591.8	949.3	77.5	:	:
AT	221.2	525.9	7.5	0.7	0.0	109.1
BE	267.3	1,056.2	1.2	0.0	2.8	:
BG	19.8	72.9	15.7	5.1	0.0	91.5
CY	4.2	59.2	3.3	3.9	:	28.7
CZ	80.0	336.5	1.7	0.1	0.1	210.3
DE	1,209.8	5,111.4	42.9	0.5	2.5	1,191.7
DK	128.4	1,707.4	1.6	0.0	0.0	176.2
EE	14.8	39.6	0.5	0.0	0.0	13.3
ES	658.3	3,484.4	157.0	9.3	6.2	1,375.3
FI	82.5	217.1	0.8	0.0	0.2	100.9
FR	1,518.2	2,276.7	110.5	7.5	4.6	1,706.2
EL	56.9	119.0	72.7	37.5	:	:
HU	32.4	460.4	0.9	0.3	0.0	387.8
IE	537.3	201.8	58.7	0.0	:	117.4
IT	1,059.2	1,606.0	57.3	2.3	24.7	1,115.9
LT	47.5	75.9	0.5	0.3	:	70.6
LU	9.8	10.0	0.0	0.0	0.0	0.1
LV	21.7	40.7	0.6	0.0	0.1	23.1
MT	1.5	8.5	0.0	0.0	0.0	5.0
NL	378.4	1,317.7	13.6	1.3	0.4	:
PL	386.4	1,888.0	1.4	0.3	10.3	1,186.4
PT	108.5	381.3	11.4	0.9	0.2	284.1
RO	190.4	455.1	58.3	7.1	:	:
SE	126.7	266.8	4.5	0.0	1.0	108.6
SI	36.9	31.4	0.1	0.0	0.3	58.7
SK	19.9	102.4	1.0	0.3	:	77.7
UK	862.4	739.6	325.6	0.1	0.0	1,432.6

Figure 3.2.2: Slaughter by Member States, 1000t, 2008


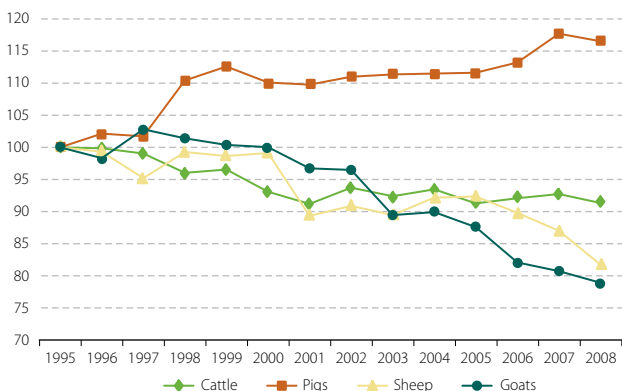
Germany, Spain and France produce almost half (48 %) of the pig meat produced in the EU. France, Germany and Italy produce a similar proportion (47 %) of cattle meat. .



The United Kingdom and Spain produce more than half (51 %) of the sheep meat while Greece alone produces almost half (48 %) of the goat meat produced in the EU.



Five Member States (France, the United Kingdom, Spain, Germany and Poland) account for almost $\frac{2}{3}$ of total EU production of poultry meat.

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

From 2007 to 2008, the production of pig, cattle, sheep and goat meat decreased.

Since 1995, meat production in the EU-27 has fallen in terms of tonnes of animals slaughtered for cattle (-8.6 %), sheep (-18.2 %) and goats (-21.0 %). The weight of pigs slaughtered has increased (16.5 %).

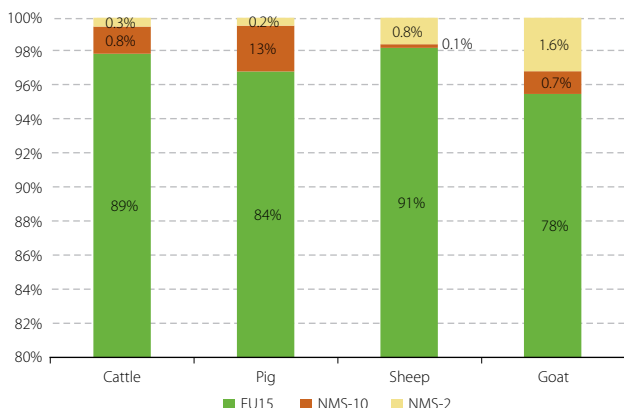
The weight of pigs slaughtered rose rapidly between 1997 and 1999, dropped slightly between 1999 and 2001, then slowly picked up again until 2007 when a new maximum was registered, before falling in 2008 by 1 %.

The weight of cattle slaughtered fell between 1995 and 2001, recovered partially in 2002, fell slightly until 2005, recovered until 2007 and then fell again (-1.5 %) in 2008.

The weight of sheep slaughtered fell sharply between 2000 and 2001 and remained relatively stable until 2006. It fell quite sharply again in 2007 and 2008 (-6.0 %).

The weight of goats slaughtered has decreased since 1997, especially since 2002. In 2008 it fell by 2.2 % from 2007.

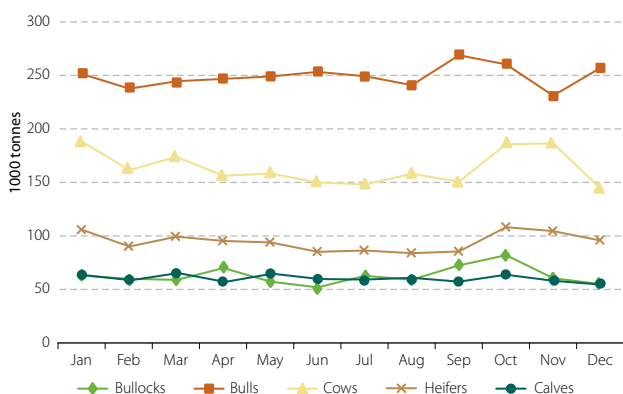
Figure 2.2.4: Slaughter enlargement effect, % of EU-27, 2008



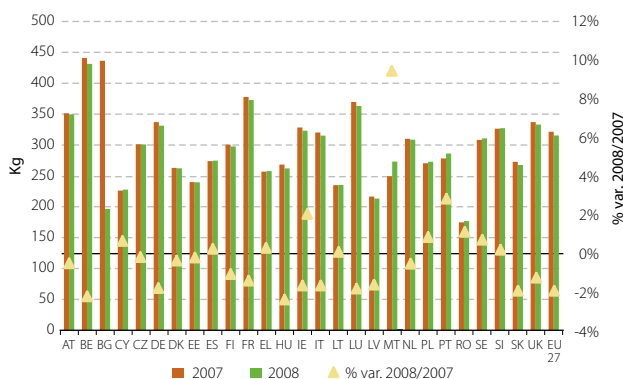
One effect of enlargement of the European Union from 15 to 25 Member States in 2004 was to increase the Union's production of pig, cattle and goat meat. The further enlargement to 27 Member States in 2007 mainly led to an increase in sheep and goat meat production.

