

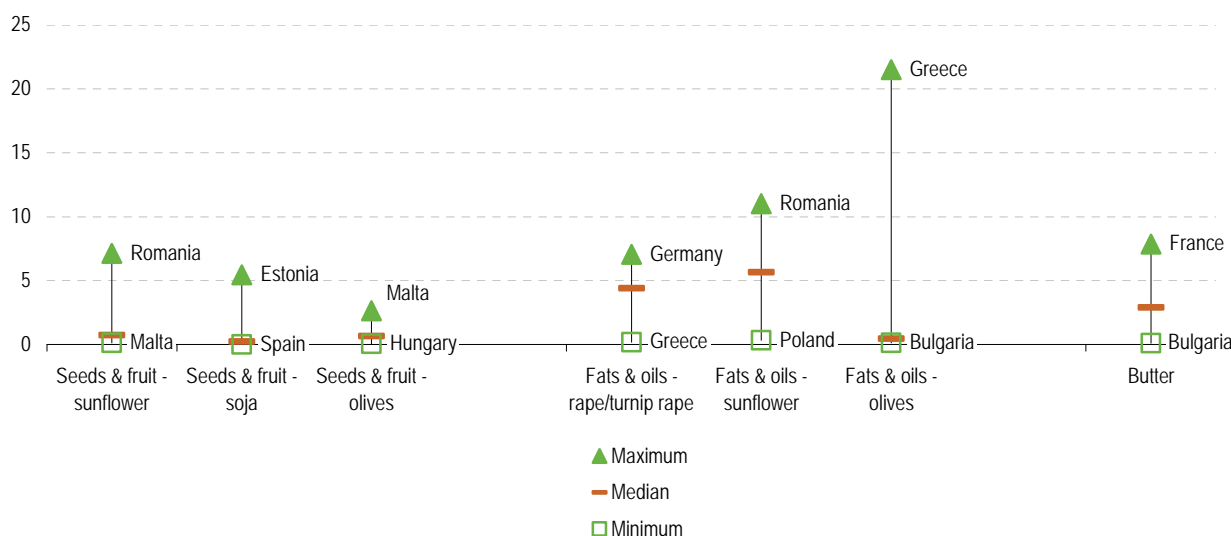
The food chain for animal and vegetable fats and oils A statistical portrait based on 2005-2010 statistics

This publication looks at the food chain for fats and oils on their journey from the farm to the consumer. It presents statistics for farming, manufacturing and processing activities, the main animal and vegetable fats and oils that are sold, imported and exported, as well as changes in consumer prices and levels of consumption.

Fats and oils may be classified according to a range of different criteria. A first distinction can be made with respect to their natural state at room temperature; fats being solid and oils being liquid. Secondly, they may be analysed according to origin: animal-based products (for example, butter or lard) or vegetable-based products (for example, sunflower or olive oil). Another method for classifying these products is according to their end-use: initially this may be used to split food and non-food products.

While this publication focuses on the human consumption of fats and oils (details of which may be seen in Figure 1), it is important to note that fats and oils may also be used in a variety of different applications – such as for lubricants, cosmetics, pharmaceuticals or medicines; vegetable oils are also increasingly used to make biofuels. It is also possible to categorise fats and oils according to their potential impact on human health. A simplistic division suggests that vegetable oils (which are predominantly unsaturated) are usually considered better for human health than animal fats (which are predominantly saturated). A high intake of saturated fats may lead to an increased risk of heart disease, obesity, strokes, diabetes or certain types of cancer. It is however important to underline that there are exceptions to this rule, for example, many fish-based oils contain omega-3 fatty acids that are generally thought to provide beneficial health effects.

Figure 1: Gross human apparent consumption of fats and oils, Member States with the highest and lowest consumption, latest year available ⁽¹⁾ (kg per capita)



⁽¹⁾ Latest year available is from 2005 to 2010; information for some products and/or Member States is incomplete or not available.

Source: Eurostat (online data codes: [apro_cpb_foil](#) and [apro_mk_bal](#))

Around 10.4 million hectares of land devoted to the production of oil seeds

EU-27 production of oil seeds in 2007 was largely concentrated among sunflower and rape/turnip rape seed production (see Table 1). There were around 434 500 holdings specialised in sunflower oil seed production in the EU-27 in 2007, which was around 108 000 more than the corresponding number for rape/turnip rape seeds; the high number of holdings in Romania for sunflower production reflects the fragmented structure of agriculture in this country with many farms operating on a subsistence rather than commercial basis. The production of rape/turnip rape seeds occupied an area of 6.5 million hectares in the EU-27, which was more than double the area for sunflower oil seed production (3.2 million hectares).

There was a clear split in the geographical location of oil seed production, largely southern and eastern Member States specialised in sunflower oil seed production (Romania, Bulgaria, Spain, France and Hungary), while more north-westerly locations

tended to specialise in rape/turnip rape production (for example, France, Germany, Poland and the United Kingdom).

Olive plantations were also relatively concentrated, and were predominantly found within the Mediterranean basin (Spain, Italy and Greece) and Portugal – see Table 2. The vast majority of the olive plantations in the EU-27 in 2007 were holdings specialised in olive oil production (1.9 million), while there were relatively few holdings specialised in the production of table olives (around 117 000). Over half of the holdings that were specialised in the production of table olives within the EU-27 were located in Greece. In terms of area, just over 50 % of the olive plantations in the EU-27 were located in Spain (2.2 million hectares), while Italy (1.0 million hectares) and Greece (0.8 million hectares) were the other main producers according to this measure.

