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<p>Situation and Outlook Dairy Sector</p>

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This report is based on figures available at the middle of March 1997. In general, figures for 1996 are provisional or estimates. The report does not prejudge in any way the proposals which might be made to solve the problems which may appear from the analysis. The report is available as document SEC(97) 1013 with publication date 21.05.97.

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Foreword

In late 1995, the European Commission presented its Agricultural Strategy Paper¹ in which it outlined the major challenges European agriculture and its rural areas would be facing at the turn of the century and the implications these might have for future policy developments.

In its working programme for 1997, the Commission announced its intention to present, after the conclusion of the Intergovernmental Conference, a communication on the financial framework from 2000 onwards, to be accompanied by “a very careful look at the future of the Communities policies, in particular the common agricultural policy and structural policies”.

In the light of these orientations, the Directorate-General for Agriculture (DG VI) has undertaken a number of studies, which examine in detail the current situation and the longer term outlook for some of the main agricultural markets, developments in rural areas, and in world markets. These studies are being published as *working documents* under the common heading *CAP 2000*.

A general overview of agricultural market trends and long term projections of supply and demand for the main commodities is presented in “Long term Prospects: Grains, Milk and Meat Markets”. These are accompanied successively by more detailed sector analyses in “Situation and Outlook” reports for the beef, dairy and grain markets and their organisation. A study on rural development under the *CAP 2000* heading will follow.

¹ “Study on alternative strategies for the development of relations in the field of agriculture between the EU and the associated countries with a view to future accession of these countries” (Agricultural Strategy Paper), a communication (CSE(95)607 of 29.11.1995) presented by the Commission to the Madrid European Council in December 1995.

List of acronyms and abbreviations

ABARE	Australian Bureau of Agricultural and Resource Economics
BSE	Bovine Spongiform Encephalopathy
BST (rBST)	(recombinant) Bovine Somatotropine
CAP	Common Agricultural Policy
CEC	Central European Countries
CEEC	Central and Eastern European Countries
CIS	Community of Independent States
CMO	Common Market Organisation
DG	Directorate-General
EAA	European Association Agreements
EAGGF	European Agricultural Guidance and Guarantee Fund
EC	European Community
EU	European Union
EUROSTAT	Statistical Office of the European Communities
ex-GDR	Former German Democratic Republic
FAO	Food and Agriculture Organisation (of the United Nations)
FAPRI	Food and Agricultural Policy Research Institute
FSU	Former Soviet Union
GATT	General Agreement on Tariffs and Trade
ha	hectare
IDA	International Dairy Agreement
kg/cap.	kilogram/capita
mio t	million tonnes
NUTS	Nomenclature of territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development
US	United States (of America)
USDA	United States Department of Agriculture
SMP	Skimmed Milk Powder
WMP	Whole Milk Powder
WTO	World Trade Organisation

EXECUTIVE SUMMARY

- Milk production is the most important agricultural activity in almost all EU countries, and in the EU as a whole (18.4% of total value of agricultural production), despite the fact that the bulk of EU cow's milk is produced by only a few member states. Its importance is further highlighted if the closely-linked cattle sector (accounting for a further 11.9%) is also taken into consideration.
- With the introduction of the milk quota system in 1984, milk output declined in all member states (except Portugal), mainly due to several reductions in the reference quantities. This evolution was accompanied by an even more marked drop in the dairy cow herd as milk yields improved substantially.
- Milk deliveries to dairies have been relatively stable, but on-farm use and direct sales have declined. This is the case throughout the EU, and, in particular, in those member states where the delivery ratio was relatively low.
- Butter manufacture still absorbs about one third of the total milk produced in the EU. However, its share has been in constant decline since 1973. On the other hand, production of cheese, cream and whole milk powder has increased steadily in absolute and relative terms. Fresh products have more or less maintained their share, and the relative importance of concentrated milk has decreased.
- The manufacture of skimmed milk powder (SMP) still absorbs most skimmed milk produced in dairies. Nevertheless, the pattern of skimmed milk use in dairies has changed considerably, especially during the last 10 years. In particular, volumes used in the production of cheese, fresh products, whole milk powder and casein have increased steadily.
- Milk producer prices in nominal terms increased by +4.5% on average per year over the last 20 years, but there has been a clear slowdown in growth rates over time. Beginning with mean annual growth rates of +9.4% and +7.5% respectively in the periods 1973-79 and 1979-84 (+7.7% on average over the period 1973-84), the rise in prices slowed down progressively. In the years immediately following the introduction of the milk quota system, nominal prices increased by +2.3% per year, compared to only +0.7% in recent years. In real terms, producer prices improved slightly from 1984 to 1989 and dropped since.
- The milk quota system has had a profound effect on the dairy sector, halting and indeed reversing the upward trend in production. Nevertheless, the EU milk sector is still characterised by a significant structural surplus. This (net) surplus, estimated at around 9.0 to 9.5 mio t (whole milk equivalent), must be exported (the bulk with subsidies) or stocked. In addition, a significant part of internal consumption is subsidised by means of special disposal measures, involving around 11 mio t milk equivalent. The budget costs of these special disposal measures represent around a third of the market price.
- In this surplus situation, producer prices, and the income of dairy farmers, depend on prices determined to absorb excess production in the form of butter and SMP, by intervention or by special disposal measures. The producer price for milk follows relatively closely the evolution of the target price for milk - an institutional price derived from the intervention prices for butter and SMP, assuming a certain support level.

- The milk quota system, like other production control systems based on individual references quantities, creates a heavy administrative burden. Experience has shown that the implementation of such a system is not easy. Some member states were rapidly able to ensure the correct application. Others had great problems, not only because of administrative difficulties, but also due to special circumstances whose impact on the functioning of the system should not be underestimated (large numbers of small producers; quality of information on which the different elements of the quota system are based, in particular, in the initial period of implementation; level at which the system is administered; etc.). Last, but not least, the necessary political will to implement such a system must exist.
- Due to CAP supported milk prices and relatively high operating margins, large economic rents associated with production rights have been incorporated into quota values. For new entrants and those wishing to expand their production, quota availability is a major problem. Rising quota values imply either higher fixed costs (if quotas are purchased as a permanent asset) or higher variable costs (through short-term lease and rent arrangements) for new entrants or those wishing to expand milk production and, therefore, a reduction in competitive advantage for these dairy farmers.
- In general, the price of milk quotas (for purchase or lease/rent) - and also the trade volume - does not only depend on the milk price itself (or even more on the margins on milk production) and the level of the additional levy. It also depends on the regulatory framework, such as, for example, transfer restrictions or provisions for the depreciation of expenditure on quota. In this respect, the economic consequences can be quite different from one member state to another, as quite different rules often apply. It can be argued that a system of free tradable quotas could provide an economically optimal allocation of production rights, as the most efficient dairy farmers with high margins should be best able to bid for available quotas.
- On the other hand, existing producers benefit from additional revenues (windfall gains) provided by the sale, rent or lease of quota. Of course, the higher values ascribed to milk quota also have an impact on the values of other fixed assets such as land. High quota values can provide the incentive and the financial means for many low margin producers, and those with no successor, to leave farming by selling or leasing their quota to more efficient expanding producers or new entrants.
- However, there are also a number of arguments in favour of the quota system. The binding of quota to land, for example, has contributed significantly to maintaining dairying in less competitive areas, in particular, in mountain and less-developed areas, because production can less easily respond to differences and changes in costs, technology or demand. Nevertheless, certain adjustments within countries are possible because quotas are to a some extent tradable within certain member states.
- Despite criticism that the milk quota regime hampers structural adjustment due to its inflexible nature, it must be pointed out that important structural changes have in fact occurred in the EU milk sector. The move towards more concentration, already evident prior to 1984, in order to benefit from economies of scale, has persisted at both producer and dairy level, and is likely to continue to characterise the evolution of the dairy sector in the future.
- Production control measures, tightened-up intervention rules, and lower support prices for butter and SMP have combined to ensure control of budgetary costs in the milk sector. Spending on the milk sector accounted for almost 41% of total EAGGF expenditure in 1980. In 1996, it was only 9.2%. In absolute terms, expenditure for milk for the 15 member states is actually lower than that in 1980 for 9 countries.

- As regards the medium-term outlook for milk in the EU, cow milk production is forecast to decrease slightly each year from 121.6 mio t in 1996 to around 119.4 mio t in 2001 and about 118.1 mio t in 2005. This result is based on the assumption that milk reference quantities remain unchanged until then and effective deliveries adjust to the level of available quotas. Furthermore, a slight increase in milk fat content and in the delivery ratio is assumed. Global demand for milk (in whole milk equivalent) is expected to decline from 111.8 mio t in 1995 to 110.4 mio t in 2001 and around 108.7 mio t in 2005. This is the net result of falling consumption of some milk products, notably butter, but also in the animal feed sector. It is expected that this will be partially compensated by increasing demand for other items, in particular cheese and fresh products. The above forecasts indicate a net annual surplus of around 9.0 to 9.5 mio t (whole milk equivalent) up to 2005, with a slight decrease in the short-term but with a tendency to increase at the end of the forecast period.
- For cheese, a further increase in domestic use is expected, but with a more modest growth rate than in the past (+0.8% per capita/year). Cheese imports are forecast to increase, mainly due to the GATT and other market access agreements. Exports will decrease, even on the assumption that a part of the required reduction of subsidised exports can be compensated for by an increase of non-subsidised exports. In any case, in the cheese sector, GATT commitments represent a constraint, limiting the scope for further growth.
- In the case of butter, domestic consumption is expected to continue to decline (-0.7% per capita/year), but more slowly than in the past. Imports of butter could increase by around 15,000 t due to the GATT and other market access agreements. Butter production is expected to remain relatively stable over the 1997-2001 period and to fall slightly subsequently. On the export side, the margin to fulfil GATT commitments should be more than sufficient. Nevertheless, relatively high exports (around 300,000 t at the end of the forecast period) will be necessary in order to keep intervention stocks down.
- Forecasts for SMP indicate a further drop in consumption, mainly in animal feed use, while human consumption is projected to remain more or less stable. Due to lower availability of milk, and increasing use of skimmed milk in the manufacture of other dairy products (fresh products, cheese), SMP production is likely to decline also, but to a lesser extent than consumption. Excluding the possibility of exports without refunds, the forecasts envisage a situation where intervention stocks for SMP tend to increase from 1998 onwards as the GATT commitments on subsidised exports become binding.
- As far as other milk products are concerned, the forecasts indicate that consumption of fresh products will continue to increase, but modestly given the already high level of per capita consumption. Demand for other milk powder (mainly whole milk powder) is also expected to increase slightly, while there is a strong upward tendency in internal demand for cream. Finally, consumption of concentrated milk is expected to decline further. As in the case of cheese, there is pressure on these products because the volume of subsidised exports must be reduced as a result of the GATT agreement.
- Internationally, only a small part of world milk production is traded (around 6% of total world production, estimated by the FAO at 537 mio t in 1996). The international markets are dominated by a few players. The EU, as the main producer, exported between 10 and 15% of its production in the past and is still the world's biggest exporter. However, the EU share on world markets has been declining steadily for several years, but is still at around 45%. The next two most important exporters, New Zealand and Australia, rank only among the world's medium or even small producers,

but are much more export-oriented than the EU and are developing further their export capacities.

- There is a broad consensus among analysts that world markets for dairy products are likely to expand. As far as the main milk producer countries are concerned, production growth is expected to be concentrated in those countries where production is not subject to a quota system. It will be particularly strong in countries with a low level of support for the dairy sector, and where farmers can respond rapidly to new market opportunities, such as, for example, Australia and New Zealand. Among the other big developed countries, positive growth rates are forecast for the US and Japan, while production in the EU, Canada and in some of the former centrally planned countries is projected to decrease. A marked increase in production is also expected in Latin and South America and Asia.
- Consumption should globally follow the same trend as production. Amongst the developed countries, a significant increase is projected only for the US and Japan, while consumption in other developed countries is likely to fall. In contrast, consumption is expected to continue to increase by around +2.6% on average per year in developing countries. The perspectives for consumption are most favourable in Asia and Latin America. In general, growing population and urbanisation, coupled with an increase in average incomes, will be the main factors underpinning rising consumption. Other regions in the world, in particular Africa, should also see some improvements, but mainly due to higher population; per capita consumption could even decrease in some cases.
- Improved market balance for dairy products, combined with a decline in subsidised exports resulting from the GATT Uruguay Round Agreement, and relatively strong demand in a number of non-OECD countries, should lead to higher international prices for dairy products, compared to the first half of the 1990s. The price of cheese is expected to remain firm due to steadily rising demand. The world price for SMP will follow more or less the same trend, mainly as a result of growing demand in the main importing countries, a shift from SMP to WMP exports by New Zealand and the constraining GATT commitments for some countries as far as subsidised exports are concerned. WMP world market prices will also remain relatively high because of strong demand. Finally, the world butter price is expected to continue to fall from its 1995 record level. Nevertheless, it will still be above the 1991-95 average at the end of the forecast period.
- As international prices for cheese, SMP and WMP are expected to rise, the difference between EU domestic prices and world market prices for these products is likely to narrow. This, coupled with relatively small volumes of public stocks, especially in the US and the EU, could make prices of some dairy products more sensitive to changes in supply and demand in the international market. According to the OECD, mainly butter and SMP prices will be affected and might show quite important fluctuations, the extent of which is difficult to quantify. Nevertheless, although decreasing over the forecast period, the price gaps between the EU and other main producer countries are projected to remain relatively large.
- Long-term projections, covering the period up to the year 2005/06, tend in general to confirm the main findings concerning the medium-term outlook, and indicate that these trends are likely to continue in the long-term. Quite important increases in world trade are likely over the next ten years, but the scope for growth in EU exports is very limited under the present system. Overall, it is expected that the EU will lose market share for nearly all dairy products. The main beneficiaries of this expansion of world

markets are likely to be Australia and New Zealand. The cheese sector, in particular, seems to be affected. No major changes are expected for the US and Canada.