Table 3.2.2: Cattle slaughter by animal category, 1000t, 2008

	Total Cattle	Calves	Heifers	Cows	Bullock	Bulls
	1000t					
EU27	8,080.4	806.4	1,188.5	2,338.3	:	:
AT	221.2	7.9	27.4	61.7	8.7	115.4
BE	267.3	50.7	4.1	129.0	0.6	82.8
BG	19.8	9.2	2.2	6.4	0.1	1.9
CY	4.2	0.0	0.6	1.6	0.0	2.1
CZ	80.0	0.6	5.6	30.1	0.1	43.7
DE	1,209.8	40.1	136.5	423.2	11.0	599.0
DK	128.4	1.5	12.2	53.4	2.6	58.9
EE	14.8	0.4	1.7	6.4	0.4	6.0
ES	658.3	28.9	185.9	94.0	:	349.5
FI	82.5	0.7	8.4	23.9	:	48.9
FR	1,518.2	232.1	153.1	609.5	92.2	431.3
EL	56.9	14.9	6.4	6.2	:	:
HU	32.4	0.2	3.4	19.0	0.1	9.7
IE	537.3	0.1	136.0	99.7	248.7	52.7
IT	1,059.2	127.0	161.7	135.5	7.2	633.5
LT	47.5	1.1	8.4	19.2	:	18.8
LU	9.8	0.3	1.2	2.7	0.6	5.1
LV	21.7	1.7	2.2	7.0	0.0	10.5
MT	1.5	0.0	0.1	0.5	0.0	0.9
NL	378.4	223.0	2.4	128.4	:	:
PL	386.4	20.8	48.7	131.1	:	185.8
PT	108.5	21.0	13.3	13.8	1.2	59.2
RO	190.4	16.1	15.5	112.0	8.0	38.8
SE	126.7	4.2	11.6	41.2	13.4	56.2
SI	36.9	2.3	3.4	5.4	0.2	25.7
SK	19.9	0.2	1.5	10.0	:	8.2
UK	862.4	1.3	235.1	167.4	356.7	101.8

Figure 3.2.5: Cattle slaughtered by animal category, 1000t, 2008


Overall, annual cattle production in 2008 visibly picked up in October, similar to the trend observed in 2007, while it remained relatively stable during the rest of the year.

Figure 3.2.6: Carcass weight for cattle, kg and %, 2007


The average cattle carcass weight in the EU remained relatively stable from 2007 to 2008 at around 315 kg. The most significant variations occurred in Bulgaria (-55 %) and Malta (+9.5 %). The considerably high difference observed in Bulgaria may be partially due to a different method used to calculate carcass weight between 2007 and 2008.

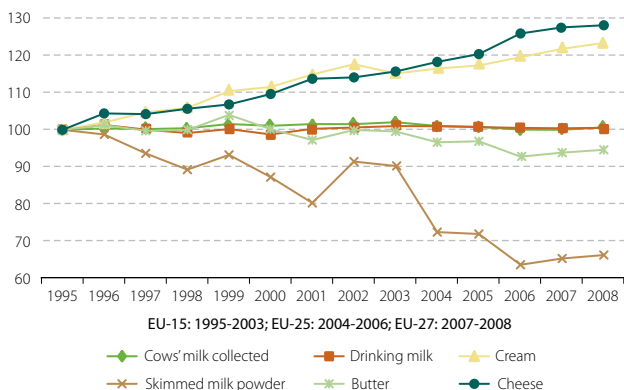
Milk

Table 4.2.3 – Cows' milk collected and products obtained, 2007

	Cows' Milk Collected	Drinking Milk	Cream for Direct Consum.	Skimmed Milk Powder	Butter	Cheese
EU27	133,395 e	32,031 e	2,440 e	:	1,937 e	8,065 e
AT	2,705	710	63	3	33	148
BE	2,860	667	136	62	88	67
BG	681	53	2	:	1	59
CY	150	52	3	0	0	1
CZ	2,433	661	46	21	36	109
DE	26,933	6,071	547	227	466	2,033
DK	4,586	511	58	18	38	324
EE	614	83	29	8	7	36
ES	5,813	3,531	134	5	39	118
FI	2,254	738	53	8	54	107
FR	23,814	3,778	410	285	435	1,737
EL	690	434	9	:	1	17
HU	1,425	415	6	:	8	73
IE	5,106	536	11	52	125	:
IT	10,177	2,974	149	:	110	1,063
LT	1,382	85	45	10	12	107
LU	265	:	:	:	:	:
LV	635	89	28	:	4	32
MT*	41	28	0	0	0	0
NL	10,936	:	:	:	131	722
PL	9,112	1,358	240	114	157	637
PT	1,890	882	17	9	30	56
RO	1,123	199	47	3	8	65
SE	2,951	915	97	17	28	114
SI	524	156	16	:	2	20
SK	946	239	38	7	10	34
UK	13,350 p	6,811 p	257 p	:	113 p	373 p

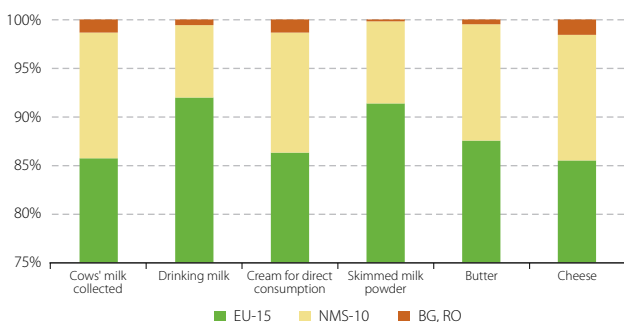
* 2006 data

Figure 3.2.7: Trend in collection of cows' milk and products made from cows' milk, EU-15