Table 1: Main agricultural indicators, oil seeds, 2007

	No. of holdings (units)				Area (1 000 ha)				Organic area (% of area) ⁽¹⁾		
	Rape/turnip rape	Sun-flower	Soya	Others	Rape/turnip rape	Sun-flower	Soya	Others	Rape/turnip rape	Sun-flower	Soya
EU-27 ⁽²⁾	326 920	434 470	32 730	62 010	6 516.0	3 211.8	332.5	327.3	:	:	:
Belgium	1 380	0	0	1 740	10.8	0.0	0.0	14.3	0.5	0.0	0.0
Bulgaria	580	17 590	20	6 300	50.9	624.3	0.1	15.3	1.3	0.2	25.0
Czech Republic	4 180	500	200	1 900	331.7	24.1	7.2	80.1	0.3	0.2	0.0
Denmark	10 820	0	0	30	179.8	0.0	0.0	0.1	0.3	0.0	:
Germany	77 160	1 390	0	1 830	1 549.6	18.8	0.0	11.4	:	:	:
Estonia	1 290	0	0	80	73.6	0.0	0.0	0.7	2.1	0.0	0.0
Ireland	620	0	0	0	8.1	0.0	0.0	0.0	:	:	:
Greece	180	4 620	70	170	0.7	12.3	0.2	0.2	:	14.4	31.1
Spain	1 580	32 540	70	380	18.3	620.0	1.3	2.8	0.5	1.0	6.1
France	86 870	40 900	2 840	8 720	1 588.0	506.2	32.3	101.3	0.2	2.4	23.7
Italy	1 060	15 990	18 120	400	8.0	89.2	104.9	1.8	10.3	5.0	4.6
Cyprus	0	0	0	30	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Latvia	1 790	0	0	50	92.7	0.0	0.0	1.4	1.2	0.0	0.0
Lithuania	4 300	0	0	190	163.7	0.0	0.0	1.0	2.0	:	0.0
Luxembourg	520	0	0	10	5.4	0.0	0.0	0.0	0.1	0.0	0.0
Hungary	6 700	25 350	980	2 550	223.4	388.3	27.2	19.1	0.7	0.8	2.6
Malta	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Netherlands	500	130	10	610	3.4	0.4	0.0	4.2	0.1	0.0	0.0
Austria	8 070	6 030	3 970	9 690	46.7	26.3	19.5	23.1	1.0	3.8	15.0
Poland	78 290	0	0	16 930	796.8	0.0	0.0	28.5	0.3	:	0.0
Portugal	0	1 000	0	0	0.0	15.1	0.0	0.0	:	:	:
Romania	8 020	286 910	6 100	730	344.0	821.2	131.8	5.7	5.6	2.2	4.6
Slovenia	1 350	230	130	8 880	5.4	0.3	0.1	3.9	0.8	8.4	6.2
Slovakia	1 930	1 160	220	290	158.0	65.3	7.9	5.6	0.5	1.8	4.0
Finland	6 700	130	0	220	90.2	0.1	0.0	2.3	2.0	4.0	0.0
Sweden	5 280	0	0	280	87.9	0.0	0.0	4.3	3.0	:	0.0
United Kingdom	17 750	0	0	:	679.3	0.0	0.0	:	0.0	0.0	:
Norway	790	0	0	0	6.2	0.0	0.0	0.0	0.0	0.0	0.0

⁽¹⁾ Fully converted crop area and area in the process of being converted.

⁽²⁾ Excluding the United Kingdom for the category 'Others'.

Source: Eurostat ([ef_lu_aliplant](#) and [food_in_porg1](#))

Table 2 also presents some information on the organic crop area given over to the production of olives. Organic production methods accounted for some 6.1 % of the total area for olive plantations in the EU-27 in 2007.

Greece, Spain and Portugal reported shares of organic crop area that were close to the EU-27 average, while organic olive plantations were more common in Italy, accounting for 13.8 % of the area used for olive production (and a much higher share for table olives, 83.9 %).

Table 2: Main agricultural indicators, olive plantations, 2007 ⁽¹⁾

	No. of holdings (units) ⁽²⁾			Area (1 000 ha)			Organic area (% of area) ⁽³⁾		
	Total olives	Table olives	Olive oil production	Total olives	Table olives	Olive oil production	Total olives	Table olives	Olive oil production
EU-27 ⁽⁴⁾	1 874 890	117 110	1 789 250	4 376.9	321.8	4 039.9	6.1	:	:
Greece	531 160	61 550	492 460	830.2	92.6	737.7	6.9	16.3	5.7
Spain	412 690	38 580	385 860	2 208.0	198.7	2 009.4	5.7	0.3	6.3
France	8 850	:	:	15.1	:	:	19.0	:	:
Italy	775 780	10 430	767 990	1 019.0	22.5	996.5	13.8	83.9	12.2
Cyprus	31 410	1 880	31 210	11.6	0.2	11.4	8.1	:	:
Malta	390	260	180	0.1	0.1	0.0	2.0	0.0	5.0
Portugal	113 310	4 410	110 250	292.2	7.8	284.3	5.7	:	:
Slovenia	1 300	:	1 300	0.6	:	0.6	12.8	:	:

⁽¹⁾ No olive plantations in Belgium, Bulgaria, the Czech Republic, Denmark, Germany, Estonia, Ireland, Latvia, Lithuania, Luxembourg, Hungary, the Netherlands, Austria, Poland, Romania, Slovakia, Finland, Sweden or the United Kingdom. ⁽²⁾ Holdings may produce both types of olives; hence, the total is lower than the sum of table olives and olive oil production. ⁽³⁾ Fully converted crop area or area in the process of being converted. ⁽⁴⁾ Excluding France and Slovenia for table olives and France for olive oil.

Source: Eurostat (online data codes: [ef_lu_pcolive](#) and [food_in_porq1](#))

There are a variety of animal by-products that are used for the production of fats and oils. These are often rendered from slaughtered animals (for example lard) and may be used in food manufacturing processes or directly by consumers for cooking.

However, the most common animal fats are those derived from the dairy sector – for example, butter and a variety of dairy spreads. It is important to note that the information presented in Table 3 covers the whole of the specialist dairy activity; the statistics presented therefore overstate the relative importance of dairy farming in relation to the production of fats and oils, as dairy farms principally produce milk, as well as cheeses and other dairy products, alongside animal fats.

There were 656 640 specialist dairy farms in the EU-27 in 2007, covering an area of 14.9 million hectares (the area given relates to that used for forage plants, permanent grassland and meadow).

Although dairy activity was spread across all of the Member States, it was relatively concentrated in France, Germany, the United Kingdom, Ireland, Poland and the Netherlands, each of these countries had an area in excess of 800 000 hectares devoted to specialist dairy farming activities. There were more than 16 million dairy cows in the EU-27 in 2007, with the highest shares accounted for by Germany (19.1 %) and France (14.6 %).