- Against this background, it seems likely that market prices in the EU will remain under pressure, due to the internal surplus situation, increasing access to EU markets and difficult conditions for participating in the favourable development of world markets. Certainly, competitive producers have a margin and the tendency towards larger dairy holdings, in order to benefit from economies of scale, will continue to characterise the evolution of the EU dairy sector in the future. However, within the current regulatory framework, quota availability will be a major problem for new entrants and those wishing to expand their production. Purchase, leasing or rent of quota implies higher costs and, therefore, a reduction in competitive advantage. This issue will become more and more important over time as, due to the expected structural change towards larger dairy holdings, increasing volumes of milk will be affected.

1. MAIN ECONOMIC AND STRUCTURAL FEATURES

1.1 Milk production in the EU

In most member states, and in the EU as a whole, milk production is the most important agricultural activity. At EU level, around 18.4% of the total value of agricultural production derives from this sector (the closely-linked cattle sector contributes a further 11.9% to output). The milk sector generates a high proportion of agricultural output, especially in the northern member states; Luxembourg with 43.8% is followed by Ireland, Finland and Sweden with more than 30%. In the south of the EU, the role of milk is relatively modest compared to other products.

In 1995, the EU produced around 121.2 mio t of cow milk¹⁾. The two largest producer countries, Germany and France, accounted for nearly 45%. These two countries, together with the United Kingdom, the Netherlands and Italy, account for around 75% of EU cow milk output. Following enlargement, EU production increased by around 8.9 mio t (or 7.9% of EC-12 production). According to estimates for 1996, EU-15 milk production was around 0.4 mio t higher than in 1995. It is currently estimated at around 121.6 mio t.

Table 1: Cow Milk Production by Member State 1984 and 1995

Cow Milk Production by Member State							
	1984			1995			1984-1995 Production change in %
	000 t	Share in %	Share in final agricultural output	000 t	Share in %	Share in final agricultural output	
Germany (old)	26151	22.0%	25.2%	22898	18.9%	---	-12.4%
Germany (new)	(34880)	---	---	28621	23.6%	26.7%	(-17.9%)
France	27700	23.3%	16.9%	25413	21.0%	17.1%	-8.3%
Italy	10901	9.2%	11.4%	10236	8.4%	11.2%	-6.1%
Netherlands	12782	10.8%	26.5%	11295	9.3%	21.5%	-11.6%
Belgium	3819	3.2%	15.9%	3375	2.8%	14.8%	-11.6%
Luxembourg	299	0.3%	44.6%	269	0.2%	43.8%	-10.0%
United Kingdom	17882	15.0%	20.1%	14749	12.2%	23.6%	-17.5%
Ireland	5730	4.8%	32.3%	5421	4.5%	33.7%	-5.4%
Denmark	5234	4.4%	22.2%	4673	3.9%	22.0%	-10.7%
Greece	791	0.7%	8.3%	764	0.6%	12.8%	-3.4%
Spain	6392	5.4%	9.2%	5750	4.7%	8.5%	-10.0%
Portugal	1192	1.0%	9.9%	1760	1.5%	12.9%	47.7%
EC-12	118873	100.0%	17.4%	112326	92.6%	17.9%	-5.5%
Austria	3769	3.2%	21.8%	3148	2.6%	20.6%	-16.5%
Finland	3224	2.7%	34.9%	2468	2.0%	36.6%	-23.4%
Sweden	3773	3.2%	31.6%	3304	2.7%	32.6%	-12.4%
EU-15	129639	109.1%	18.2%	121246	100.0%	18.4%	-6.5%

Notes:

Figures for Germany (old) exclude the former GDR.

The share in final agricultural output refers to total milk production (incl. sheep and goat milk), whereas production figures are only for cow milk.

Figures for 1995 are provisional.

Source:

EUROSTAT, DG VI-D1 and DG VI-A2

¹⁾ In addition, about 3.3 mio t of sheep and goat milk are produced in the EU, mainly in Greece (which accounts for one third), Spain ($\pm 22\%$), Italy ($\pm 21\%$) and France ($\pm 20\%$). Of this, around 65% or 2.1 mio t are delivered to dairies. The rest is used on farm for own consumption and production of farm products.

Since the milk quota system was introduced in 1984, cow milk production has increased only in Portugal. Production in all other member states dropped, from -3.4% in Greece to -17.5% in the United Kingdom. A similar trend is evident in Austria, Finland and Sweden.

1.2 Number of dairy cows

In the same period, the decline in dairy cow herds was even more marked, as increased milk yields led to a reduction in the number of animals necessary for producing a given quantity of milk. In most member states, the dairy cow herd shrank by more than 20% over the last ten years. This reduction was particularly marked in the years 1984/85, 1987 and 1990-1992, due to milk quota cuts and herd destocking in the former GDR. According to the Livestock Survey of December 1996, the EU-15 dairy cow herd totalled 22.1 mio head, representing a 2.0% decrease on 1995.

Table 2: Number of Dairy Cows by Member State 1984 and 1996

Number of Dairy Cows by Member State							
	1984			1996			1984-1996
	000 head	Share in %	Share in % of total cattle	000 head	Share in %	Share in % of total cattle	Dairy cows change in %
Germany (old)	5582	20.7%	35.6%	4162	18.8%	32.4%	-25.4%
Germany (new)	(7662)	—	—	5185	23.5%	33.1%	(-32.3%)
France	6764	25.1%	29.3%	4562	20.6%	22.2%	-32.6%
Italy	2841	10.6%	31.0%	2125	9.6%	28.8%	-25.2%
Netherlands	2437	9.1%	46.2%	1642	7.4%	37.6%	-32.6%
Belgium	982	3.6%	32.9%	645	2.9%	21.0%	-34.4%
Luxemburg	71	0.3%	32.1%	48	0.2%	22.9%	-32.7%
United Kingdom	3311	12.3%	25.5%	2509	11.4%	22.1%	-24.2%
Ireland	1523	5.7%	26.0%	1272	5.8%	18.8%	-16.5%
Denmark	948	3.5%	35.1%	697	3.2%	34.0%	-26.5%
Greece	224	0.8%	29.6%	187	0.8%	34.6%	-16.6%
Spain	1877	7.0%	38.1%	1293	5.9%	23.0%	-31.1%
Portugal	355	1.3%	27.7%	362	1.6%	27.6%	2.0%
EC-12	26916	100.0%	31.7%	20527	92.9%	26.0%	-23.7%
Austria	985	3.7%	36.9%	698	3.2%	30.7%	-29.2%
Finland	642	2.4%	40.4%	396	1.8%	34.4%	-38.4%
Sweden	656	2.4%	34.9%	478	2.2%	27.4%	-27.1%
EU-15	29199	108.5%	32.3%	22098	100.0%	26.3%	-24.3%

Notes:

Figures for Germany (old) exclude the former GDR.

Figures are based on the results of the December Livestock Survey.

Figures for 1996 are provisional.

Source:

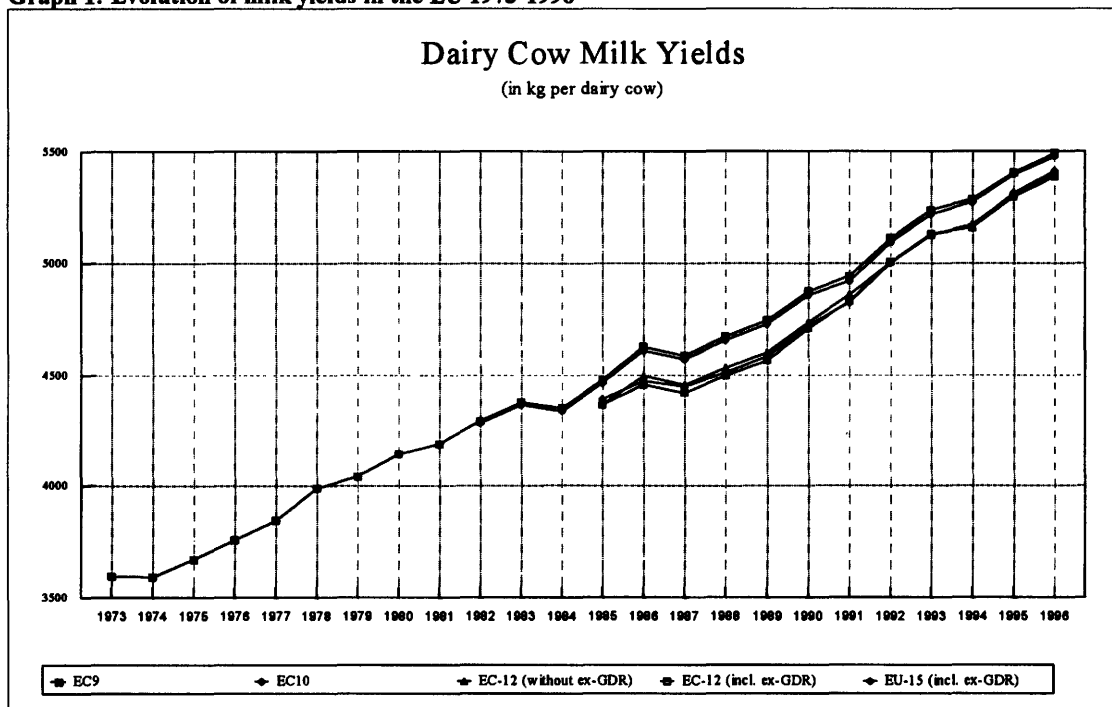
EUROSTAT, DG VI-D1 and DG VI-A2

The reduction in dairy cow numbers has been partly compensated by increasing numbers of other cows (mainly suckler cows). On average, during the period 1984-1996, for every hundred fewer dairy cows, farmers in EC-12 held about 40 additional suckler cows. In recent years, a much higher replacement rate could be observed, as farmers increased suckler cow herds in order to benefit from the EU suckler cow premium. But in the medium term, this tendency should come to a halt, due to the limitation of suckler premia to individual reference herds, fixed on the basis of historical data.

1.3 Milk yields

The following graph shows the evolution of milk yields in the EU since 1973. In the period 1973-1995, milk yields increased by around 1.9% on average per year. A similar pattern has been observed over the ten year period of the quota system. Lower rates obtained at the beginning (+1.3% from 1984-89), increased in recent years (+2.4% between 1989 and 1996). Milk yields currently range from 4200 kg per dairy cow in Greece and 4500 kg in Spain and Portugal to more than 6500 kg in some northern member states (Sweden, Denmark and the Netherlands), where climatic and structural conditions for milk production are more favourable than in the south.¹⁾ This compares to an EU average of around 5400 kg per dairy cow. In 1985, the EU milk yield averaged around 4360 kg. Over the last ten years, therefore, there has been an increase of about 1050 kg per cow or +24.1%.

Graph 1: Evolution of milk yields in the EU 1973-1996



1.4 Milk deliveries

About 93.5% of cow milk output is delivered to dairies. The remainder is used on the farm (animal feed, human consumption) and for direct sales (farm products). At member state level, only Austria, Greece, Spain and Belgium record delivery ratios below 90%. Over the past 15 years, on-farm use and direct sales have been declining, not only in relative but also in absolute terms. In 1995, around 4.4 mio t of whole milk was used as animal feed. A further 4.4 mio t was absorbed in the production of farm butter, cheese and fresh products. In the case of fresh products, about 1.5 mio t out of a total of 2.5 mio t appear in the official statistics as farm (home) consumption.²⁾

¹⁾ However, among the northern member states, milk yields in Ireland are also relatively low, reaching around 4200 kg per dairy cow.

²⁾ There are some deficiencies with the official statistics in the milk sector, especially as far as on-farm use and direct sales are concerned. The Court of Justice has complained several times about the available information on direct sales from farms, for which separate reference quantities are fixed, in order to control the correct application of the milk quota system.