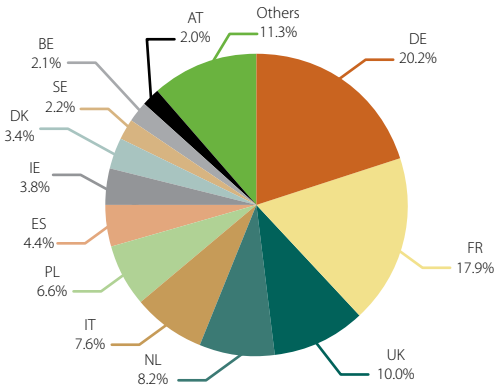


The quantity of cows' milk collected remained remarkably stable in the EU between 1995 and 2008, due to the milk quota system. As for the products obtained, there was a notable increase since 1995 in cheese (+28 %) and (to a lesser extent) cream production for direct consumption (+23 %). The production of butter fell slightly (by -5 %), especially since 2003, while the production of skimmed milk powder, which is a residual product, registered a marked fall (by -34 %).

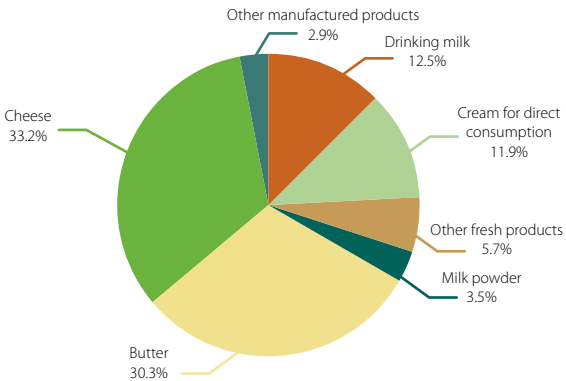
Figure 3.2.8: Cows' milk and milk products, % EU-27, 2008



The EU enlargement from 15 to 25 Member States in 2004 resulted in a significantly larger volume of cows' milk collected and milk products obtained. The further enlargement to 27 Member States in 2007 produced a much smaller increase. Nevertheless, the 15 Member States which made up the EU between 1995 and 2004 still contribute more than 80 % of the cows' milk collected and products obtained from cows' milk.

Figure 3.2.9: Cows' milk collected, % EU-27, 2008

In 2008 (as in 2007) 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.

Figure 3.2.10: Utilisation of milk, % EU-27, 2007

Of the milk (from cows, sheep, goats and buffalos) collected in 2007, almost one third was used to produce fresh products. Drinking milk and cream for direct consumption each accounted for about 12 % of the milk. Other fresh products, such as yoghurt and milk-based drinks, made up about 6 %. Over two thirds of the milk was used for manufactured products, with butter and cheese each representing about 30 % of the total milk volume.

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’¹, the European Commission proposed a set of 28 agri-environmental indicators. 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 indicators portrays agricultural production systems, farm management practices, pressures and risks to 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:

- irrigation areas;
- consumption of mineral fertilisers;
- spending on pesticides, fertilisers and feedingstuffs;
- livestock density;
- greenhouse gas emissions from agriculture.

Most of the indicators combine different kinds of data with the ‘utilised agricultural area’ (UAA), which means the total area taken up by arable land, permanent crops, permanent grassland and kitchen gardens.

In this chapter, data are aggregated at country level, regardless of regional differences and of the different categories of farm. However, the 28 agri-environmental indicators will eventually be calculated and published at regional level when and where appropriate, in order to provide sufficient information for a more detailed analysis of differences between regions and between farms of various types or sizes.

¹ COM(2006) 508 final.

4.1 Irrigation areas

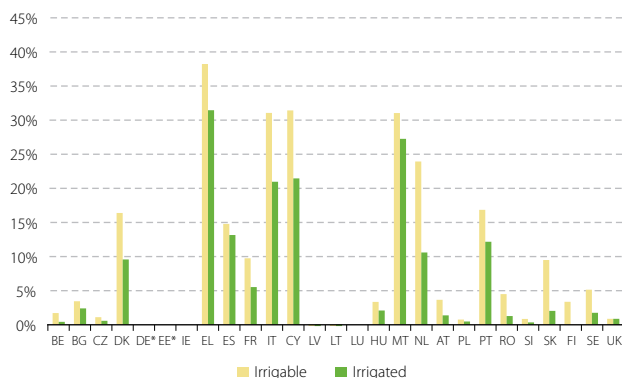
Irrigation fosters crop production by bringing water to plants, which is absolutely essential if plants are to grow in some areas. As such, it is a major driving force behind water abstraction which can eventually lead to environmental problems. In particular, availability problems occur when the demand for water exceeds the amount available during a certain period. Apart from causing problems with supplying agriculture and other users, overexploitation of water has led to drying-out of natural areas in western and southern Europe and to salt-water intrusion in coastal aquifers (EEA 1995).

The main types of environmental impact arising from irrigation are, according to the Institute for European Environmental Policy (2000):

- 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.

Figure 4.1.1 shows the percentages of irrigable areas and irrigated areas in the utilised agricultural area (UAA) in EU-27 countries in 2007.

Figure 4.1.1: Irrigable and irrigated areas as % of the UAA, 2007



Source: Eurostat, Farm Structure Survey 2007

* Data not available for Germany and Estonia.

Irrigable areas indicate the irrigation potential, i.e. the maximum area which could be irrigated during the year using the equipment and the quantity of water normally available on the farm. Irrigated areas are those areas actually irrigated at least once in the year. Crops under glass and kitchen gardens, which are assumed to be generally irrigable and irrigated, are not counted here. The irrigable area should be quite stable over the years, whereas the irrigated area can vary substantially, depending on weather conditions.

Excluding Germany and Estonia (where irrigation areas are non-significant), the average irrigable area in the EU makes up 9.8 % of the UAA and the average irrigated area approximately 6.7 %. The share of irrigable and irrigated areas is highest in the Mediterranean countries where irrigation is essential for agricultural production. In Greece, about one third of the UAA is irrigable and irrigated (38.2 % and 31.4 % respectively). Cyprus, Italy and Malta also have substantial irrigation potential and show a comparable share of irrigable areas (around 31 %), but in Cyprus and Italy the gap between the irrigation potential and the areas actually irrigated is quite wide.