Table 3: Specialist dairy farming, 2007

	No. of holdings (units)	Area ⁽¹⁾ (1 000 ha)	No. of dairy cows (1 000)
EU-27	656 640	14 869	16 108
Belgium	6 570	234	328
Bulgaria	42 570	71	190
Czech Republic	1 770	143	73
Denmark	4 460	345	505
Germany	74 260	2 931	3 073
Estonia	2 330	188	82
Ireland	19 300	920	1 006
Greece	2 620	14	113
Spain	26 640	477	859
France	55 040	3 122	2 349
Italy	26 070	540	1 133
Cyprus	200	8	21
Latvia	22 080	332	121
Lithuania	32 330	294	151
Luxembourg	640	43	29
Hungary	5 910	93	125
Malta	100	0	7
Netherlands	18 900	805	1 343
Austria	31 730	573	424
Poland	105 260	848	1 095
Portugal	9 590	136	258
Romania	117 570	260	298
Slovenia	7 390	82	80
Slovakia	6 740	192	58
Finland	12 250	344	273
Sweden	6 490	472	340
United Kingdom	17 830	1 402	1 773
Norway	12 290	291	230

⁽¹⁾ Excluding common land in Bulgaria, Germany, Ireland, Greece, France, Hungary, Slovenia and the United Kingdom.

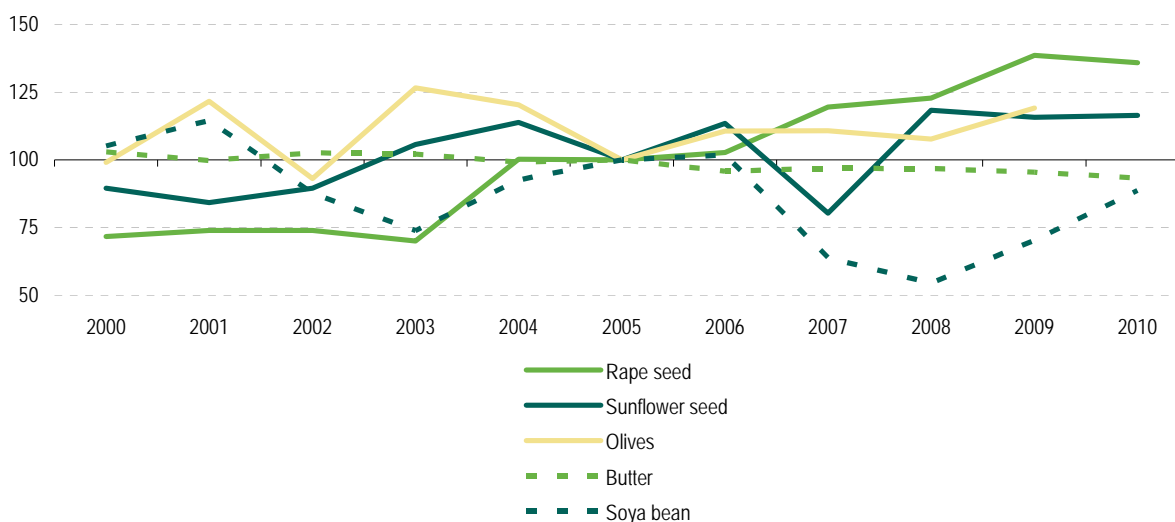
Source: Eurostat (online data codes: [ef_ov_lsft](#) and [ef_ov_luft](#))

Figure 2 presents the development of EU-27 production for a range of selected products that are associated with fats and oils. It shows that the highest increases in output during the period 2000 to 2010 were for the production of rape seed, sunflower seed and olives, whereas butter and soya bean production fell. The average growth experienced over the period was highest for rape seed (6.6 % per annum), while there were gains of 2.7 % per annum and 2.1 % per annum for sunflower seeds and olives. In contrast, the average reduction in the quantity of production for butter

was 1.0 % per annum, while the biggest losses (despite a recovery in production in 2009 and 2010) were recorded for soya beans.

Although a complete set of figures are not available for 2010, the EU's output of rape seed was around 21 million tonnes, that of olives around 11 million tonnes (in 2009) and sunflower seed around 7 million tonnes. The production of butter and soya beans was much lower at around 1.6 million tonnes and 1.0 million tonnes respectively (also in 2010).

Figure 2: Farm production, selected products within fats and oils, EU (1)
(2005=100, based on information in tonnes)



(1) Estimates; the information presented is based on the average for those products and Member States for which a complete time-series is available; olives, not available for 2010.

Source: Eurostat (online data codes: [apro_cpp_crop](#), [apro_cpp_fruveg](#) and [apro_mkCola](#))

More than 65 000 persons employed in the manufacture of oils and fats in the EU-27

After having harvested oil seeds or olives, the next stage in the production process generally involves recovering the oil. This may be done by pressing and crushing, or by extracting oils through the use of solvents. Following extraction, there is generally a residue left at the end of the process; this is commonly used as a feedstuff (oilcakes or meals). In order for oils to be considered fit for human consumption, most undergo some form of refining and/or filtering to remove impurities. Thereafter, they may be consumed, used as ingredients in food production, or heated and used to cook other foods; the wide range of different smoke points for various fats and oils determines which cooking technique and which fats and oils may be employed.

There were 8 800 enterprises in the EU-27 in 2008 whose principal activity was the manufacture of fats and oils (NACE Rev. 2 Group 10.4); as such,

this activity was considerably more concentrated than upstream agricultural activities (see Table 4). There was, however, a considerable difference in enterprise structure across the Member States with a much higher number of enterprises operating in the Mediterranean countries, while activity was often consolidated within relatively few manufacturers for more northerly Member States.

The EU-27 vegetable and animal fats and oils manufacturing sector generated more than EUR 4 300 million of value added in 2008, the highest contributions coming from Spain (16.7 %), Italy (13.3 %) and Germany (13.0 %). This sector employed more than 65 400 persons across the EU-27; Spain and Italy had by far the largest workforces, together accounting for more than one third of the total.

It is important to distinguish between processing activities that are carried out by manufacturing enterprises (shown in this section) and those carried out on the farm (not covered). Processing on the farm can potentially account for a relatively high share of production in some countries – for example, farmers who choose to press and commercialise their own olive oil production.

Table 4 also presents a breakdown of main indicators for the operation of dairies and cheese making (NACE Rev. 1 Class 10.51). This shows that this activity had just over 9 000 enterprises in the EU-27 in 2008, which together generated nearly EUR 17 000 million of value added; almost four times the level recorded for the manufacture of vegetable and animal oils and fats. In contrast to the manufacture of vegetable and animal oils and fats sector, the leading operators of dairies and cheese making were France (17.6 % of EU-27 value added) and Germany (14.0 %).