Table 3: Deliveries of Cow Milk by Member State 1984, 1994 and 1996

Deliveries of Cow Milk by Member State									
	1984			1994			1996 (p)		1984-1996
	000 t	Share in %	Delivery ratio in % of total production	000 t	Share in %	Delivery ratio in % of total production	000 t	Share in %	Deliveries change in %
Germany (old)	24304	22.7%	92.9%	21689	20.9%	96.7%	22168	19.5%	-8.8%
Germany (new)	(31596)	---	---	26047	25.1%	93.5%	27007	23.7%	(-14.5%)
France	26055	24.4%	94.1%	23278	22.5%	92.1%	23287	20.5%	-10.6%
Italy	8198	7.7%	75.2%	9540	9.2%	94.9%	10187	9.0%	24.3%
Netherlands	12465	11.7%	97.5%	10496	10.1%	95.7%	10500	9.2%	-15.8%
Belgium	3048	2.8%	79.8%	2916	2.8%	87.2%	3003	2.6%	-1.5%
Luxemburg	293	0.3%	97.9%	251	0.2%	96.0%	258	0.2%	-12.0%
United Kingdom	15767	14.7%	88.2%	14322	13.8%	95.4%	14203	12.5%	-9.9%
Ireland	5585	5.2%	97.5%	5280	5.1%	97.8%	5341	4.7%	-4.4%
Denmark	5034	4.7%	96.2%	4441	4.3%	95.7%	4475	3.9%	-11.1%
Greece	454	0.4%	57.4%	639	0.6%	93.1%	665	0.6%	46.5%
Spain	4787	4.5%	74.9%	4926	4.8%	87.1%	5296	4.7%	10.6%
Portugal	985	0.9%	82.6%	1497	1.4%	91.4%	1650	1.4%	67.5%
EC-12	106975	100.0%	90.0%	103633	100.0%	93.5%	105872	93.0%	-1.0%
Austria	2433	2.3%	64.6%	2207	2.1%	68.3%	2350	2.1%	-3.4%
Finland	3029	2.8%	94.0%	2390	2.3%	95.1%	2328	2.0%	-23.1%
Sweden	3677	3.4%	97.5%	3357	3.2%	98.1%	3260	2.9%	-11.3%
EU-15	116114	108.5%	89.2%	111587	107.7%	92.9%	113810	100.0%	-2.0%

Notes: Figures for Germany (old) exclude the former GDR.

Figures for 1996 are provisional.

Source: EUROSTAT, DG VI-D1 and DG VI-A2

1.5 Milk use in dairies

Butter production remains the most important use of whole milk, with cheese now coming a close second. In 1995, butter absorbed 32.3% of the total available whole milk¹⁾ - around 38 mio t. Nevertheless, its share continues to decline as it has done since 1973, when more than 46% of milk was used for the manufacture of butter. On the other hand, the use of milk in the production of cheese, fresh products, cream and whole milk powder continues to increase in absolute and relative terms. At present, cheese-making absorbs almost as much milk as butter manufacture. In third place comes fresh products, with a share of around 21%, which has remained more or less constant in recent years.

Table 4: Use of Whole Milk in Dairies

Use of Whole Milk in Dairies for production of									
	1973			1984			1995		
	Dairy Production 000 t	Whole Milk equivalent 000 t	Share in % of total	Dairy Production 000 t	Whole Milk equivalent 000 t	Share in % of total deliveries	Dairy Production 000 t	Whole Milk equivalent 000 t	Share in % of total
Cow milk	---	79716	99.6%	---	101203	99.0%	---	113114	98.1%
Ewe's and Goats milk	---	297	0.4%	---	1007	1.0%	---	2211	1.9%
Total Deliveries	---	80013	100.0%	---	102210	100.0%	---	115325	100.0%
Butter	1676	37149	46.2%	2085	45260	43.8%	1848	37874	32.3%
Cheese	2571	16899	21.0%	3983	25346	24.5%	6065	35897	30.6%
Fresh Products	19947	16519	20.6%	23764	18103	17.5%	36357	24228	20.7%
Cream	489	4222	5.3%	802	6549	6.3%	1479	10637	9.1%
Concentrated Milk	1317	2802	3.5%	1413	2827	2.7%	1299	2218	1.9%
Whole Milk Powder	419	2169	2.7%	801	5058	4.9%	988	5799	4.9%
Other	---	622	0.8%	---	306	0.3%	---	534	0.5%
Total Use in Dairies	---	80382	100.0%	---	103449	100.0%	---	117187	100.0%

Note: Figures for 1973 refer to EC9, 1984 to EC10 and 1995 to EU15. Production figures are only for dairy production (without farm production).

The difference between total deliveries and total use in dairies is mainly due to statistical discrepancies. But, account must be taken also of dairy collection of cream from farms and dairy imports and exports of whole milk.

Figures for 1995 are provisional or estimated.

Source: EUROSTAT, DG VI-D1 and DG VI-A2

¹⁾ Total availability of whole milk in dairies differs somewhat from quantities collected by dairies (= delivered by farmers) mainly due to statistical discrepancies. Account must be taken also of dairy collection of cream on farms and dairy imports and exports of whole milk.

While figures for the production and delivery of whole milk are directly available, the quantities of **skimmed milk** produced in dairies must be calculated. Skimmed milk is released during the process of defatting whole milk to obtain cream - the starting point for butter production. Subsequently, skimmed milk is used in various ways: in liquid form (returned to farms) as animal feed; in dehydrated form as skimmed milk powder (SMP), the bulk of which ends up also in feedingstuffs; in the manufacture of other milk products (together with whole milk) and, after fragmentation into casein, as protein in the agri-food and chemical industry. Most skimmed milk is derived from butter production, even though the importance of cream is increasing.¹⁾

Changing consumer preferences towards lower fat products, and the increasing popularity of cheese and fresh products have led to significant changes in the pattern of **skimmed milk use in dairies**, during the last two decades. Its use in cheese and fresh products increased from around 9 mio t in 1973, representing a share of 23.9%, to more than 23 mio t or 51.6% in 1995. In contrast, the share of skimmed milk powder production and animal feed (returns to farms) fell from nearly two thirds to less than one third, during the same period. Nevertheless, skimmed milk powder still absorbs over 30% of the skimmed milk produced in dairies. An upward tendency is also evident in casein manufacture.

Table 5: Use of Skimmed Milk in Dairies

Use of Skimmed Milk in Dairies for production of									
	1973			1984			1995		
	Dairy Production 000 t	Skimmed Milk equivalent 000 t	Share in % of total	Dairy Production 000 t	Skimmed Milk equivalent 000 t	Share in % of total	Dairy Production 000 t	Skimmed Milk equivalent 000 t	Share in % of total
Butter	1676	35474	90.5%	2085	43179	88.3%	1848	36026	79.7%
Cream	489	3733	9.5%	802	5747	11.7%	1479	9157	20.3%
Total Dairy Production	---	39207	100.0%	---	48926	100.0%	---	45183	100.0%
Cheese	2571	5538	14.6%	3983	8222	16.9%	6065	10981	24.4%
Fresh Products	19947	3532	9.3%	23764	5708	11.7%	36357	12282	27.2%
Concentrated Milk	1317	309	0.8%	1413	456	0.9%	1299	658	1.5%
Skimmed Milk Powder	1802	19712	51.9%	2109	22975	47.1%	1276	13779	30.6%
Whole Milk Powder	419	940	2.5%	801	1310	2.7%	988	1593	3.5%
Casein	56	1859	4.9%	121	4089	8.4%	134	4400	9.8%
Other Uses	---	1654	4.4%	---	1160	2.4%	---	1135	2.5%
Returned to farms	---	4466	11.7%	---	4831	9.9%	---	268	0.6%
Total Use in Dairies	---	38010	100.0%	---	48751	100.0%	---	45096	100.0%

Note: Figures for 1973 refer to EC9, 1984 to EC10 and 1995 to EU15. Production figures are only for dairy production (without farm production).

The difference between total dairy production and total use in dairies is mainly due to statistical discrepancies. But, account must be taken also of other sources (use of milk powder from stocks, etc.) and dairy imports and exports of skimmed milk.

Figures for 1995 are provisional or estimated.

Source: EUROSTAT, DG VI-D1 and DG VI-A2

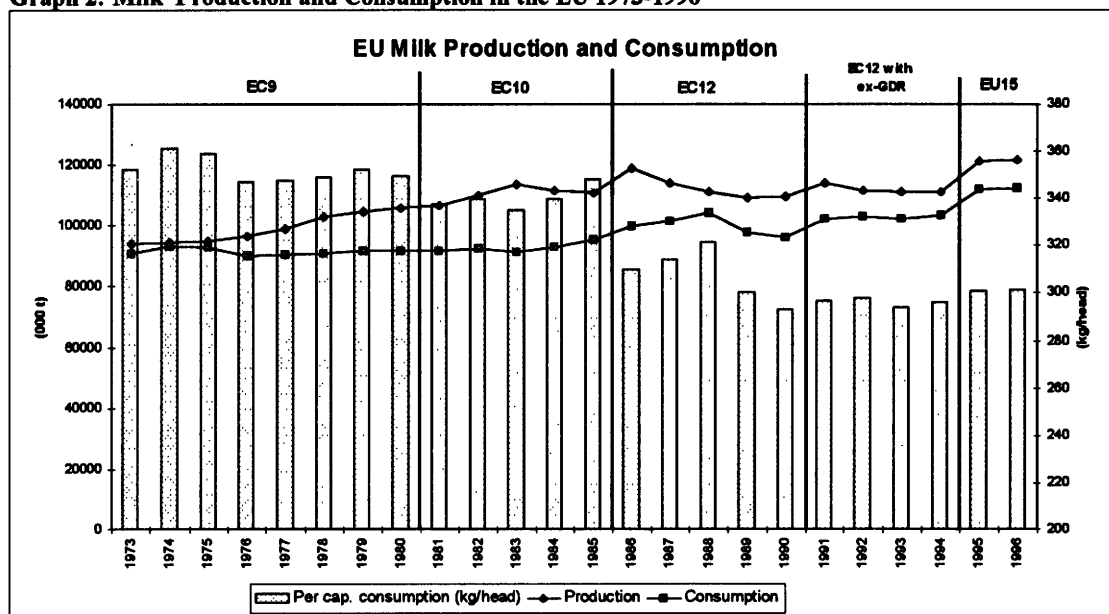
1.6 Milk consumption and global balance

The following graph shows clearly the growing gap between production and demand, starting in the mid 1970s which, together with a depressed world market, led to the build-up of costly stocks during the 1980s. Total milk consumption, expressed in

¹⁾ This separation is practiced in the current system of milk statistics even if it does not correspond to the "real" situation in dairies. As explained above, whole milk is separated into skimmed milk and cream. After that, butter is produced by using (a part of the) cream obtained.

whole milk equivalent¹⁾, remained more or less stable, while milk production rose steadily. By 1988, the gap had narrowed in response to increasing demand and falling output. In recent years, production and consumption developed relatively closely, with a surplus ranging from 8.5 to 9.5 mio t. Over the last two decades, per capita consumption of milk, expressed in whole milk equivalent, has decreased from around 360 kg/head in 1973 (EC-9) to stabilise at around 300 kg/head (EU-15) in recent years.

Graph 2: Milk Production and Consumption in the EU 1973-1996



Note: Milk consumption is expressed in whole milk equivalent.