In the other parts of the EU, supplementary irrigation is used to improve production in dry summers. In the Netherlands, 23.9 % of the UAA is irrigable but only 10.6 % was actually irrigated in 2007.

It is, however, difficult to interpret these differences for the moment because of the multiple factors which have an impact on irrigable and irrigated areas: weather, cropping patterns, cost of water, expected revenue from crops, etc.

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, 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. Finally, the water sources used for irrigation also matter, e.g. surface water can be replenished much faster than groundwater.

Table 4.1.1: Irrigable and irrigated areas and utilised agricultural area (UAA), 2007

	Irrigable area	Irrigated area	UAA
	Hectares		
EU-27*	15,091,510	10,345,270	172,485,050
BE	23,350	5,680	1,374,430
BG	104,580	72,640	3,050,740
CZ	38,530	19,910	3,518,070
DK	435,350	254,140	2,662,590
DE*	:	:	16,931,900
EE*	:	:	906,830
IE	0	0	4,139,240
EL	1,555,310	1,279,520	4,076,230
ES	3,671,340	3,266,330	24,892,520
FR	2,670,340	1,511,730	27,476,930
IT	3,950,500	2,666,210	12,744,200
CY	45,790	31,260	146,000
LV	830	620	1,773,840
LT	1,340	1,000	2,648,950
LU	0	0	130,880
HU	140,940	87,620	4,228,580
MT	3,200	2,810	10,330
NL	457,240	202,260	1,914,330
AT	116,070	43,440	3,189,110
PL	115,710	72,060	15,477,190
PT	583,740	421,520	3,472,940
RO	615,330	173,450	13,753,050
SI	4,100	1,620	488,770
SK	183,290	39,090	1,936,620
FI	76,750	0	2,292,290
SE	159,690	54,170	3,118,000
UK	138,190	138,190	16,130,490

Source: Eurostat, Farm Structure Survey 2007

* Data on irrigation areas not available for Germany and Estonia.

4.2 Consumption of mineral fertilisers

Fertilisers contain important nutrients, such as nitrogen, phosphorus and potassium, which plants absorb from the soil for their growth. Fertilisers are therefore an essential input in agricultural production. In addition to livestock manure used as an organic fertiliser, most farms — with the exception of organic farms — also apply large amounts of mineral fertilisers manufactured by the fertiliser industry.

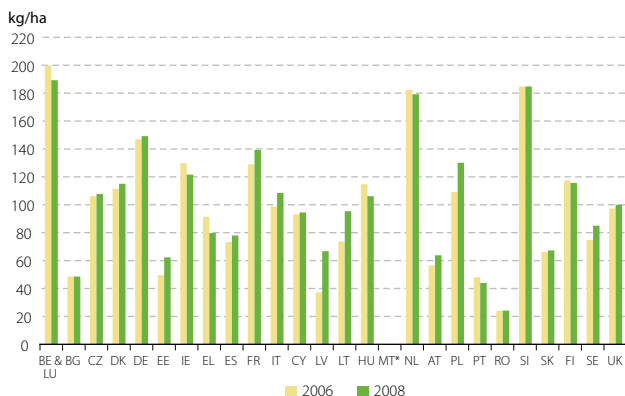
When the amount of fertiliser applied exceeds plants' nutritional requirements, there is a greater risk of nutrient losses from agricultural soils into ground and surface water. The resultant higher concentration of nutrients ('eutrophication') can cause serious degradation of ecosystems.

Therefore, consumption of (mineral) fertilisers is a major driving force behind eutrophication and the associated environmental damage. In order to limit this phenomenon, a number of legislative measures have been taken, such as the Nitrates Directive and the Water Framework Directive, including designation of nitrate-vulnerable zones where Member States have imposed regulatory limits on the load and timing for fertiliser (and manure) spreading on agricultural land.

In addition to the problems triggered by eutrophication, fertilisers also have adverse environmental effects stemming from their production processes. More specifically, nitrogenous fertilisers — the fertilisers most commonly consumed — require large amounts of energy and ultimately cause greenhouse gas emissions. In a completely different way, phosphorus and potash fertilisers also have an environmental impact, since the raw materials used to produce them are mined, therefore inducing the typical damage associated with mining, e.g. landscape destruction, water contamination, excessive water consumption and air pollution.

Figure 4.2.1 shows the consumption of mineral fertilisers in kilograms of active ingredients (expressed as the sum of N, P_2O_5 and K_2O) per hectare of utilised agricultural area (UAA) for EU-27 countries in 2006 and 2008.

Figure 4.2.1: Consumption of mineral fertilisers per hectare of UAA, 2006 and 2008



Source: European Fertiliser Manufacturers Association (EFMA) and Eurostat, Farm Structure Survey 2007

BE & LU stands for the Belgium-Luxembourg Economic Union (separate data for these two countries are not available).

* Data not available for Malta.

N.B.: The UAA data are the 2007 FSS values.

Although the EFMA forecasts are based on a crop approach, where fertiliser consumption is evaluated by assessing the area, expected yield and nutrient application rate for each crop, only aggregate consumption can be displayed here.

Consumption of mineral fertilisers in the EU, excluding Malta, averaged 98 kg/ha in 2006 and rose to 104 kg/ha in 2008, a 6 % increase.

The countries with the highest consumption are Belgium and Luxembourg (199 kg/ha in 2006 and 189 kg/ha in 2008, down by 5 %), Slovenia (185 kg/ha in both years) and the Netherlands (182 kg/ha in 2006 and 179 kg/ha in 2008, down by 2 %).

By contrast, Romania is the country with the lowest consumption (24 kg/ha in both years). Latvia is a noteworthy case: although it was the country with the second lowest consumption in 2006 (37 kg/ha), it reported by far the biggest increase in 2008 (79 %). In comparison, Greece showed the largest, albeit fairly moderate, decrease (down by 13 %).

However, in order to estimate the risk of nutrient loss, consumption of mineral fertilisers should be combined with other nutrient inputs, such as application of manure and slurry, nitrogen fixation and atmospheric nitrogen deposition, along with nutri-

ent uptake by plants. In addition, plants' nutrient requirements (and hence consumption) are influenced by previous land management, soil type and climatic factors and vary from one crop to another. Consequently, the differentiation of consumption data by region, by crop and by type of nutrient (since these substances have different properties in terms of solubility and toxicity) would add considerable value to this kind of analysis.