Although no overall figure is available for the size of the EU-27 workforce for the operation of dairies and cheese making, a simple sum of the available data (no information for six of the Member States) suggests that the total workforce approached close to 300 000 persons in 2008, which was between four and five times as high as for the manufacture of vegetable and animal oils and fats.

The relative importance of large enterprises (employing 250 or more persons) was particularly marked for the manufacture of dairy products (NACE Rev. 2 Group 10.5); note the wider activity coverage compared with the operation of dairies and cheese making (Class 10.51). Large enterprises generated 61.2 % of EU-27 value added within the dairy sector in 2008, while they accounted for 53.5 % of its workforce. The importance of large enterprises was somewhat less for the manufacture of vegetable and animal oils and fats, although large enterprises still provided the highest share of value added and employment.

Table 4: Structural indicators for the manufacture of vegetable and animal oils and fats and for the operation of dairies and cheese making, 2008

	Vegetable and animal oils and fats ⁽¹⁾			Dairies and cheese making ⁽²⁾		
	Number of enterprises (units)	Value added (EUR million)	Persons employed (units)	Number of enterprises (units)	Value added (EUR million)	Persons employed (units) ⁽³⁾
EU-27	8 800	4 341	65 400	9 086	16 731	:
Belgium	34	229	2 258	106	522	5 611
Bulgaria	85	34	2 607	233	48	7 553
Czech Republic	17	105	:	:	:	:
Denmark	23	:	:	50	:	:
Germany	149	566	4 269	289	2 341	34 587
Estonia	4	:	:	24	45	1 771
Ireland	4	5	60	52	537	4 929
Greece	:	:	:	:	:	:
Spain	1 512	723	13 043	1 128	1 611	20 791
France	216	305	:	1 104	2 953	35 758
Italy	3 614	579	10 784	2 880	2 043	38 092
Cyprus	:	:	:	126	53	1 415
Latvia	7	-2	211	36	59	3 085
Lithuania	9	2	175	58	102	7 992
Luxembourg	1	:	:	4	:	:
Hungary	73	81	924	84	153	6 965
Malta	:	:	:	:	:	:
Netherlands	33	205	2 382	172	:	10 942
Austria	63	32	579	146	358	4 638
Poland	113	231	3 676	370	815	37 398
Portugal	495	92	2 308	388	263	6 443
Romania	211	59	3 396	468	135	13 650
Slovenia	32	7	186	47	43	1 130
Slovakia	7	27	990	34	49	3 205
Finland	21	:	:	44	:	:
Sweden	57	92	1 183	81	389	6 811
United Kingdom	47	327	964	303	1 510	26 120
Norway	38	126	992	53	:	5 318
Croatia	108	:	:	119	:	:

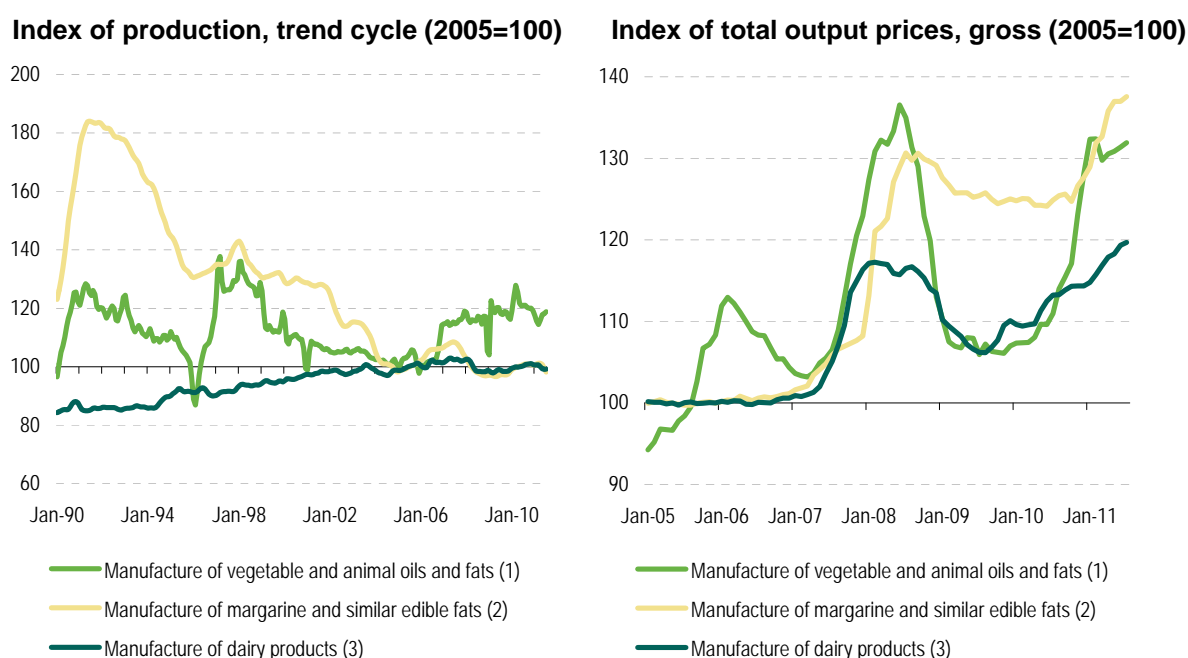
⁽¹⁾ NACE Rev. 2 Group 10.4; Belgium, Spain, Latvia, Hungary, Austria, Portugal, Romania, Slovenia and Sweden, 2009. ⁽²⁾ NACE Rev. 2 Class 10.51; Belgium, Estonia, Spain, Cyprus, Latvia, Luxembourg, Hungary, Austria, Portugal, Romania, Slovenia and Sweden, 2009. ⁽³⁾ France, number of employees.

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

Figure 3 presents the development of EU-27 production indices and output price indices. The output of dairy products generally followed a gradual upward path during most of the last two decades. The production index for vegetable and animal oils and fats displayed a fluctuating development with output oscillating around its average level from 1990, with noticeable peaks in 1991 and 1998; despite some abrupt changes in output the index level in July 2011 saw production some 18.9 % higher than in 1990 (equivalent to annual growth of 0.8 % per annum). In contrast there was a largely downward development to the index of production for the manufacture of margarine and similar fats (which is part of vegetable and animal oils and fats), once the index had peaked in 1991.