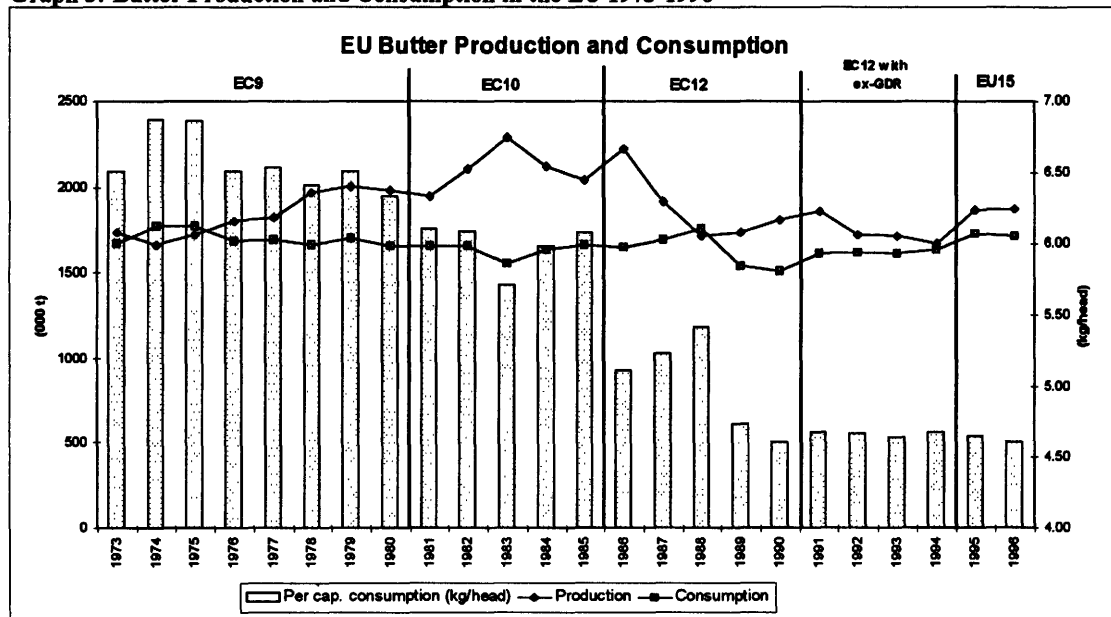
1.7 Butter production and consumption

The beginning of the 1980s saw enormous quantities of butter in EU cold stores, and the need to control production in the dairy sector led to the introduction of the milk quota system in 1984. In the first two years of the operation of the new regime, butter production dropped only to peak once again in 1986. At the end of that year, butter stocks stood at a record level of 1.37 mio t, representing more than 60% of annual production at that time. Due to further EU measures (cuts in milk quotas, stronger penalties for production over quota, intervention price cuts and changes in intervention rules, etc.), butter production has declined steadily since then, except for a short period from 1988-1990, but stabilised in recent years. Overall, EU butter production dropped by -11.8% from 2.120 mio t in 1984 (EC-10 without the former GDR) to an estimated 1.870 mio t in 1996 (EU-15). The biggest producers of butter in the EU are Germany

¹⁾ Two approaches are normally followed in order to calculate total milk consumption. The first is based on a balance sheet concept, starting from domestic production. Imports, exports and stock changes of whole milk are calculated on the basis of imports, exports and stock changes (so far as known) of individual products which are to be converted in whole milk equivalent by means of specific conversion coefficients. In most cases, these coefficients are fixed over time and based on rough estimates of the fat content of the individual products. The second method is based on internal consumption (domestic use) of individual dairy products. For conversion into whole milk equivalent, coefficients from the EUROSTAT dairy statistics can be used. Two different coefficients are provided, one for whole milk and one for skimmed milk. These coefficients represent regular dynamics over time, but due to discrepancies in the official dairy statistics of some member states, corrections and estimates have to be made before use. Unfortunately, both approaches do not lead always to the same results. The second approach has been chosen for the purpose of this analysis because of its advantages for establishing forecasts on the global consumption of milk.

(26% of total), France (25%) and the Netherlands (10%), while the four Mediterranean countries account for only about 7%.

Graph 3: Butter Production and Consumption in the EU 1973-1996



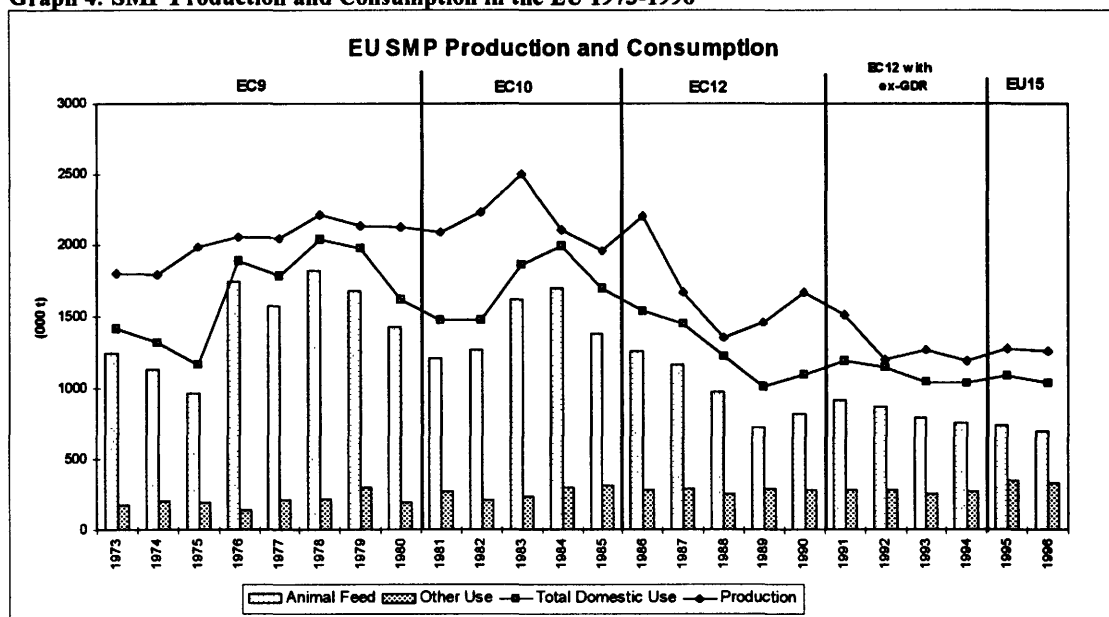
Per capita consumption of butter has been on a long-term declining trend since 1974, apart from the 1983-1988 period. In recent years, however, consumption has stabilized at around 4.6 kg per head, compared to 6.9 kg/head in 1974. In the last decade, per capita consumption in the EU fell, on average, by more than 10%.¹⁾ Almost all member states have experienced this decline. Only Greece and Portugal recorded an increase in the last ten years, but at a very low level. In absolute terms, total consumption in EU-15 is actually more or less at the same level as in EC-9, at the beginning of the 1970s. Although difficult to quantify, consumption would have fallen even more without the EU subsidized disposal measures. In 1995, for example, these measures concerned about 500,000 t of butter, representing around 30% of total consumption.

1.8 SMP production and consumption

The drop in SMP production was even more marked than for butter (more than 40% since 1973). For 1996, EU-15 output is estimated at around 1.26 mio t, compared to 2.10 mio t in 1984 (EC-10 without the former GDR). Over 80% comes from four member states: Germany and France (each accounting for around 32%), Ireland and UK (both with around 9%). Animal feed accounts for nearly 70% of total domestic use of SMP. Domestic use amounted to around 1.03 mio t in 1996 and about two thirds of this are subsidized. The SMP market tends to fluctuate. Important volumes (up to 60% of total production) flow from the producer regions to the main demand regions in the EU - those countries with important production of calves for slaughter, such as France, Spain, the Netherlands and Italy. Other uses of SMP (mainly human consumption) show a slight upward tendency.

¹⁾ Excluding the effect of EU enlargements.

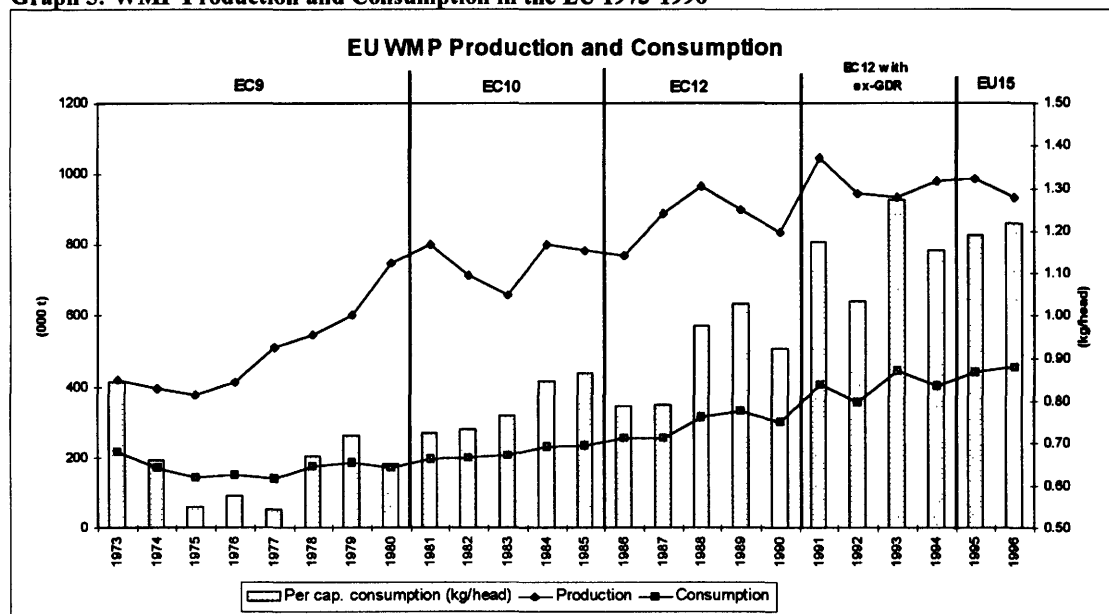
Graph 4: SMP Production and Consumption in the EU 1973-1996



1.9 Production and consumption of other milk powder

In contrast, production of **other milk powder**, mainly whole milk powder (WMP), rose by more than 20% in the 1984-1995 period to close to 1 mio t. France (28%), Germany (22%), the Netherlands (15%) and Denmark (11%) are the main producers and account for about 75% of the total. Less than 45% is consumed within the EU. Most is exported to third countries (1995: 0.597 mio t), notably to Algeria, Latin America, the Middle and Far East. Expressed in whole milk equivalent, the export volume (around 3.5 mio t) is more important than that of cheese exports.

Graph 5: WMP Production and Consumption in the EU 1973-1996

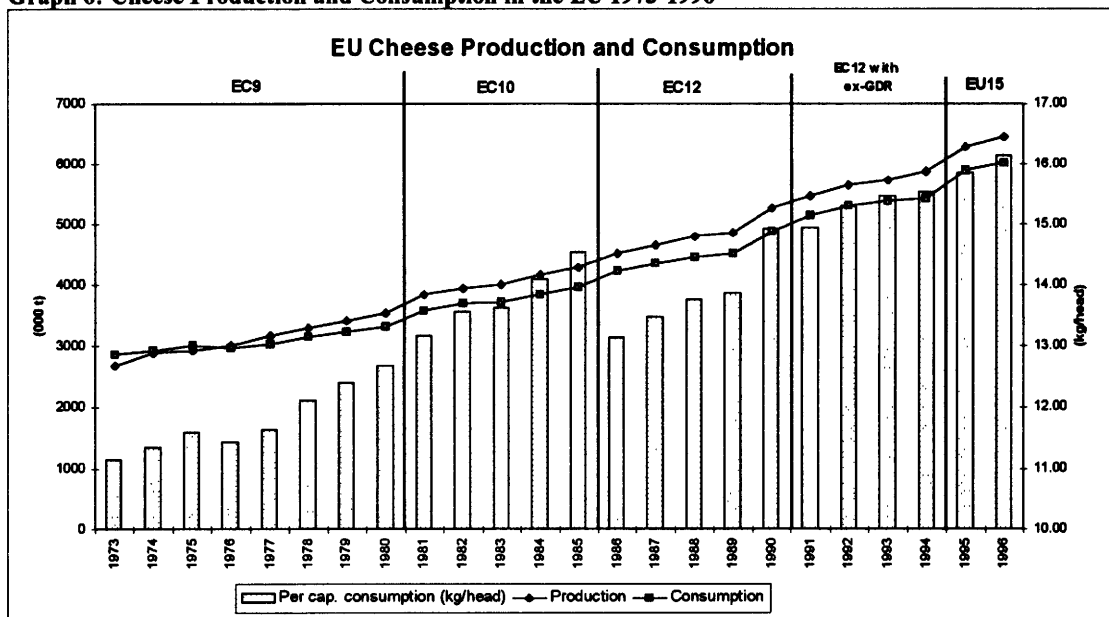


1.10 Cheese production and consumption

EU production and consumption of **cheese** grew by more than 50% over the last decade, from around 4.2 mio t in 1984 (EC-10 without ex-GDR) to an estimated 6.45

mio t in 1996 (EU-15). Like other milk products, it is concentrated in a few member states. In 1995, around 75% of the total (6.29 mio t) was produced by only four countries: France (26%), Germany (23%), Italy (14%) and the Netherlands (11%). Demand is mainly concentrated in Germany (27%), France (24%) and Italy (18%). Next comes the UK with just 8%. The Netherlands, one of the main producer countries, is clearly export-oriented and accounts for only 4% of total domestic use in the EU. Consumption per capita increased by 12.6% between 1984 (EC-10 without ex-GDR) and 1995 (EU-15), from 14.1 kg/head to 15.9 hg/head. Wide variations exist between member states. While per capita consumption in Ireland, UK, Portugal and Spain is still below 8 kg/head, the French and the Greeks consume more than 22 kg.