Table 4.2.1: Consumption of mineral fertilisers, 2006 and 2008, and utilised agricultural area (UAA), 2007

	Consumption of mineral fertilisers		UAA
	Kg of active ingredients		Hectares
	2006	2008	2007
EU-27*	16,932,550	17,897,623	172,485,050
BE & LU	300,297	284,504	1,505,310
BG	147,832	147,873	3,050,740
CZ	372,852	378,394	3,518,070
DK	296,217	305,870	2,662,590
DE	2,484,813	2,522,106	16,931,900
EE	44,922	56,470	906,830
IE	536,245	502,587	4,139,240
EL	372,029	324,374	4,076,230
ES	1,824,597	1,938,557	24,892,520
FR	3,538,736	3,822,713	27,476,930
IT	1,257,331	1,380,429	12,744,200
CY	13,579	13,776	146,000
LV	65,982	118,227	1,773,840
LT	194,960	252,247	2,648,950
HU	484,277	448,163	4,228,580
MT*	:	:	10,330
NL	348,509	342,618	1,914,330
AT	180,008	203,282	3,189,110
PL	1,685,804	2,010,858	15,477,190
PT	166,705	152,415	3,472,940
RO	331,548	331,548	13,753,050
SI	90,199	90,199	488,770
SK	127,954	130,166	1,936,620
FI	268,820	264,811	2,292,290
SE	232,936	264,602	3,118,000
UK	1,565,398	1,610,834	16,130,490

Source: European Fertiliser Manufacturers Association (EFMA) and Eurostat, Farm Structure Survey 2007

* Data on fertiliser consumption not available for Malta.

4.3 Spending on inputs

Inputs such as fertilisers and other soil improvers, plant protection products (PPP, including insecticides, rodenticides, molluscicides, herbicides, fungicides, etc.) and animal feed concentrates are very important for agricultural production. A wide variety of such products are available to farmers and this is reflected in the diversity of substances, their concentration in commercial preparations, the recommended frequency of application and in the wide range of crops or livestock for which they are designed.

Use of these inputs depends on the type of farming system and practice and on the farmer's willingness to increase yields and productivity. In particular, use of feed concentrates depends on the local availability of fodder and transport facilities. In general, the money spent by agricultural holdings to purchase inputs is considered a proxy indicator of agricultural intensification.

Although intensification is often associated with greater efficiency in agricultural production, it can also have a negative impact on the environment.

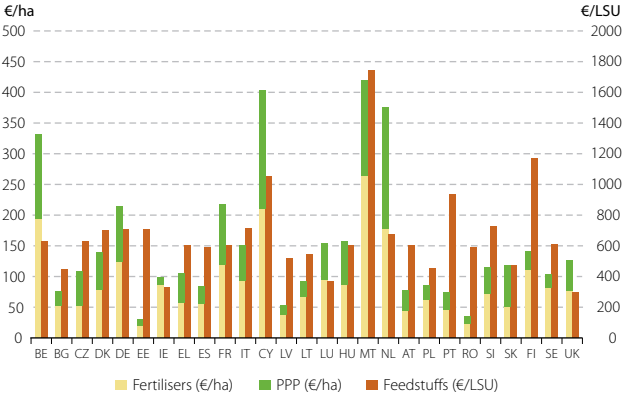
In the case of PPP, biochemical properties such as mobility, degradation timespan or the persistence and toxicity of residues determine the potential harmful effects of a product on the environment, i.e. soil, water, air and non-target organisms (fish and other aquatic organisms, birds, beneficial insects,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

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

Feed concentrates can have a direct environmental impact stemming from the production process: global warming, conversion of rainforests into arable land and cultivation of genetically modified varieties. Furthermore, animal feedingstuffs can also have an indirect impact on manure production and eutrophication (see section 4.4) and on greenhouse gas emissions.

Figure 4.3.1 shows the spending by agricultural holdings on fertilisers, plant protection products and animal feedingstuffs in EU-27 countries in 2007. Agricultural production intensity is presented here as the relationship between spending on fertilisers and PPP and hectares of utilised agricultural area (UAA) and between spending on feedingstuffs and total livestock units (LSU, see section 4.4).

Figure 4.3.1: Spending on fertilisers and PPP, by UAA and spending on feedingstuffs, by total livestock, 2007



Source: Eurostat, Economic Accounts for Agriculture and FSS 2007

Values at current prices.

Average spending in EU-27 stands at 80 €/ha for fertilisers, 53 €/ha for PPP and 582 €/LSU for feedingstuffs.

The highest spending on fertilisers and PPP added together is in Malta (419 €/ha), Cyprus (403 €/ha), the Netherlands (374 €/ha) and Belgium (332 €/ha) and the lowest in Estonia (30 €/ha) and Romania (34 €/ha).

Spending per hectare on PPP might be slightly under-estimated here, compared with fertilisers, because the total UAA is taken into account in the calculations, despite the fact that PPP are not normally spread on some areas, such as grassland, whereas fertilisers are. Nevertheless, although spending on fertilisers is usually higher than spending on PPP, both parameters show similar trends in most countries. The exceptions, where the difference between the two kinds of spending is much bigger than average, are Malta, Finland and Ireland on the one hand and the Netherlands and Slovakia on the other.

Spending on feedingstuffs is highest in Malta (1739 €/LSU), Finland (1170 €/LSU) and Cyprus (1054 €/LSU) and lowest in the UK (294 €/LSU), Ireland (329 €/LSU) and Luxembourg (369 €/LSU).

Commercial products sometimes vary substantially in terms of ingredients or concentrations (with different recommended application rates) and are usually sold at different prices to take these differences into account and reflect the overall value of the

product. Therefore, the data collected on the amounts spent on commercial products are highly relevant for indicating the overall degree of intensification of agricultural holdings. In practice, to survey individual use of these products, data on the volumes bought and application rates would be needed for each product. However, prices can show very wide fluctuation linked to production costs; for example, nitrogenous fertiliser prices are strongly linked to energy prices. Consequently, heavy spending does not necessarily signify high volumes.

High intensity does not necessarily mean a threat to the environment, if the products are used properly. To analyse the possible pressures on the environment, data on soil and water quality are also needed.