Total output price indices measure the change in producer prices for items that are destined for both domestic and external markets. The output price of vegetable and animal oils and fats for the EU-27 rose overall during the period from the start of 2005 to mid-2011, with three main peaks and two troughs. These cycles were closely linked to overall economic activity, global commodity prices and the demand for basic food supplies, as well as the increased use of vegetable oils to meet the rising level of biofuel production. Prices rose rapidly in the run-up to the financial and economic crisis, plunging during late 2008 and early 2009, before recovering swiftly thereafter – to return to price levels that were similar to those recorded prior to the crisis.

Figure 3: Development of short-term indices, EU-27



(¹) NACE Rev. 2 Group 10.4; (²) NACE Rev. 2 Class 10.42; (³) NACE Rev. 2 Group 10.5.

Source: Eurostat (online data codes: [sts_inpr_m](#) and [sts_inpp_m](#))

Almost 1.8 million tonnes of butter sold in the EU-27 in 2010

Production statistics are available for the quantity and value of production sold – when combined with external trade indicators these provide information on the apparent size of particular product markets. Table 5 details the 12 products within fats and oils with the highest quantity of production sold in the EU-27 in 2010. Oilcakes from rape or colza seeds recorded the highest quantity of production sold (10.6 million tonnes). However, virgin olive oil and butter had higher levels of production sold in value terms (EUR 4 500 million and EUR 5 800 million respectively); this was between three and four

times as high as the value of production sold for oilcakes from rape or colza seeds.

Table 6 provides details with respect to the three leading producers among the EU Member States for each of the main products within fats and oils (the same 12 products that were identified in Table 5). This confirms that the highest levels of production for butter were in Germany and France, the highest levels of olive oil production in Spain and Italy, and the highest levels of oilcake production from rape or colza seeds in Germany and France.

Table 5: Production and trade indicators for selected products within fats and oils, EU-27, 2010 ⁽¹⁾

	Quantity (1 000 tonnes)				Value (EUR million)			
	Production sold	Exports (X)	Imports (M)	Trade balance (X-M)	Production sold	Exports (X)	Imports (M)	Trade balance (X-M)
Refined rape, colza or mustard oil	5 322.5	59.3	14.8	44.6	3 838.7	61.1	12.1	49.0
Refined palm oil	2 883.3	33.1	957.9	-924.8	1 919.6	30.3	586.4	-556.0
Refined sunflower-seed and safflower oil	2 736.0	80.4	109.3	-28.8	2 395.5	81.6	90.1	-8.5
Virgin olive oil & fractions	2 315.9	285.2	24.9	260.3	4 544.4	932.7	55.9	876.9
Margarine and reduced and low fat spreads	2 027.9	49.1	4.1	45.0	2 740.5	59.7	4.2	55.4
Butter of a fat content by weight <= 85 %	1 782.1	120.8	33.2	87.6	5 826.8	431.1	83.7	347.4
Oilcake from rape or colza seed extraction	10 637.5	224.3	169.7	54.6	1 477.1	43.9	33.3	10.6
Oilcake from soya-bean oil extraction	6 768.7	448.9	21 645.6	-21 196.8	1 560.5	152.3	6 407.7	-6 255.4
Flours and meals of oil seeds or oleaginous fruits	4 500.0	9.4	26.6	-17.2	1 500.0	5.8	11.5	-5.7
Oilcake from extraction of vegetable fats/oils	4 202.1	2.7	2 174.0	-2 171.3	228.3	1.8	212.7	-210.9
Crude rape, colza or mustard oil	4 092.6	92.6	388.8	-296.2	2 383.3	68.9	281.4	-212.5
Oilcake from sunflower seed extraction	2 346.9	101.0	1 936.2	-1 835.2	308.6	15.8	293.5	-277.7

⁽¹⁾ Information presented for the 12 products with the highest quantity of production sold within CPA Group 10.4 and Class 10.51; the products are split between those for human consumption and those for animal nutrition and intermediate consumption.

Source: Eurostat (online data code : [food_pd_prod5](#))

Table 6: Three largest producing Member States for selected products within fats and oils, 2010 ⁽¹⁾ (1 000 tonnes)

	Largest		Second largest		Third largest	
	Country	Share in EU-27 (%)	Country	Share in EU-27 (%)	Country	Share in EU-27 (%)
Refined rape, colza or mustard oil	Germany	24.6	United Kingdom	21.8	Poland	8.7
Refined palm oil	Netherlands	52.5	Germany	22.3	United Kingdom	8.4
Refined sunflower-seed and safflower oil	Spain	24.4	Italy	8.8	Germany	8.4
Virgin olive oil & fractions	Spain	78.3	Italy	18.8	Portugal	2.3
Margarine and reduced and low fat spreads	Germany	20.1	Netherlands	15.2	Poland	10.8
Butter of a fat content by weight <= 85 %	Germany	24.9	France	18.1	Ireland	9.6
Oilcake from rape or colza seed extraction	Germany	29.9	France	20.1	United Kingdom	12.8
Oilcake from soya-bean oil extraction	Germany	36.4	Italy	15.6	Portugal	9.4
Flours and meals of oil seeds or oleaginous fruits	Spain	53.6	Italy	5.0	Portugal	2.7
Oilcake from extraction of vegetable fats/oils	Spain	72.8	Italy	7.2	Greece	5.7
Crude rape, colza or mustard oil	Germany	38.6	France	13.6	Poland	8.5
Oilcake from sunflower seed extraction	France	32.6	Romania	11.1	Hungary	9.4

⁽¹⁾ Information presented for the 12 products with the highest quantity of production sold for the EU-27 within CPA Group 10.4 and Class 10.51; some information is incomplete or not available; the share for the Member States are calculated on the basis of shares in EU-27 quantity produced; the products in the table are split between those for human consumption and those for animal nutrition and intermediate consumption.