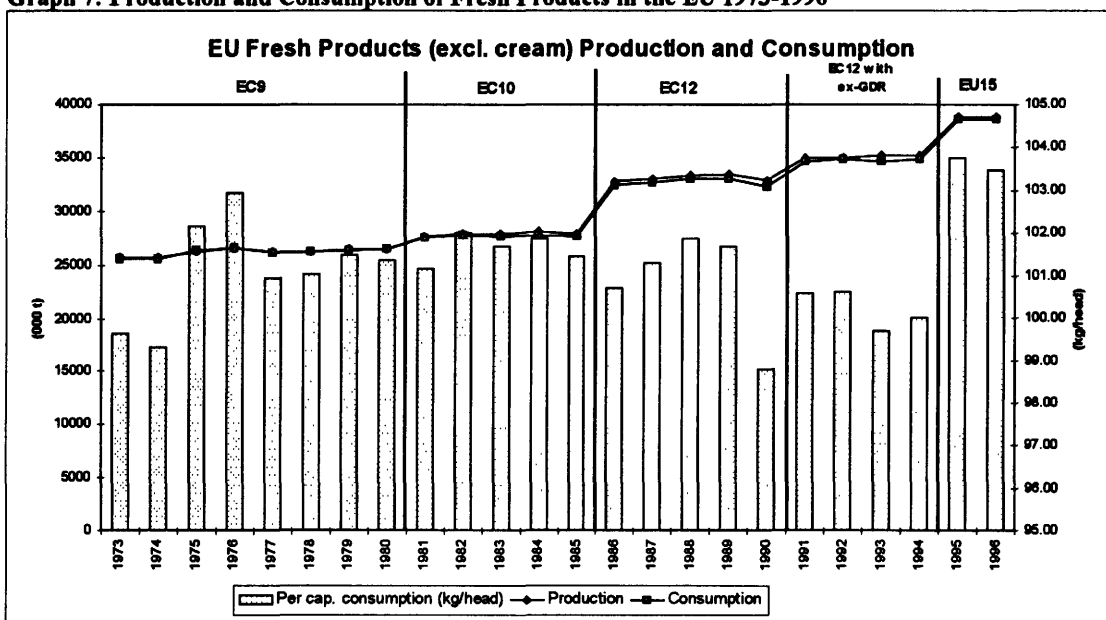
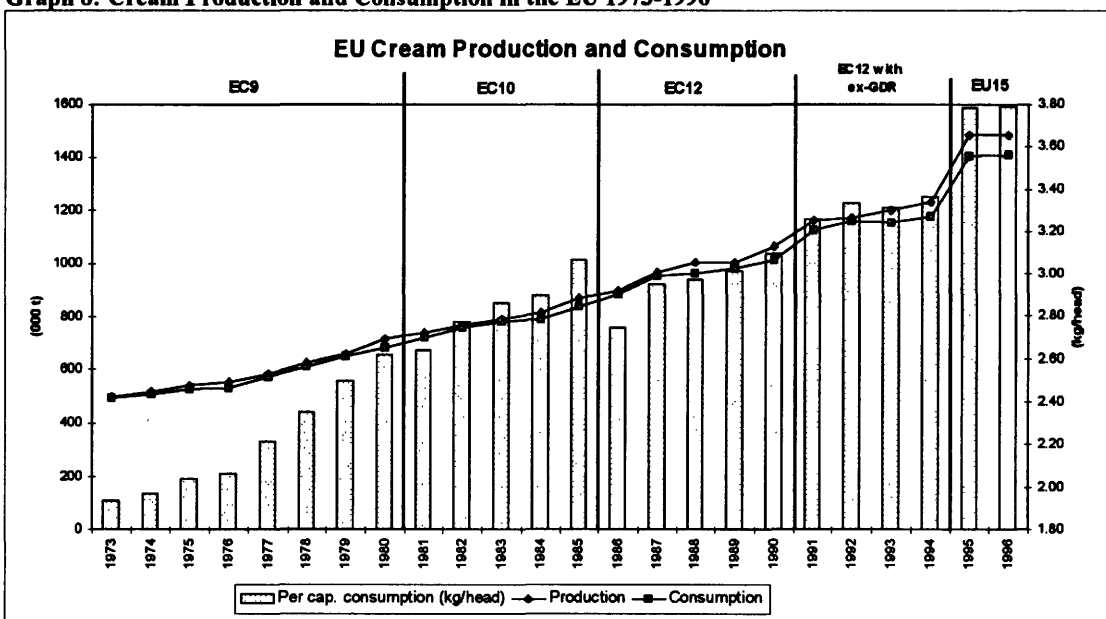
Graph 6: Cheese Production and Consumption in the EU 1973-1996



1.11 Production and consumption of fresh products

In the category “fresh products”, output also increased by more than 50% during the period from 1984 to 1995. However, a big part of this increase is attributable to the accession of Spain and Portugal in 1986. Excluding the impact of this enlargement, production rose more modestly by around 10%. Output of “drinking milk”¹⁾, by far the most important item, remained relatively stable. However, the manufacture of other items, such as cream, acidified milk (yoghurt and yoghurt preparations), milk-based drinks and other fresh products (milk jelly, etc.) increased. The main producers are Germany (21%), UK (19%), France (15%), Spain (12%) and Italy (9%). Cream production is concentrated mainly in Germany (43%) and France (17%). Per capita consumption of fresh products (incl. cream) increased by 2.7% from 104.7 kg/head in 1984 (EC-10 without ex-GDR) to 107.5 kg/head in 1995 (EU-15). This rate of change might appear quite negligible, but applies to an already very high absolute level. In some member states, consumption is well above the EU average, with Ireland leading with more than 180 kg/head. On the other hand, consumption in Italy and Greece is only respectively about 65 and 60 kg/head.

¹⁾ In 1995, dairy production of fresh products (excluding cream) totalled 36.4 mio t, of which about 29 mio t were liquid milk.

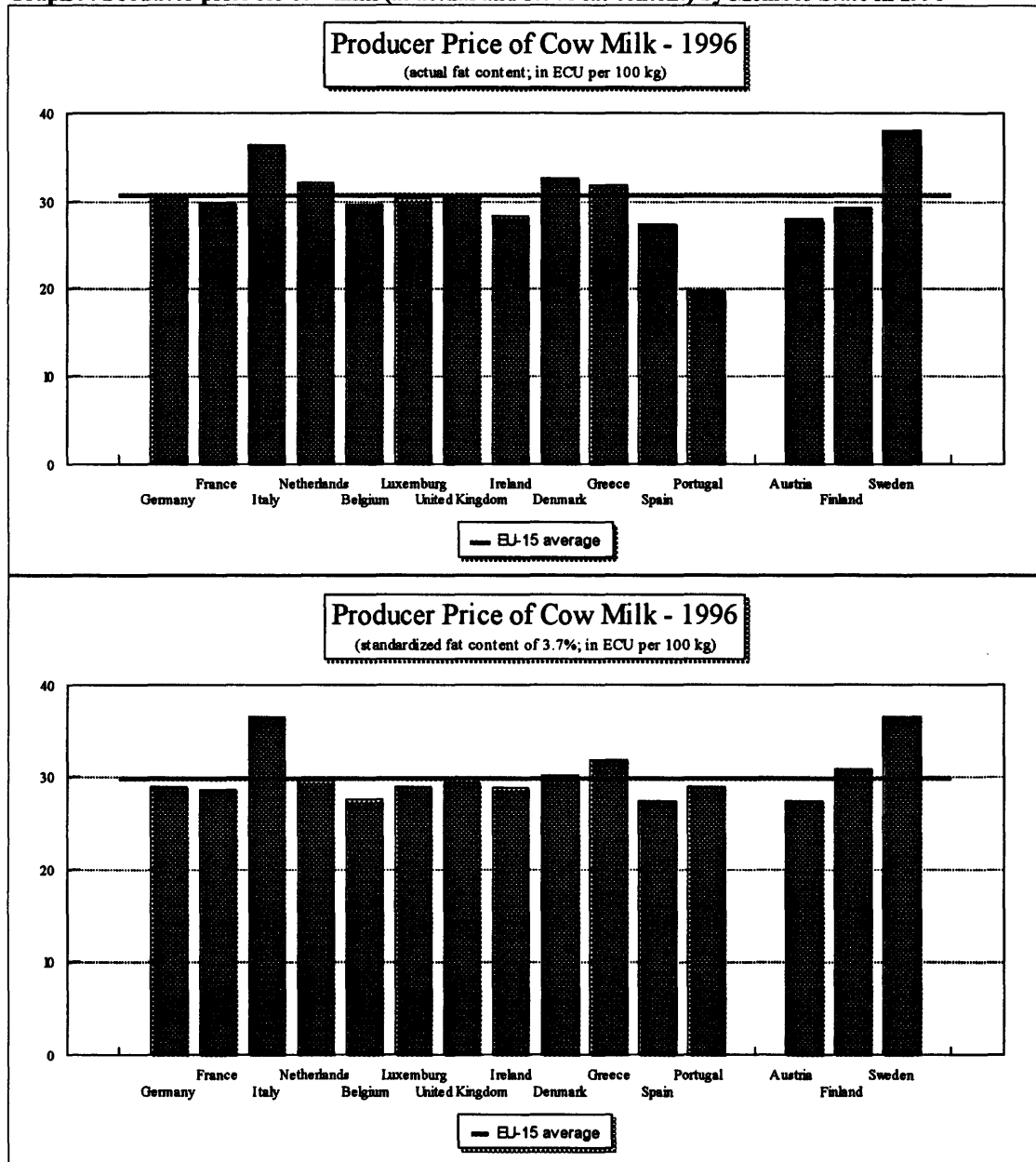
Graph 7: Production and Consumption of Fresh Products in the EU 1973-1996**Graph 8: Cream Production and Consumption in the EU 1973-1996**

1.12 Milk producer prices

According to provisional figures for 1996, the **producer price for cow milk** (in terms of actual fat content) reached 30.82 ECU per 100 kg on average in EU-15. However, this slight increase of 0.7% on 1995 was affected by relatively large fluctuations in exchange rates. Expressed in national currency, producer prices decreased in most countries. Milk prices rose only in Italy (+5.5%), Sweden (+4.3%), Austria (+1.4%) Ireland (+1.2%) and the UK (+0.3%). After their big drop in 1995 due to the alignment to EU prices, milk prices in Austria and Finland are now below the EU average. In contrast, milk producer prices in Sweden, where most support had been removed prior to entry, are developing quite favourably and are currently the highest in the EU (38.03 ECU per 100 kg).

There are wide variations between member states ranging from Portugal with 19.75 ECU/100 kg, Spain (27.28 ECU), Austria (28.00 ECU) and Ireland (28.34 ECU) to Denmark (32.60 ECU), Italy (36.41 ECU) and Sweden (38.03 ECU). A big part of these price differences between member states can be explained by differences in the fat content of milk delivered.¹⁾ When expressed on the basis of milk with a standardised fat content of 3.7%, the difference between the lowest (Portugal) and the highest producer price (Sweden) narrows considerably.

Graph 9: Producer price for cow milk (at actual and 3.7% fat content) by Member State in 1996

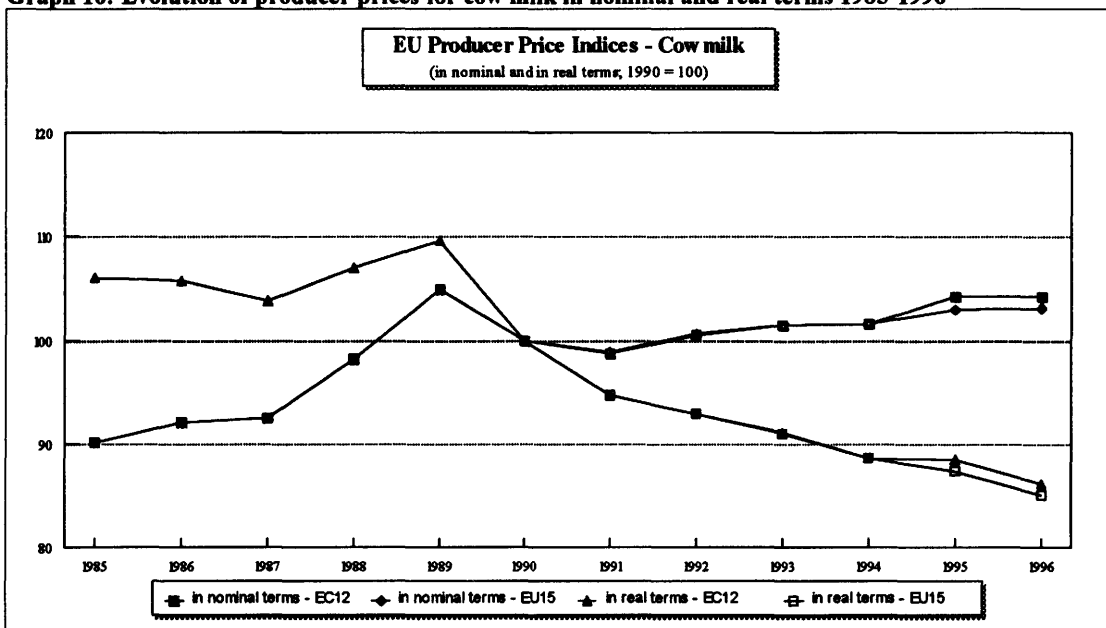


Over the last 20 years, the average producer price for cow milk in the EC/EU increased from 11.61 ECU in 1973 (EC-9 average) to 30.82 ECU in 1996 (EU-15), representing an increase of around +4.5% on average per year. But a more detailed

¹⁾ The actual fat content of the milk delivered, and also increasingly its protein content, are the most important variables determining the milk price paid by dairies to farmers.

analysis shows clearly that the annual growth rate has declined over time.¹⁾ Beginning with mean annual growth rates of +9.4% and +5.7% respectively in the periods 1973-79 and 1979-84 (+7.7% on average between 1973 and 1984)²⁾, the rise in prices slowed down progressively. In the years following the introduction of the milk quota system (1984-90), nominal prices increased by 2.3% yearly, compared to only +0.7% in recent years (1990-96). In real terms, producer prices improved slightly from 1984 to 1989 and have dropped since, as was the case for other agricultural commodities. Only in the UK and Ireland have real producer prices for milk remained at more or less the same level over the last ten years.