Table 4.3.1: Spending on inputs and utilised agricultural area (UAA), 2007

	Fertilisers and soil improvers	Plant protection products	Feeding- stuffs	UAA	Total livestock
	Million euro			Hectares	Livestock units
EU-27	1,3812	9,190	79,173	172,485,050	135,982,290
BE	268	188	2,379	1,374,430	3,787,770
BG	160	73	553	3,050,740	1,245,980
CZ	182	198	1,284	3,518,070	2,052,810
DK	207	163	3,203	2,662,590	4,582,160
DE	2,087	1,541	12,672	16,931,900	17,985,170
EE	18	9	221	906,830	313,200
IE	359	51	1,946	4,139,240	5,918,340
EL	231	195	1,587	4,076,230	2,626,560
ES	1,385	714	8,481	24,892,520	14,380,700
FR	3,264	2,701	13,520	27,476,930	22,543,650
IT	1,196	732	7,090	12,744,200	9,900,670
CY	31	28	260	146,000	246,660
LV	67	27	253	1,773,840	487,870
LT	179	66	562	2,648,950	1,030,890
LU	12	8	59	130,880	160,820
HU	369	296	1,450	4,228,580	2,409,330
MT	3	2	86	10,330	49,630
NL	340	377	4,304	1,914,330	6,415,200
AT	143	104	1,496	3,189,110	2,473,240
PL	954	372	5,009	15,477,190	11,117,920
PT	160	99	1,901	3,472,940	2,030,050
RO	314	158	3,565	13,753,050	6,041,720
SI	35	21	400	488,770	553,590
SK	100	129	352	1,936,620	747,210
FI	252	72	1,348	2,292,290	1,152,090
SE	254	68	1,090	3,118,000	1,784,810
UK	1,243	799	4,102	16,130,490	13,944,250

Source: Eurostat, Economic Accounts for Agriculture and FSS 2007

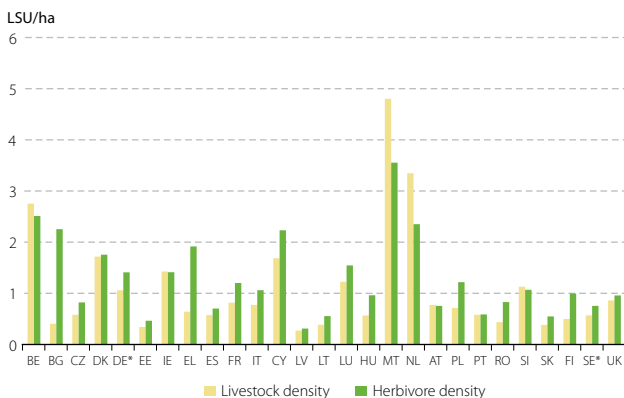
Values at current prices.

4.4 Livestock density

Livestock production depends on the availability of agricultural land to supply animal feed. Livestock density, defined as the ratio of total livestock to the total utilised agricultural area (UAA), is therefore an indicator of the intensity of livestock production. However, as the UAA is used for growing crops for both animal and human consumption, industrial or ornamental use, etc., this ratio does not primarily reflect the availability of land for growing animal feed but rather for spreading manure over cultivated areas. Manure contains large quantities of nutrients and manure production and spreading avoid systematic use of industrial fertilisers while maintaining soil fertility. Consequently, low livestock densities indicate high specialisation on crop production and insufficient provision of organic manure. Yet as excessive manure-spreading can result in nutrients leaching into water bodies, high stocking densities are associated with limited areas for manure-spreading and, thus, with pressure on the environment in general and water quality in particular. Medium livestock densities therefore appear more desirable than high or low densities which could cause environmental problems.

Furthermore, livestock is commonly split into herbivores and granivores, reflecting their different diets. Granivores are usually fed with specific feedingstuffs. As a result, farms raising granivores therefore do not necessarily need agricultural land. By contrast, herbivores are grazing livestock which can either be raised free-range and directly graze on pasture or be kept indoors and fed with harvested fodder. A specific stocking rate can therefore be calculated for such livestock, defined as the ratio of the total herbivores on the total fodder area. In general, high herbivore density increases the risk of overgrazing, which can have devastating effects on grasslands (e.g. soil erosion, adverse impact on water quality and loss of biodiversity), while low herbivore density indicates potential for scrub and woodland invasion of meadows. Nevertheless, this ratio is also considered a proxy for the likelihood of substitution of green fodder by grain in herbivores' diet.

Figure 4.4.1 shows the values of both ratios in 2007 in EU-27 countries.

Figure 4.4.1: Livestock densities, 2007

Source: Eurostat, Farm Structure Survey 2007

* Herbivore density in Germany and Sweden does not count the goat populations which are non-significant compared with other livestock in these two countries.

The fodder area comprises grassland, fodder roots and brassicas and forage plants such as green maize, leguminous plants, etc. The areas recorded in the Farm Structure Survey do not include common land, which is also often used for grazing.

Livestock consists of cattle, sheep, goats, pigs, poultry and equidae² kept on agricultural holdings. Herbivores include cattle, sheep, goats and equidae. In order to aggregate these different livestock categories, calculations are based on 'livestock units' (LSU) for which equivalents are defined on the basis of feed requirements. For example, one dairy cow of 600 kg, producing 3 000 litres of milk per year, equals 1 LSU.

The average livestock density in the EU is 0.8, ranging from 0.3 in Estonia and Latvia to 2.8 in Belgium, 3.4 in the Netherlands and 4.8 in Malta. The average herbivore density is 1.1, ranging from 0.3 in Latvia to 2.4 in the Netherlands, 2.5 in Belgium and 3.6 in Malta.

In general, EU countries with high livestock density also have high herbivore density and vice-versa, but this is not the case in every country. In fact, in Bulgaria and Greece herbivore

² As most horses are kept in non-agricultural holdings that are not surveyed in the FSS, the number of equidae used in the calculations is considerably smaller than the real population. Both ratios, in particular herbivore density, are therefore slightly under-estimated (but are still accurate enough since equidae account for only 2 % of total livestock and under 4 % of herbivores).

density is much higher than livestock density. Conversely, in Malta and the Netherlands herbivore density is much lower than livestock density.

However, it is not possible to extrapolate on the comparison of the ratios in a country since they are not built with a common denominator. In the Netherlands, for instance, livestock density is higher than herbivore density: this could be due to the large number of granivores raised in the country or to the relatively small area used to cultivate non-fodder crops. A thorough knowledge of the cropping and livestock patterns in each country is a prerequisite for this kind of analysis.