Source: Eurostat (online data code : [food_pd_prod5](#))

The level of trade for vegetable and animal fats and oils was considerably higher than that for butter, and it was also characterised by a higher degree of trade with non-member countries. More specifically, the EU-27 imported 10.1 million tonnes of vegetable and animal fats and oils in 2010, which was almost 8 million tonnes more than it exported. The reliance on imports of vegetable and animal fats and oils is largely linked to the demand from the EU-27 for soya beans, rape seeds and palm oil. Portugal was the only Member State to record an extra-EU trade surplus in 2010 for vegetable and animal fats and oils. Of those countries that ran a deficit, the largest were recorded for the Netherlands (in part, explained by the Netherlands being an initial port of entry into the EU from non-member countries), Italy and Germany (each of which ran a deficit of more than a million tonnes).

Figure 4 presents details on the main origin of imports for vegetable and animal fats and oils and for butter and dairy spreads. While the level of extra-EU imports of butter was relatively low (39 900 tonnes), these were dominated by imports from New Zealand, which accounted for 85.2 % of all EU-27 imports.

The origin of imports for vegetable and animal fats and oils was more varied, although largely dominated by imports from south east Asia. Indonesia accounted for more than one third of the EU-27's imports in 2010, ahead of Malaysia (18.6 %), while the Philippines (6.6 %) and Papua New Guinea (5.6 %) were also among the top five trading partners for the EU-27; Ukraine was the other, providing 7.2 % of EU-27 imports.

Table 7: Extra-EU and intra-EU trade, 2010
(1 000 tonnes)

	Vegetable & animal fats & oils ⁽¹⁾				Butter & dairy spreads ⁽²⁾			
	Exports		Imports		Exports		Imports	
	Extra-EU	Intra-EU	Extra-EU	Intra-EU	Extra-EU	Intra-EU	Extra-EU	Intra-EU
EU-27	2 170.6	13 058.3	10 103.1	12 744.9	156.1	759.9	39.9	787.0
Belgium	99.8	1 358.6	178.3	1 703.8	16.6	114.6	2.4	110.6
Bulgaria	39.0	93.0	41.5	82.9	0.1	1.1	0.0	3.9
Czech Republic	0.5	249.3	14.0	231.3	0.9	7.2	:	19.2
Denmark	198.3	365.9	264.4	318.9	9.9	46.5	31.7	16.8
Germany	301.1	1 836.4	1 496.7	2 391.3	22.2	90.2	0.0	144.0
Estonia	3.3	49.7	12.4	17.3	1.7	2.6	:	0.7
Ireland	1.0	63.1	40.5	191.8	8.1	126.3	0.0	8.1
Greece	39.0	151.9	166.5	157.4	0.0	0.2	0.0	9.6
Spain	366.3	1 132.3	1 078.0	698.3	0.4	37.9	0.0	16.4
France	74.2	1 363.4	638.3	1 204.7	26.3	53.9	0.7	159.6
Italy	315.8	496.9	1 743.6	1 251.2	0.2	27.1	0.0	73.4
Cyprus	0.6	0.9	3.8	29.3	0.0	0.0	:	1.3
Latvia	0.3	29.4	21.2	54.5	0.2	2.7	:	1.9
Lithuania	6.8	35.0	45.6	69.4	0.7	2.3	:	0.9
Luxembourg	0.0	1.2	0.2	8.9	0.0	2.8	:	3.8
Hungary	31.5	231.0	33.1	242.6	0.5	1.0	:	5.8
Malta	0.0	0.0	1.6	6.6	:	:	:	0.5
Netherlands	349.8	3 714.0	2 881.4	1 139.2	42.2	139.8	2.9	41.5
Austria	7.0	241.0	39.0	462.6	0.4	2.1	0.0	14.4
Poland	12.0	415.8	107.9	420.5	3.2	23.4	0.2	13.1
Portugal	99.7	110.4	61.7	323.9	1.1	20.4	0.0	10.4
Romania	12.2	213.0	46.0	184.2	0.0	0.4	:	5.2
Slovenia	6.3	15.5	52.2	31.7	0.2	0.7	0.1	1.1
Slovakia	1.2	73.8	7.9	191.9	:	2.1	:	9.1
Finland	50.2	35.8	365.8	77.4	17.8	13.2	0.1	1.6
Sweden	96.5	169.4	169.0	370.0	0.6	17.6	0.0	12.6
United Kingdom	58.2	611.6	592.4	883.2	3.0	23.8	1.9	101.5

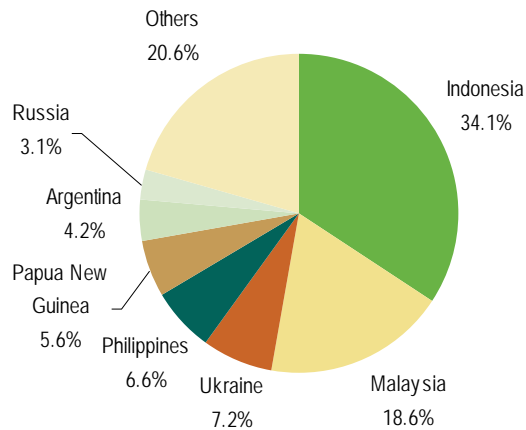
⁽¹⁾ HS Chapter 15.

⁽²⁾ HS heading 04.05.

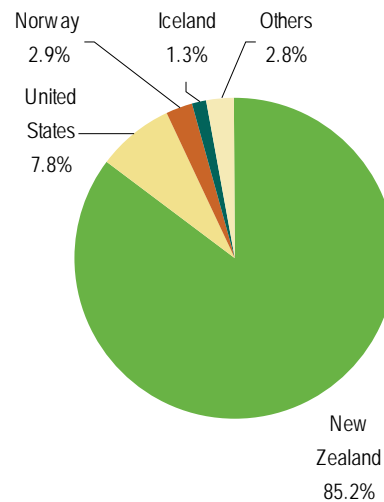
Source: Eurostat, Comext (online data code: [DS-016894](#))

Figure 4: Origin of extra-EU imports, EU-27, 2010
(% share, based on the quantity of trade in kg)

Vegetable and animal oils and fats ⁽¹⁾



Butter; dairy spreads ⁽²⁾



⁽¹⁾ HS Chapter 15; extra-EU imports of vegetable and animal oils and fats amounted to 10.1 million tonnes in 2010.

⁽²⁾ HS heading 04.05; extra-EU imports of butter and dairy spreads amounted to 39 900 tonnes in 2010.