Graph 10: Evolution of producer prices for cow milk in nominal and real terms 1985-1996



As to the evolution of milk producer prices at member state level over the last two decades, nominal prices have developed relatively more favourably in the southern member states (Greece, Italy, Portugal and Spain). This is mainly due to the fact that production in these countries lags behind consumption. Furthermore, relatively high inflation rates have been recorded in these member states over the same period. Among the “bigger” milk producers, the UK saw the most positive evolution in milk prices. This favorable development, in recent years in particular, contrasts with that of other countries - even in real terms. This can be seen, at least partially, as a consequence of the deregulation of the UK milk sector, which appears to have benefited the UK dairy farmers.³⁾

¹⁾ See detailed tables in the annex of this report.

²⁾ This rise was mainly due to the evolution of the target price of milk (and also the intervention prices for butter, SMP and cheese), which increased steadily over the same period.

³⁾ Graphs showing the trend in milk prices since 1973 per member state, compared with the evolution of the EC/EU average, are presented in the annex. For clearer presentation, the graphs are split up in three groups of countries; each one including the EC/EU average for comparison purposes. The time series for the EC/EU average consists of averages for EC-9 (1973-1980), EC-10 (1981-1985), EC-12 (1986-1994) and EU-15 (since 1995) and has been calculated as weighted average of national indices (1990=100).

1.13 Structural aspects of EU milk production

Structure of dairy holdings

In 1993, around 1 million agricultural holdings in the EC-12 were involved in dairy farming, out of a total of 6.3 million agricultural holdings, including 1.9 million cattle holdings (dairy and beef combined). Most dairy farms are situated in Germany (which accounts for 23.3% of all EC dairy farms and 24.9% of the EC dairy cow herd), France (16.7% of the dairy holdings and 21.4% of the dairy cow herd), Spain (14.6% of all dairy farms, but only 6.4% of the dairy cows), Italy (holdings: 14.5%; dairy cows: 10.7%) and Portugal (with 9.8% of all EC dairy holdings but only 1.7% of the EC dairy herd). These five countries account for around 79% of total dairy holdings and around 65% of the dairy cow herd in the EC-12. Among the three new member states, Austria also has a significant number of (mainly small) dairy farms.

The distribution of dairy farms by size classes underlines the enormous structural differences between member states.¹⁾ For example, farms with less than 10 dairy cows account for 92.7% of all dairy holdings in Portugal, for 86.5% in Greece, for 69.6% in Spain and 60% in Italy. Also, in Germany, the number of small dairy farms is quite important (around 32% of all dairy farms). This percentage is much higher than in other EU member states, where their share ranges between 5.3% in Luxembourg and 20.4% in Ireland. A significant number of these small holdings, in particular in the north of the EU, are owned by part-time farmers.

If the relative importance of small dairy farms (holding fewer than 10 animals) is measured by their overall number of animals, then the picture changes somewhat. While in Greece and Portugal, a significant part of the national dairy herd is held on small farms (Portugal: 53.3% and Greece: 43.8%), the importance of small farms is relatively low in Spain (26.3%) and, in particular, in Italy (14.6% of the dairy herd against 60% of all dairy holdings) and Germany (only 6.6% of the dairy herd but 32% of all dairy farms). In the other countries, the share of the national dairy herd held on small dairy farms is very low, ranging from 0.5% in the UK to 3.4% in Ireland.

On the other hand, in the UK, the Netherlands and Denmark, milk production is much more concentrated on big farms. In the UK, around 23% of all dairy farms hold more than 100 dairy cows, while a further 34.6% of farms keep between 50 and 99 animals. Around 74% of the national dairy herd in the UK is kept on farms falling into these two size classes, compared to 59.8% in the Netherlands and 53.2% in Denmark. But, in all other member states, including the Netherlands and Denmark, the share of farms with more than 100 animals is relatively modest. Nevertheless, in some countries (Italy, Germany, the Netherlands and Denmark) a significant share of the national dairy herd is kept on this small number of holdings. In the case of the Netherlands and Denmark (and also Luxembourg), dairy farms are mainly concentrated in the size classes "50-99 animals" and "30-49" animals.

For the EC-12, the average number of dairy cows per farm amounted to 21 animals in 1993. However, wide variations exist of course between member states. The biggest farms can be found in the United Kingdom with on average 69 dairy cows per holding.

¹⁾ The figures are presented in a separate table in the annex of this report.

Dairy farms in the Netherlands (42 animals per holding) and Denmark (40 animals per holding) are also well above the EC average. They are followed by Luxembourg (33 dairy cows per farm), Belgium (28), France and Ireland (both with 27). The average number of animals in Germany (23 dairy cows per farm) is slightly above the mean for the EC-12. The smallest herds are situated in the southern EU countries: Italy (16 animals per holding), Spain (9 animals per holding), Greece (6 animals per holding) and, finally, Portugal with only 4 dairy cows per farm on average.

For decades, there has been a clear tendency in all member states towards bigger dairy farms. As the table below indicates, this was already evident in the years before the introduction of the milk quota system. If the mean annual rate of change is calculated over shorter periods, it would seem that the concentration process in dairy farms slowed down somewhat during the first years after the introduction of the milk quotas (1985-1987), but strengthened again in recent years (1987-1993). In any case, even if the wide variations of farm size between member states narrowed somewhat over the whole period,¹⁾ the differences are still enormous.

Table 6: Structure of Dairy Holdings 1973-1993

Structure of Dairy Cow Holdings 1973-1993												
	1993			1991			1987			1985		
	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)
Germany 1)	236	5364	23	275	4769	17	337	5390	16	369	5581	15
France	169	4613	27	201	4969	25	291	5841	20	329	6506	20
Italy	147	2287	16	197	2536	13	310	3024	10	338	3075	9
Netherlands	43	1804	42	48	1909	40	58	2166	38	61	2412	39
Belgium	25	702	28	29	806	28	38	922	24	45	973	22
Luxemburg	2	51	33	2	52	31	2	64	32	2	70	31
United Kingdom	40	2786	69	42	2779	66	48	3052	63	53	3257	62
Ireland	47	1274	27	51	1293	26	69	1444	21	77	1528	20
Denmark	18	714	40	21	742	36	27	811	30	32	896	28
Greece	39	219	6	47	214	5	61	232	4	73	219	3
Spain	148	1371	9	185	1516	8	251	1783	7	--	--	--
Portugal	99	375	4	100	394	4	108	388	4	--	--	--
EC-12	1013	21559	21	1198	21978	18	1600	25116	16	--	--	--
EC-10	766	19813	26	912	20068	22	1242	22945	18	1379	24518	18
EC-9	726	19594	27	865	19854	23	1181	22713	19	1305	24299	19
Austria	116	898	8	--	--	--	--	--	--	--	--	--
Finland 2)	47	490	10	--	--	--	--	--	--	--	--	--
Sweden	20	525	26	--	--	--	--	--	--	--	--	--

	1993			1979			1977			1973		
	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)
Germany 1)	397	5529	14	456	5442	12	519	5417	10	630	5486	9
France	427	7195	17	518	7453	14	576	7510	13	697	7683	11
Italy	424	3068	7	483	3074	6	453	2945	6	607	3051	5
Netherlands	64	2557	40	75	2369	32	83	2245	27	99	2255	23
Belgium	49	984	20	58	981	17	66	983	15	85	1000	12
Luxemburg	3	69	27	3	68	21	4	68	18	5	68	14
United Kingdom	58	3334	57	63	3348	53	72	3327	46	93	3544	38
Ireland	86	1535	18	106	1503	14	120	1484	12	144	1431	10
Denmark	35	1003	28	47	1071	23	56	1099	20	72	1086	15
Greece	77	237	3	--	--	--	--	--	--	--	--	--
Spain	--	--	--	--	--	--	--	--	--	--	--	--
Portugal	--	--	--	--	--	--	--	--	--	--	--	--
EC-12	--	--	--	--	--	--	--	--	--	--	--	--
EC-10	1621	25512	16	--	--	--	--	--	--	--	--	--
EC-9	1544	25275	16	1810	25309	14	1950	25078	13	2432	25604	11

Source:

EUROSTAT

Note:

1) From 1993 the data for EC and Germany refer to Germany as constituted after 3.10.1990.

2) Figures based on the Agricultural Census 1990.

3) Average number of animals per holding.

¹⁾ This is true for almost all member states, except for Denmark (more or less stable with respect to the EU average) and Portugal and Spain where the gap in relation to the EU average widened over the period 1987-1993.

Structure of dairies

In 1994, around 6100 companies were active in the primary milk collection sector in the EC-12. Around one third, mostly dairies collecting not more than 5,000 t per year, were located in Italy. Greece, Spain, France and the UK also have many very small dairies, pushing up the total number of plants. But, in terms of milk collection, the importance of small dairies is very limited, except in Italy and Greece, where they account for 25.0% and 44.7% respectively of all milk collected. On the other hand, most of the biggest dairy companies, collecting more than 100,000 t per year, can be found in Germany, France, the UK and the Netherlands. In all countries, except Spain, Italy and Greece, this group of dairies accounts for at least two thirds of total national milk collection, with the highest figures in the Netherlands (98.3%) and Denmark (87.8%). For the EC-12 on average, the corresponding figure is 66.5%. Among the three new member states, milk collection is highly concentrated in Sweden.

Table 7: Structure of Dairies (by annual milk collection) 1994

Structure of Dairies by annual milk collection (Situation on 31 December of year)													
	Year	All Dairies				Dairies with milk collection of 5000 t/year and under				Dairies with milk collection of 5001 t/year to 20000 t/year			
		Number of dairies (t)	Share of Total %	Milk collected (000 t)	Share of Total %	Number of dairies (t)	Share of Total %	Milk collected (000 t)	Share of Total %	Number of dairies (t)	Share of Total %	Milk collected (000 t)	Share of Total %
Germany	1994	284	100.0%	26047	100.0%	43	15.1%	81	0.3%	41	14.4%	448	1.7%
France	1994	815	100.0%	23724	100.0%	496	60.9%	887	3.7%	132	16.2%	1357	5.7%
Italy	1994	2182	100.0%	9710	100.0%	1834	84.1%	2431	25.0%	262	12.0%	2588	26.6%
Netherlands 4)	1994	19	100.0%	10496	100.0%	---	---	---	---	---	---	---	---
Belgium	1994	86	100.0%	2919	100.0%	50	58.1%	9	0.3%	8	9.3%	79	2.7%
Luxemburg 8)	1994	1	100.0%	252	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
United Kingdom	1991	648	100.0%	14105	100.0%	515	79.5%	477	3.4%	65	10.0%	696	4.9%
Ireland	1994	71	100.0%	5271	100.0%	15	21.1%	33	0.6%	24	33.8%	304	5.8%
Denmark	1994	42	100.0%	4429	100.0%	14	33.3%	31	0.7%	13	31.0%	147	3.3%
Greece 8)	1994	1010	100.0%	1242	100.0%	990	98.0%	555	44.7%	13	1.3%	106	8.7%
Spain 7)	1994	836	100.0%	4447	100.0%	642	76.8%	337	7.6%	113	13.5%	605	13.6%
Portugal	1994	113	100.0%	1446	100.0%	77	68.1%	97	6.7%	22	19.5%	218	15.1%
EC-12		6107	100.0%	104089	100.0%	4676	76.6%	4937	4.7%	693	11.3%	6549	6.3%
Austria	1994	133	100.0%	2199	100.0%	78	58.6%	150	6.8%	27	20.3%	259	11.8%
Finland	1994	61	100.0%	2385	100.0%	3	4.9%	8	0.3%	24	39.3%	303	12.7%
Sweden 5)	1994	13	100.0%	3357	100.0%	4	30.8%	1	0.0%	2	15.4%	s	---