Table 4.4.1: Total livestock and herbivore population, utilised agricultural area (UAA) and fodder area, 2007

	Total livestock	Herbivore population	UAA	Fodder area
	Livestock units		Hectares	
EU-27	135,982,290	79,625,200	172,485,050	74,198,250
BE	3,787,770	1,917,330	1,374,430	762,450
BG	1,245,980	784,520	3,050,740	347,590
CZ	2,052,810	1,075,850	3,518,070	1,303,040
DK	4,582,160	1,185,300	2,662,590	674,120
DE*	17,985,170	9,782,200	16,931,900	6,922,310
EE	313,200	210,570	906,830	450,360
IE	5,918,340	5,400,850	4,139,240	3,815,390
EL	2,626,560	2,051,090	4,076,230	1,068,350
ES	14,380,700	6,425,490	24,892,520	9,113,680
FR	22,543,650	15,199,700	27,476,930	12,614,640
IT	9,900,670	5,542,780	12,744,200	5,208,260
CY	246,660	95,990	146,000	42,950
LV	487,870	322,610	1,773,840	1,025,960
LT	1,030,890	670,000	2,648,950	1,200,780
LU	160,820	141,360	130,880	91,270
HU	2,409,330	706,090	4,228,580	731,760
MT	49,630	16,680	10,330	4,690
NL	6,415,200	2,923,350	1,914,330	1,241,670
AT	2,473,240	1,493,390	3,189,110	1,970,720
PL	11,117,920	4,835,730	15,477,190	3,958,210
PT	2,030,050	1,260,090	3,472,940	2,135,790
RO	6,041,720	3,904,010	13,753,050	4,690,960
SI	553,590	364,850	488,770	340,210
SK	747,210	411,680	1,936,620	745,880
FI	1,152,090	690,700	2,292,290	691,570
SE*	1,784,810	1,228,300	3,118,000	1,620,730
UK	13,944,250	10,984,690	16,130,490	11,424,910

Source: Eurostat, Farm Structure Survey 2007

* Herbivore population in Germany and Sweden does not count the goat populations which are non-significant compared with other livestock in these two countries.

4.5 Greenhouse gas emissions from agriculture

Agricultural production not only uses environmental resources as inputs but also puts pressure on the environment by emitting pollutants such as greenhouse gases (GHG) and therefore contributes to climate change.

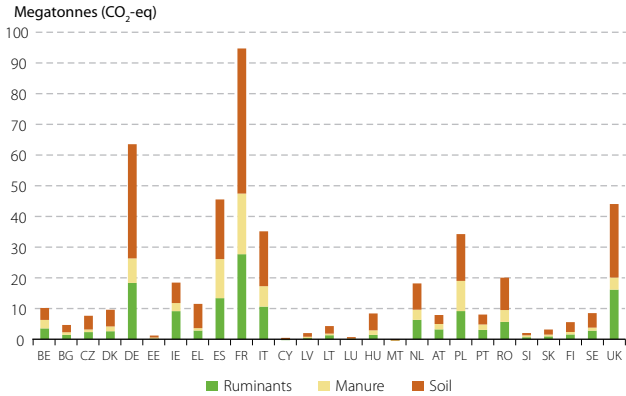
Looking at EU-27 in 2006, agriculture contributed significantly to the total (net) GHG emissions. In fact, excluding fuel combustion, agricultural activities were to blame for 10.2 % of the total net emissions if LULUCF (land use, land-use change and forestry) are included and 9.2 % of the total emissions if they are excluded. Moreover, fuel combustion in agriculture, fisheries and forestry adds a further 1.7 % to the total net emissions and 1.6 % to the total emissions.

Beyond those figures reflecting the situation for agriculture as a whole in EU-27, the contributions made by different activities within the agricultural sector can also be singled out. In detail, the main agricultural sources of agricultural GHG emissions are:

- enteric fermentation in ruminant animals (cattle, sheep and goats), which account for 72 % of methane (CH_4) emissions from agriculture;
- soil denitrification, which produces 88 % of nitrous oxide (N_2O) emissions from agriculture;
- manure decomposition, which is responsible for 27 % of CH_4 and 12 % of N_2O emissions from agriculture.

These biochemical processes generally depend on climatic, pedological, agronomic and technological conditions which can affect 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. Since these different GHG have different global warming potential (GWP), the data are expressed in terms of emissions of CO_2 -equivalent (CO_2 having a GWP equal to 1) in order to make them comparable.

Figure 4.5.1 shows the contributions made by these three main agricultural sources of GHG emissions in EU-27 countries in 2006.

Figure 4.5.1: GHG emissions from agriculture, 2006

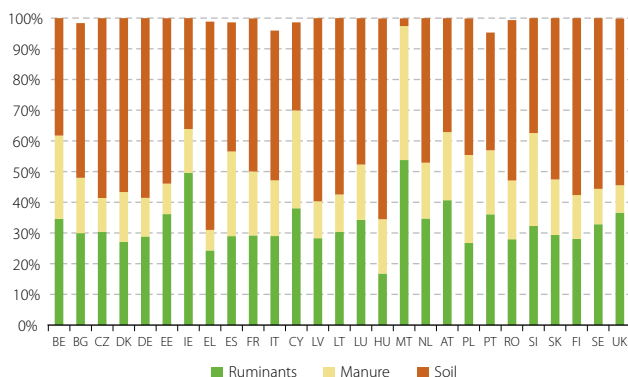
Source: European Environment Agency/European Topic Centre on Air and Climate Change, UN Framework Convention on Climate Change

Emissions from agriculture vary substantially between individual EU-27 countries. The biggest contributor by far is France (95 Mtonnes, i.e. 20 % of EU-27 emissions). Germany comes second (64 Mtonnes), followed by Spain (46 Mtonnes), the UK (44 Mtonnes), Italy (35 Mtonnes) and Poland (34 Mtonnes). On average, in EU-27 emissions from soil account for 51 % of agricultural emissions, whereas ruminants are responsible for 31 % and manure for 18 %.

Theoretically, agricultural sources of GHG include not only ruminants, manure and soil, but also rice cultivation, field burning of agricultural residues, prescribed burning of savannas and other sources. However, those sources are not considered here, since they do not generate significant emissions compared with ruminants, manure and soil in the EU. Another major contributor is fuel combustion in agriculture (mainly responsible for CO₂ emissions), but the only data available for agriculture are aggregates including fisheries and forestry.