Source: Eurostat (online data code: [DS-016894](#))

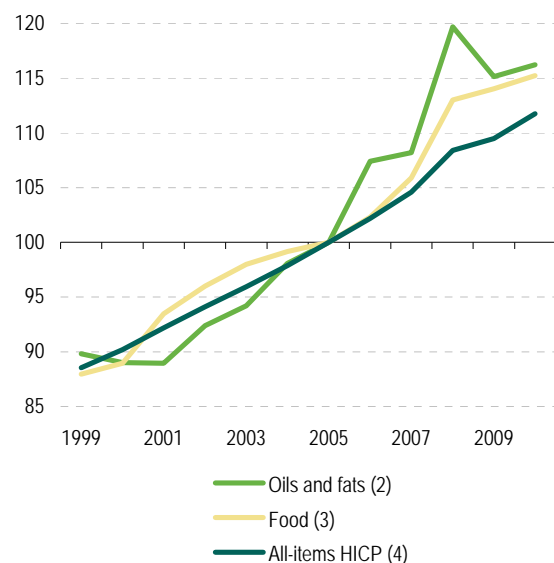
Consumer prices of oils and fats rose by 3.1 % per annum between 2000 and 2010

The final link in the food chain is reached when end products are purchased by consumers from retailers for own preparation and consumption or from food service enterprises (restaurants, fast food outlets, etc.).

Consumer price developments for oils and fats (see Figure 5) show that the price of oils and fats in the EU rose at a slightly faster pace than the all-items index during the period from 1999 to 2010, and at almost the same pace as the average increase experienced for all food items. There was a rapid increase in food prices (and in particular for the price of oils and fats) prior to the financial and economic crisis.

Figure 6 (overleaf) provides details of annual rates of change in consumer prices for fats and oils. Having fallen in the majority of Member States in 2009 there was a more varied picture for price changes in 2010, with the highest price increases being registered in Germany, Bulgaria, the United Kingdom and Poland – while prices continued to fall for almost half of the Member States. The largest price reductions for oils and fats in 2010 were posted in Cyprus, Ireland and Finland.

Figure 5: Annual average indices of harmonised consumer prices, EU ⁽¹⁾ (2005=100)



⁽¹⁾ EU evolving composition.

⁽²⁾ COICOP Class 01.1.5.

⁽³⁾ COICOP Group 01.1.

⁽⁴⁾ COICOP Divisions 01-12.

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

Figure 6: Harmonised consumer price indices, fats and oils, annual rates of change (1) (%)



(1) COICOP Class 01.1.5. (2) EU evolving composition.

(3) Broken y-axis, value is -25.5 % for 2009. (4) Broken y-axis, value is 32.0 % for 2009.

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

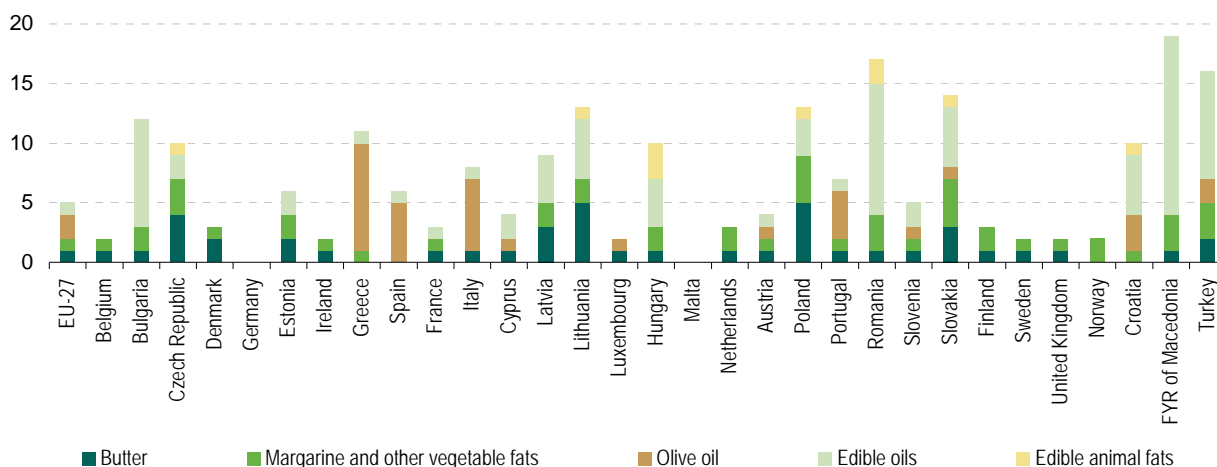
Figure 7 (below) presents information relating to consumption expenditure for oils and fats (from household budget surveys) – it provides details of the relative importance of household spending on oils and fats (expressed per thousand (‰) in relation to overall household expenditure on all goods and services). EU-27 households spent, on average, approximately 5 ‰ of their total budget on oils and fats in 2005 – this share reached 10 ‰ or more in the following eight Member States: Bulgaria, the Czech Republic, Greece, Lithuania, Hungary, Poland, Romania and Slovakia.

The structure of expenditure on oils and fats varied considerably between countries. A relatively high proportion of total expenditure on oils and fats was devoted to the purchase of olive oil in Greece,

Spain, Italy and Portugal, whereas purchases of butter tended to account for a higher share of expenditure on oils and fats in northern Europe.

Agricultural balance sheets can be used to provide more information on the consumption of various oil seeds, fats and oil, as well as butter (in terms of average gross human apparent consumption). The latest information available supports the information presented from household budget surveys insofar as it suggests that the highest consumption per capita for olives was in Greece and Italy (no information for Spain or Portugal), while the highest annual level of consumption for butter was in France (almost 8 kg per inhabitant), followed by Finland and Luxembourg (both close to 7 kg per inhabitant).

Figure 7: Overall structure of consumption expenditure for oils and fats, 2005 (1) (%)



(1) Breakdown of COICOP Class 01.1.5; Germany and Malta, not available.

Source: Eurostat (online data code : [hbs_str_t211](#))

METHODOLOGICAL NOTES

DETAILS OF DATA SOURCES

The information presented in this publication is largely drawn from the Eurostat database 'Food: From farm to fork statistics', which brings together data that provide information which are considered relevant for food safety purposes: details of the primary data sources are also provided.

Food: from farm to fork statistics

The domain is structured in four main areas.