	Year	Dairies with milk collection of 20001 t/year to 50000 t/year				Dairies with milk collection of 50001 t/year to 100000 t/year				Dairies with milk collection of over 100000 t/year			
		Number of dairies (t)	Share of Total %	Milk collected (000 t)	Share of Total %	Number of dairies (t)	Share of Total %	Milk collected (000 t)	Share of Total %	Number of dairies (t)	Share of Total %	Milk collected (000 t)	Share of Total %
Germany	1994	59	20.8%	2039	7.8%	64	22.5%	4532	17.4%	77	27.1%	18948	72.7%
France	1994	73	9.0%	2431	10.2%	37	4.5%	2601	11.0%	77	9.4%	16448	69.3%
Italy	1994	56	2.6%	1766	18.2%	19	0.9%	1299	13.4%	11	0.5%	1627	16.8%
Netherlands 4)	1994	---	---	---	---	6	31.6%	183	1.7%	13	68.4%	10313	98.3%
Belgium	1994	11	12.8%	372	12.7%	8	9.3%	533	18.3%	9	10.5%	1926	66.0%
Luxemburg 8)	1994	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	252	100.0%
United Kingdom	1991	32	4.9%	1012	7.2%	15	2.3%	1007	7.1%	21	3.2%	10912	77.4%
Ireland	1994	9	12.7%	308	5.8%	12	16.9%	855	16.2%	11	15.5%	3771	71.5%
Denmark	1994	11	26.2%	363	8.2%	0	0.0%	0	0.0%	4	9.5%	3888	87.8%
Greece 2) 8)	1994	7	0.7%	579	46.6%	---	---	---	---	---	---	---	---
Spain 7)	1994	49	5.9%	1048	23.6%	23	2.8%	1290	29.0%	9	1.1%	1167	26.3%
Portugal 3) 5)	1994	7	6.2%	189	13.1%	5	4.4%	943	65.2%	2	1.8%	s	---
EC-12		314	5.1%	10107	9.7%	189	3.1%	13243	12.7%	235	3.8%	69253	66.5%
Austria	1994	13	9.8%	438	19.9%	9	6.8%	601	27.3%	6	4.5%	751	34.1%
Finland	1994	20	32.8%	628	26.3%	7	11.5%	561	23.5%	7	11.5%	885	37.1%
Sweden 5)	1994	0	0.0%	0	0.0%	2	15.4%	s	---	5	38.5%	3204	95.4%

Source: EUROSTAT

- Note:
- 1) Unit according to the type of economic activity at undertaking level.
 - 2) For Greece, more differentiated figures for dairies with an annual collection of 20000 t and above are not available.
 - 3) For Portugal, more differentiated figures for dairies with an annual collection of 50000 t and above are not available.
 - 4) For the Netherlands, figures are only available for dairies with an annual collection of more than 50000 t.
 - 5) s = Statistical secret
 - 6) Incl. milk from sheep and goats
 - 7) Structural statistics are not reliable because figures for deliveries to dairies are too different from the official annual statistics on milk collection by dairies (incl. milk from sheep and goats)
 - 8) Luxemburg is not covered by the official dairy structure survey.

As with milk producers, important changes have occurred over the last 20 years in the structure of dairies. However, in some cases, this development shows a different and more differentiated pattern.¹⁾ The following table shows the evolution in the number of dairies, the volume of milk collected and the average volume of milk collected per dairy in the EU member states in the period 1973-1994. The structural transformation of the sector accelerated with the introduction of the milk quota system. Not only has the number of companies fallen. Amongst those still in business, a shift has taken place in favour of the larger companies. The average raw material uptake, especially in the larger dairies, increased considerably. Some of the dairies that were formed in this concentration process, are of a size that would have been scarcely imaginable a few years ago.

Table 8: Structure of Dairies 1973-1994

Structure of Dairies 1973-1994												
	1994			1991			1988			1985		
	Number of dairies (1)	Milk collected (000 t)	Average per dairy (000 t)	Number of dairies (1)	Milk collected (000 t)	Average per dairy (000 t)	Number of dairies (1)	Milk collected (000 t)	Average per dairy (000 t)	Number of dairies (1)	Milk collected (000 t)	Average per dairy (000 t)
Germany 2)	284	26047	91.7	296	21466	72.5	408	21647	53.1	489	23637	48.3
France	815	23724	29.1	966	23793	24.6	1143	24438	21.4	1322	25720	19.5
Italy	2182	9710	4.5	2430	9845	4.1	2625	8246	3.1	2816	8281	2.9
Netherlands	19	10496	552.4	22	10536	478.9	33	11023	334.0	38	12233	321.9
Belgium	86	2919	33.9	88	2969	33.7	77	3068	39.8	79	3162	40.0
Luxemburg 6)	1	252	252.0	1	254	254.0	1	269	269.0	2	294	147.2
United Kingdom 3)	NA	NA	NA	648	14105	21.8	653	14817	22.7	643	15681	24.4
Ireland	71	5271	74.2	48	4856	105.6	84	5196	61.9	90	5882	63.1
Denmark	42	4429	105.5	52	4400	84.6	65	4539	69.8	90	4899	54.4
Greece 4)	1010	1242	1.2	1019	1095	1.1	985	1058	1.1	---	---	---
Spain 1) 5)	836	4447	5.3	497	1431	2.9	462	4377	2.9	---	---	---
Portugal	113	1446	12.8	93	3591	38.6	97	1186	38.6	---	---	---
EC-12	NA	NA	NA	6158	98341	16.0	6633	99864	15.1	---	---	---
EC-10	NA	NA	NA	5568	93319	16.8	6074	94301	15.5	---	---	---
EC-9	NA	NA	NA	4549	92224	20.3	5089	93243	18.3	5569	96589	17.9
Austria	133	2199	16.5	---	---	---	---	---	---	---	---	---
Finland	61	2385	39.1	---	---	---	---	---	---	---	---	---
Sweden	13	3357	258.2	---	---	---	---	---	---	---	---	---
Structure of Dairies 1973-1994												
	1992			1979			1976			1973		
	Number of dairies (1)	Milk collected (000 t)	Average per dairy (000 t)	Number of dairies (1)	Milk collected (000 t)	Average per dairy (000 t)	Number of dairies (1)	Milk collected (000 t)	Average per dairy (000 t)	Number of dairies (1)	Milk collected (000 t)	Average per dairy (000 t)
Germany 2)	546	23696	43.4	596	22052	37.0	682	20051	29.4	782	18768	24.0
France	1497	25898	17.3	1640	23780	14.5	1762	21496	12.2	2003	21232	10.6
Italy	3115	7788	2.5	3472	7966	2.3	3935	6690	1.7	4133	9919	2.4
Netherlands	49	12377	252.6	58	11246	193.9	68	10071	148.1	93	8891	95.6
Belgium	71	3096	43.6	75	3038	40.5	79	2789	35.3	94	2717	28.9
Luxemburg 6)	2	245	122.4	2	254	127.0	2	239	119.7	2	226	113.0
United Kingdom 3)	374	16419	44	391	15014	38.4	468	13853	29.6	515	13699	26.6
Ireland	93	4948	53.2	73	4614	63.2	82	3608	44.0	118	3151	26.7
Denmark	167	5010	30.0	238	5022	21.1	293	4835	16.5	324	4536	14.0
Greece	---	---	---	---	---	---	---	---	---	---	---	---
Spain	---	---	---	---	---	---	---	---	---	---	---	---
Portugal	---	---	---	---	---	---	---	---	---	---	---	---
EC-9	5914	99476	16.8	6545	93005	14.2	7371	83631	11.3	8064	83138	10.3

Source: EUROSTAT

Note:

- 1) Unit according to the type of economic activity at undertaking level; for ES at enterprise level until 1991.
- 2) From 1994 the data for EC and Germany refer to Germany as constituted after 3.10.1990.
- 3) Including all first-hand buyers even if they are non-dairy buyers; figures for 1994 not available.
- 4) Incl. milk from sheep and goats
- 5) Structural statistics are not reliable because figures for deliveries to dairies are too different from the official annual statistics on milk collection by dairies (incl. milk from sheep and goats)
- 6) Luxemburg is not covered by the official dairy structure survey.

¹⁾ Due to some breaks in the statistical series (changes in definition, statistical discrepancies, etc.), the comparison over time and between member states is much more difficult than in the case of the structure of milk producers.

An in-depth analysis of the structure of the whole milk processing industry¹⁾ shows that the industry is highly concentrated in Denmark, the Netherlands and Ireland in all areas (with the exception of drinking milk). In Ireland, this phenomenon has accelerated in recent years. There is also a high degree of concentration in milk collection and milk processing in Germany and in cheesemaking in the UK.

In Belgium (with the exception of cheese), France, the UK, the Iberian Peninsula (with the exception of milk drying in Spain), there is a moderate level of concentration throughout. A low degree of concentration is evident throughout the whole milk processing industry in Greece. With the exception of drinking milk and cheese, which are moderately concentrated, the Italian milk-processing industry also shows a low degree of concentration. Overall, there is no single area in which all member states show the same degree of concentration.

1.14 Regional distribution of EU milk production

With declining numbers of dairy cows due to cuts in milk quotas and steadily improving milk yields, the importance of dairy farming has decreased in practically all regions of the EU over the years. However, if the regions' shares with respect to national totals are compared over a longer period, it appears that the changes which occurred during this period²⁾ are relatively modest.

A regional distribution of dairy cows is shown in the maps in the annex to this report. High numbers of dairy cows are recorded in Ireland and Denmark, some French regions (Bretagne, Basse-Normandie, Pays de la Loire) and German Länder (Bayern, Niedersachsen, Baden-Württemberg), in the south-west of the UK, in Lombardia in Italy and also in the west of Austria. But these figures depend on the size of the regions and give only a rough impression. Of more interest is the map showing the number of dairy cows per hectare of available grassland.

The highest concentration of dairy cows, i.e. more than 3 dairy cows/ha of pasture and meadows, can be found in Denmark and in one French region (Bretagne). In the Greek regions, there are very few dairy cows, but also very little meadows and pasture, resulting in a high density (see second map). Relatively high concentrations appear also in some regions in the North of Italy (Lombardia, Emilia-Romagna) and in the Netherlands.

By far the largest dairy holdings can be found in Eastern Germany and the UK (see third map). However, even in regions showing a lower number of dairy cows per holding, there can be wide variations in dairy farm size, reaching from small part-time farmers with 1 or 2 cows to farms with 100 or more animals. In this respect, a clear location of extensive or intensive dairy farming is also difficult to make since even in regions with relatively low stocking density figures, farming intensity can be very high, if dairy cows are being housed in large concentrations (due, for example, to the poor quality of available grassland).

¹⁾ The three-yearly EU survey of the structure of dairies provides not only structural data on raw material collection but also on the processing side, i.e. figures on the number and size of producers of the main dairy products.

²⁾ The REGIO database from EUROSTAT provides figures on the number of dairy cows at NUTS II level since 1977.

1.15 EU position on world markets

The EU is by far the largest producer of cow milk worldwide. In 1995, it accounted for around 26% of world production, estimated by the FAO at 463.5 mio t.¹⁾ The US represents around 15%, Russia around 8.5%, and India some 7%. New Zealand (2.1%), Australia (1.9%) and Canada (1.7%) together account for less than 6% of the world total.

Only a small part of world milk production is traded between countries. Converted into whole milk equivalent, the FAO estimates world trade in the form of different milk products at 56-58 mio t. This is somewhat more than 10% of world production. But FAO figures include around 24 mio t absorbed by EU intra-community trade. Excluding EU internal trade, only around 6% of world milk production is traded internationally.

The international markets are dominated by a few players. The EU, as the main producer, exported between 10 and 15% of its production in the past and is still the world's biggest exporter. But the EU share is declining steadily and has fallen from 55% in 1987 to less than 45% in recent years. New Zealand and Australia, though together accounting for just 4% of world output, are continually increasing their market shares, estimated currently at, respectively, 18.5% and 10%. Both are much more export-oriented than the EU. Exports absorb more than 60% of production in New Zealand and more than 35% in Australia. US milk exports fell during the period 1987 to 1990, but have steadily recovered since then. At present, around 3% of US milk production is exported, representing around 7% of total world exports.

¹⁾ In addition, about 68 mio t of other milk (milk from sheep and goats, buffalo milk, etc.) is produced worldwide, of which around 3.3 mio t in the EU.

2. THE COMMON MARKET ORGANISATION

The basic regulation establishing the common market organization (CMO) for milk and milk products dates back to 1968 (Reg. (EEC) 804/68). It covers the following products:

- fresh, preserved, concentrated or sweetened milk and cream;
- butter and other milk fat, cheese and curd;
- lactoserum, lactose and lactose syrup;
- milk-based compound feedingstuffs.

The support system established by the CMO for the milk sector comprises the following main elements:

- market support in the form of border protection, intervention buying, several special disposal measures and export refunds;
- a system of milk reference quantities for deliveries to dairies and for direct sales from farms (the so-called “milk quota system”; Reg. (EEC) 3950/92).

2.1. Market support

2.1.1. System of institutional prices

Each year, the Council of Ministers fixes two types of prices¹⁾ for the milk year which runs from 1 July to 30 June²⁾:

- (a) **Target price:** A target price is fixed for cow milk containing 3.7% fat on delivery to the dairy. It represents the notional price which the Council wishes farmers to receive for their milk sales during the milk year.
- (b) **Intervention prices:** Intervention prices are fixed for butter and skimmed-milk powder.³⁾ The intervention agencies must buy in all quantities, meeting the quality standards laid down, which is offered to them at that price, unless buying-in has been suspended.

Fresh milk, as delivered by farmers to dairies, is not suitable for direct market support due to its perishable nature. Therefore, support measures in favor of the milk price are applied indirectly. Certain milk products, in particular butter and skimmed milk powder (SMP), are supported mainly through intervention and special disposal measures. Each product represents one of the two main components on which the milk price obtained by farmers is based: the fat component (butter) and the protein component (SMP).