As Figure 4.5.1 shows GHG emissions from agriculture in absolute terms, big countries with large agricultural sectors, agricultural areas and/or livestock production are more likely to be big contributors to GHG emissions in EU-27. Figure 4.5.2 therefore presents the same data, but as a percentage of each country's emissions, masking the differences between the size of the agricultural sector in different EU countries. However, the differences visible here could be due either to different degrees of specialisation in livestock or ruminant production relative to countries' UAA or to differences in farm management practices and equipment. For some countries, such as Italy, the total is not 100 % because of rice cultivation and field burning of agricultural residues, two sources of GHG emissions not considered here.

Figure 4.5.2: Relative contributions to GHG emissions from agriculture, 2006



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

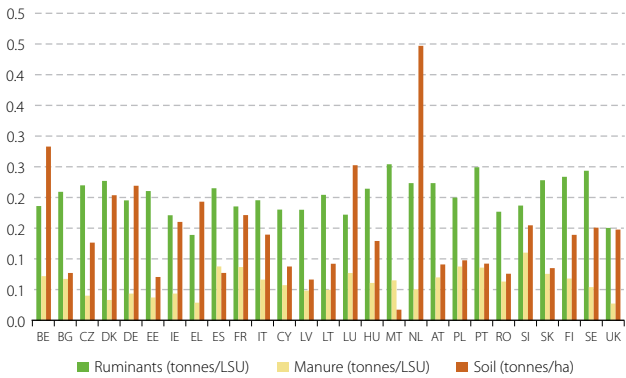
Beyond that, it is also interesting to calculate certain ratios providing information in relative terms and taking into account the size of the livestock and ruminant populations and of the agricultural areas in each country. In this way, these calculations are meant to reflect differences in farm management practices and equipment.

On average, GHG emissions in EU-27 stand at:

- 1.4 tonnes per hectare for soil (the denominator is the total utilised agricultural area);
- 1.9 tonnes per livestock unit (LSU) for ruminants (the denominator is the total number of ruminants);
- 0.6 tonnes/LSU for manure (the denominator is the total number of livestock).

Figure 4.5.3 shows those three ratios for EU-27 countries in 2006.

Figure 4.5.3: Intensity of GHG emissions from agricultural sources, 2006



Source: European Environment Agency/European Topic Centre on Air and Climate Change, UN Framework Convention on Climate Change and Eurostat FSS 2007
N.B.: All denominators are 2007 FSS values.

Table 4.5.1: Greenhouse gas emissions from agriculture, 2006, total livestock and ruminant populations, 2007, and utilised agricultural area (UAA), 2007

	Fermen- tation in rumi- nants	Manure decom- position	Soil denitrifi- cation	Rumi- nant popula- tion	Total livestock	UAA
	Tonnes CO ₂ -equivalent			Livestock units		Hectares
EU-27	145,547,843	86,635,527	237,665,443	76,503,780	135,982,290	172,485,050
BE	3,528,740	2,757,348	3,896,231	1,889,030	3,787,770	1,374,430
BG	1,413,974	850,995	2,378,630	673,590	1,245,980	3,050,740
CZ	2,322,640	842,447	4,478,574	1,053,590	2,052,810	3,518,070
DK	2,602,451	1,561,078	5,441,612	1,143,140	4,582,160	2,662,590
DE*	18,342,012	7,989,582	37,210,846	9,358,270	17,985,170	16,931,900
EE	434,538	119,338	647,782	205,790	313,200	906,830
IE	9,151,164	2,632,638	6,663,714	5,326,590	5,918,340	4,139,240
EL	2,831,870	778,900	7,902,338	2,025,500	2,626,560	4,076,230
ES	13,382,773	12,736,248	19,423,439	6,203,900	14,380,700	24,892,520
FR	27,705,255	19,749,050	47,282,683	14,884,500	22,543,650	27,476,930
IT	10,628,729	6,649,929	17,880,030	5,417,490	9,900,670	12,744,200
CY	171,257	143,387	129,172	94,610	246,660	146,000
LV	565,688	240,160	1,192,981	312,960	487,870	1,773,840
LT	1,299,872	522,343	2,462,112	634,110	1,030,890	2,648,950
LU	238,239	125,276	331,343	137,890	160,820	130,880
HU	1,411,181	1,487,891	5,497,088	656,440	2,409,330	4,228,580
MT	40,325	32,737	1,886	15,830	49,630	10,330
NL	6,310,434	3,310,028	8,563,011	2,816,530	6,415,200	1,914,330
AT	3,209,777	1,749,931	2,928,159	1,432,620	2,473,240	3,189,110
PL	9,167,787	9,832,354	15,254,233	4,572,400	11,117,920	15,477,190
PT	3,043,634	1,759,272	3,234,864	1,218,090	2,030,050	3,472,940
RO	5,645,747	3,866,732	10,550,275	3,179,870	6,041,720	13,753,050
SI	654,889	614,509	759,810	349,150	553,590	488,770
SK	928,342	571,812	1,662,168	405,810	747,210	1,936,620
FI	1,562,829	793,850	3,207,783	666,930	1,152,090	2,292,290
SE*	2,793,497	981,020	4,729,126	1,144,060	1,784,810	3,118,000
UK	16,160,199	3,936,675	23,955,553	10,685,090	13,944,250	16,130,490

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

* Ruminant population in Germany and Sweden does not count the goat populations which are non-significant compared with other livestock in these two countries.

European Commission

Agricultural statistics — Main results — 2007–08

Luxembourg: Office for Official Publications of the European Communities

2009 — 126 pp. — 10.5 x 21 cm

Theme: Agriculture and fisheries

Collection: Pocketbooks

ISBN 978-92-79-12436-5

ISSN 1830-463X

How to obtain EU publications

Publications for sale:

- via EU Bookshop (<http://bookshop.europa.eu>);
- from your bookseller by quoting the title, publisher and/or ISBN number;
- by contacting one of our sales agents directly. You can obtain their contact details on the Internet (<http://bookshop.europa.eu>) or by sending a fax to +352 2929-42758.

Free publications:

- via EU Bookshop (<http://bookshop.europa.eu>);
- at the European Commission's representations or delegations. You can obtain their contact details on the Internet (<http://ec.europa.eu>) or by sending a fax to +352 2929-42758.



Agricultural statistics

Main results — 2007–08

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 and 2008, primarily) showing the situation in the 27 Member States and at the European level (EU-27).

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



Publications Office

ISBN 978-92-79-12436-5



9 789279 124365