- Food consumption: gross human consumption of main food items.
- From production to distribution: products with distinctive marks (final consumer's perspective, production and sales of foodstuffs, ancillary activities – packaging, transport, R&D on food safety projects, prices (accessibility)).
- Inputs to the food chain: primary production, extra-EU imports of food products – main EU partners, input into agriculture – feedingstuffs, seed, fertilisers, plant protection products.
- Actors involved in the food chain: number of enterprises, number of local units, number of agricultural holdings, number of dairies, number of registered organic operators, number of fishing vessels.

Only operators certified following [Council Regulation \(EC\) No 834/2007 of 28 June 2007](#) (OJ No L 189/1991) on organic production and labelling of organic products are considered to be organic.

Statistics on the structure of agricultural holdings (FSS)

Farm structure survey data are used to collect information on agricultural holdings in the Member States at different geographic levels (Member States, regions, districts) and over periods, they provide a base for decision making in the Common Agricultural Policy. Two kinds of farm structure surveys are carried out by the Member States:

- a basic survey (full scope Agricultural Census - AC) every 10 years,
- sample based intermediate surveys.

The FSS for 2007 in Bulgaria, Germany, Ireland, Greece, France, Hungary, Slovenia and the United Kingdom did not cover land on which common rights apply – designated as common land. Generally these areas are used for grazing animals. Common land does not exist in Belgium, the Czech Republic, Denmark, Estonia, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Slovakia, Finland and Sweden.

Crop production

Annual statistics on the production of a range of specific crops are covered by Council Regulations. Agricultural production is harvested production, which includes marketed quantities, as well as quantities consumed directly on the farm, losses and waste on the holding, and losses during transport, storage and packaging. Crop statistics provide, for a given product, the area under cultivation, the yield and the production harvested.

Structural business statistics (SBS)

SBS data have been collected within the legal framework provided by [Council Regulation No 295/2008 of 11 March 2008](#) concerning structural business statistics (recast). SBS data relating to annual enterprise statistics has been used in this publication presented in the NACE Rev. 2 classification: NACE Rev. 2 Group 10.4 – manufacture of vegetable and animal oils and fats; NACE Rev. 2 Class 10.51 – operation of dairies and cheese making.

Prodcom

Prodcom provides statistics on the production of manufactured goods; it uses product codes specified in the Prodcom List (4 500 different products): the first four digits of the code correspond to NACE; the first six to the statistical classification of products by activity (CPA) and the remainder specify the product in more detail. In this publication the following codes are used: CPA Group 10.4 – vegetable and animal oils and fats; CPA Class 10.51 – dairy and cheese products.

Short-term business statistics

Short-term statistics (STS) describe the most recent developments in economic activity across the European economy. STS information is published as indices which show changes in comparison with a fixed reference year (currently 2005); the indicators do not represent absolute amounts or monetary values. Data are presented in gross, working-day adjusted, seasonally adjusted and trend forms; rates of change are also available. The activities covered by STS are presented in the NACE Rev. 2 classification: NACE Rev. 2 Group 10.4 – manufacture of vegetable and animal oils and fats;

NACE Rev. 2 Class 10.42 – manufacture of margarine and similar edible fats; NACE Rev. 2 Group 10.5 – manufacture of dairy products.

External trade statistics

External trade statistics are used extensively for multilateral and bilateral negotiations within the framework of the common commercial policy. External trade statistics relating to the trading of goods between the EU-27 and non-member countries are used for the origin of imports. This information is based on extra-EU trade flows which are recorded at the frontier country where the goods are placed under the customs procedures. Extra-EU trade statistics do not record exchanges involving goods in transit, placed in a customs warehouse or given temporary admission. The data are presented for: HS Chapter 15 – animal or vegetable fats and oil and their cleavage products; prepared edible fats; animal or vegetable waxes; HS heading 04.05 – butter and other fats and oils derived from milk.

Harmonised indices of consumer prices (HICP)

Harmonised indices of consumer prices (HICPs) are designed for international comparisons of consumer price inflation. The coverage of the HICPs is defined in terms of 'household final monetary consumption expenditure', by reference to the national accounts concepts of ESA 1995. Expenditures are classified according to the COICOP (Classification Of Individual Consumption by Purpose) adapted to the needs of HICPs): COICOP Divisions 01-12: all-items HICP index; COICOP Group 01.1: food; COICOP Class 01.1.5: oils and fats.

DEFINITIONS OF VARIABLES AND INDICATORS

Gross human apparent consumption (in supply balance sheets):

Apparent consumption = (commercial production + estimated own account production for self-consumption + imports + opening stocks) – (exports + usage input for processed food + feed + non-food usage + wastage + closing stocks).

Holding: a single unit both technically and economically, which has single management and which produces agricultural products. The holding may also provide other supplementary (non-agricultural) products and services.

Index of production: is a business cycle indicator which measures monthly changes in the price-adjusted output; it should reflect the development of value added.

Number of enterprises: a count of the number of enterprises active during at least a part of the reference period.

Number of persons employed: is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (for example, sales representatives, delivery personnel, repair and maintenance teams).

Value added: can be calculated from operating income plus or minus the changes in stocks, minus the purchases of goods and services; value adjustments (such as depreciation) are not subtracted.

Index of total output prices: the gross monthly change in the trading price of products on the domestic and non-domestic market. The index measures price changes at the stage of the manufacture of a product (in contrast to consumer price indices which measure prices from the buyer's point of view).

ABBREVIATIONS AND SYMBOLS

CPA	(EU) Classification of Products by Activity
EU	European Union
EUR	euro
EU-27	27 EU Member States
ha	hectares
HS	harmonised system (trade statistics)
kg	kilograms
NACE	(EU) classification of economic activities
:	not available
<i>Italics</i>	estimated or provisional values in tables

FURTHER INFORMATION

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Further information

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

Data on 'food: from farm to fork statistics':

<http://epp.eurostat.ec.europa.eu/portal/page/portal/food/data/database>

Further information about 'food statistics':

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

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Fax: (352) 4301 35349

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European Statistical Data Support:

With the members of the 'European statistical system', Eurostat has set up a network of support centres in nearly every Member State and in some EFTA countries.

Their role is to provide help and guidance to Internet users of European statistics.

Contact details for this support network can be found on the Eurostat website at:

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

All Eurostat publications can be ordered via the 'EU Bookshop':

<http://bookshop.europa.eu/>.

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