Consequently, there is a close link between the intervention prices for butter and SMP, on the one hand, and the target price for milk, on the other. For the purpose of relating the intervention prices for butter and SMP to a support price for fresh milk,

¹⁾ Formerly, there was a third price, namely the system of threshold prices for certain milk products (pilot products), the aim of which was to ensure that the price of imported milk was geared to the target price for milk. It was abolished on 1 July 1995 with the implementation of the GATT agreement.

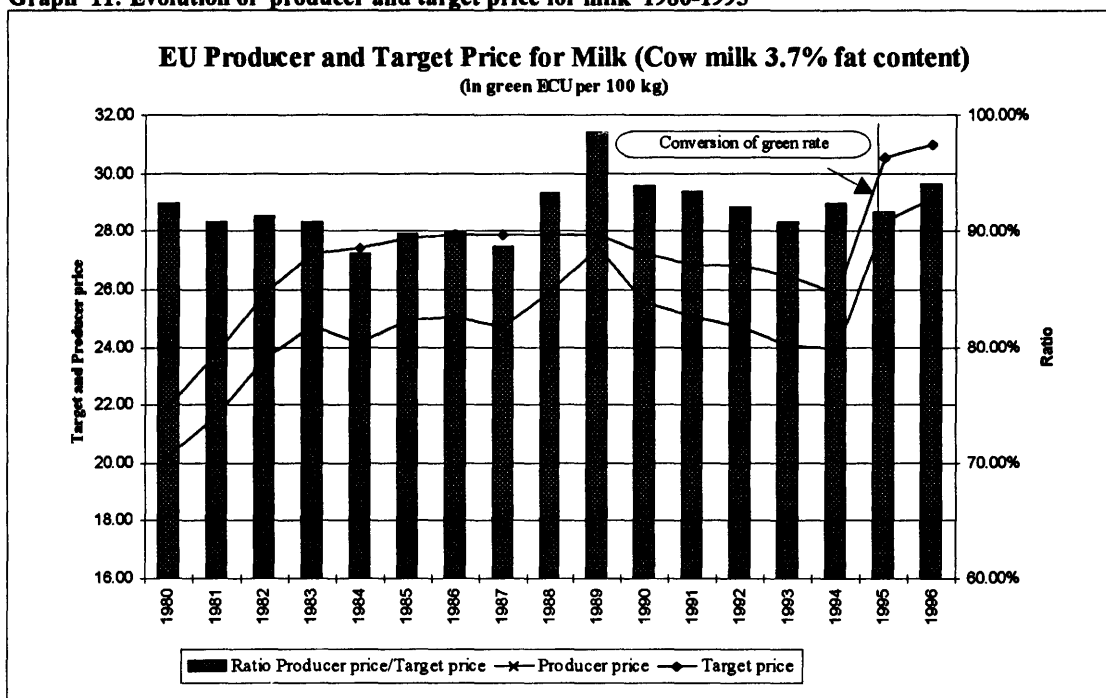
²⁾ The milk year (marketing year) was changed by Council Decision in August 1996. Previously, the milk year ran normally from beginning of April to the end of March of the following year. There was no change for the “reference period” for the milk quotas which is still running from 1 April to 31 March.

³⁾ The arrangements for intervention buying-in of certain types of cheese (Grana-Padano, Parmigiano-Reggiano) were abolished at the beginning of the 1994/95 milk year.

assumptions are made about (a) costs of manufacture of the two intervention products, and (b) the weight of milk required to manufacture 1 kg of each product (yield factors). The level of support calculated in this way reaches about 92% of the milk target price.

Therefore, milk production is supported by measures in favor of individual products. This means that the target price for milk can not and should not be considered as a "price guarantee" to farmers. Nevertheless, the following graph shows that, in the past 16 years, the milk price obtained by farmers on the market in the medium term reflected closely the evolution of the target price for milk. It ranged between 89% and 94% of the target price (except in 1984 and 1989), reaching on average around 91.9%.¹⁾

Graph 11: Evolution of producer and target price for milk 1980-1995



Note: Target prices fixed for the milk year have been averaged for the calendar year. Producer prices have been converted in green ECU.

2.1.2. Intervention system

Intervention measures in the milk sector are limited to butter and cream, SMP and certain cheeses. They take the form of buying-in by national agencies (public storage) and/or granting an aid for private storage. The primary aim of public storage is to put a floor to the producer price of milk, whereas the private storage arrangements target the balancing of seasonal variations in production, thereby improving market stability.

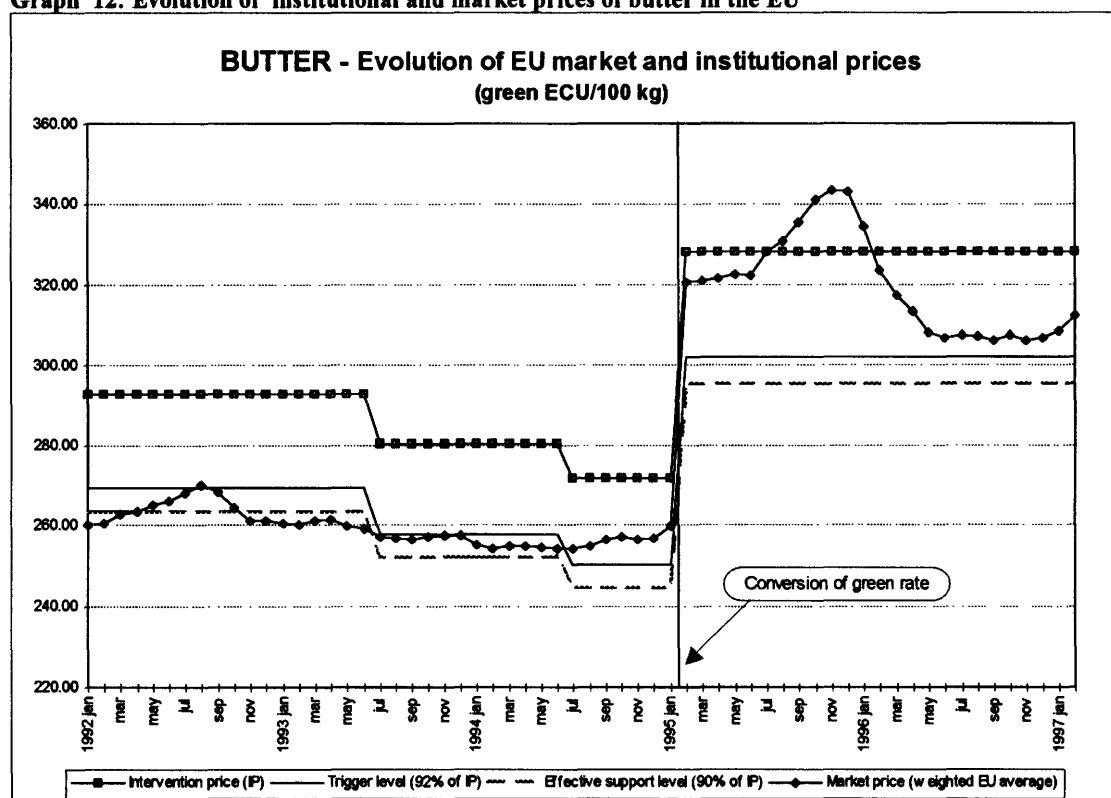
In 1987, a major change in the intervention system occurred. It aimed at replacing the unrestricted access to intervention by a system working more as a safety-net. If buying-in at full intervention is suspended, a tender system applies for buying in butter and SMP.

¹⁾ A table showing the evolution of institutional prices in the EU milk sector since 1975 is presented in the annex to this report.

Public storage

Since 1987, **intervention of butter** may be suspended throughout the Community, or in certain regions, as soon as the quantities offered for intervention from 1 March 1987 exceed 180,000 t. This was the case in June 1987. Since then, national agencies buy in butter only by tendering procedure, if the representative market price in a member state (or a region)¹⁾ falls below 92% of the intervention price during two consecutive weeks. The minimum buying-in price is fixed at 90% of the intervention price. In practice, all offers are made at this price to avoid refusal by the Commission, so that the effective support price for butter is only 90% of the intervention price. Buying-in by tendering is suspended if the representative market price stands at or above the trigger level of 92% of the intervention price for two consecutive weeks. Since 1 March 1995, when a Community quality standard for intervention butter was introduced, butter can be offered to intervention outside the country (or region) of production.

Graph 12: Evolution of institutional and market prices of butter in the EU



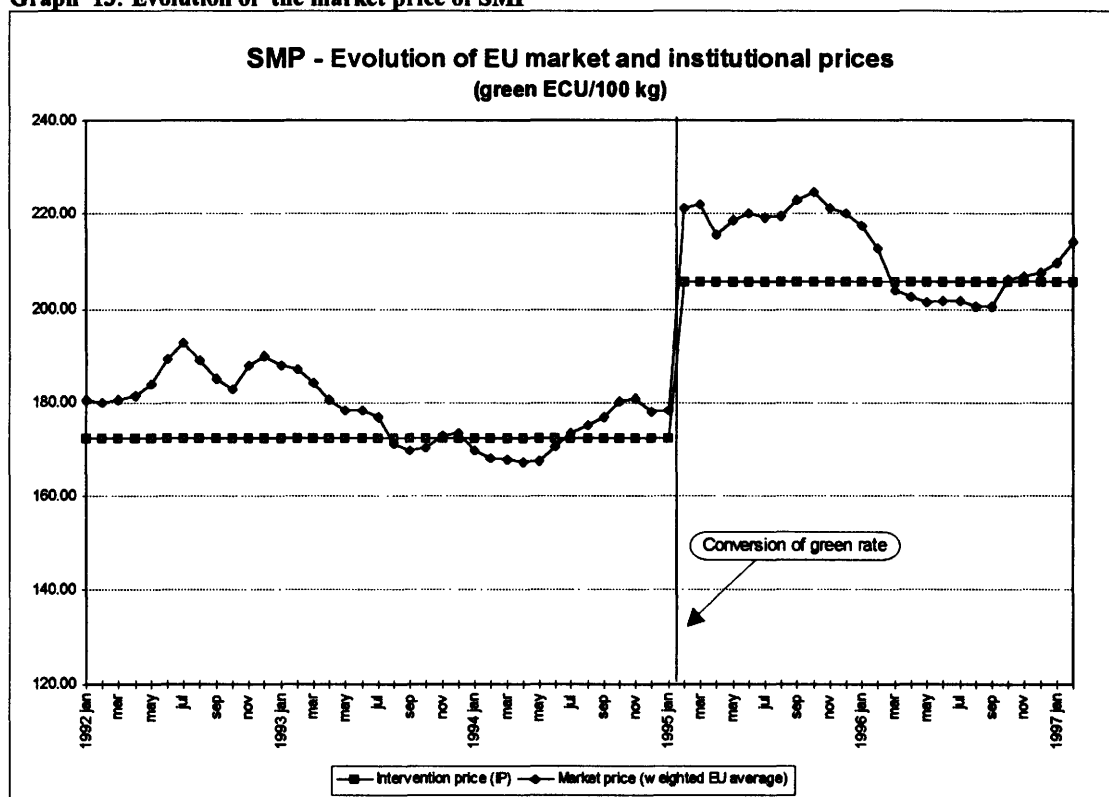
Note: As pointed out above, the triggering of intervention is only linked to the evolution of the market price in a given member state and not to the evolution of the Community average. Therefore, the purpose of the graph presented above is not to show the functioning of the intervention system, but only to present the evolution of market prices for the EU as a whole compared to the evolution of the institutional prices.

For **SMP**, buying-in is limited to the period 1 March/31 August, and it can be suspended once the quantities bought in during this period exceed 109,000 t.²⁾ Market price conditions and minimum buying-in prices are not applied. Outside the above-mentioned period, market support takes the form of other measures, in particular private storage aid.

¹⁾ Belgium and Luxembourg are considered as one member state. Two regions are fixed both for the UK (Great Britain and Northern Ireland) and Germany (Germany before 3 October 1990 and the new five Länder).

²⁾ Adjusted from 106.000 t to 109.000 t on the occasion of the EU enlargement.

Graph 13: Evolution of the market price of SMP



Note: As pointed out above, the triggering of intervention is not linked to any market price conditions. Therefore, the purpose of the graph presented above is not to show the functioning of the intervention system, but only to present the evolution of market prices for the EU as a whole compared to the evolution of the institutional prices.

To be eligible for intervention, products must be made by approved manufacturers and fulfill certain quality criteria. Once stored, products are disposed of either by tender or directly via:

- sales of butter at reduced prices to manufacturers of pastry, ice-cream and other food products, to non-profit making organizations or to the recipients of welfare benefit;
- sales of concentrated cooking butter at reduced prices;
- sales of SMP for use as animal feed;
- exports;
- food aid operations.

In 1994, the buying-in of certain types of cheese (Grana-Padano, Parmigiano-Reggiano) was abolished. Experience had shown the objective of market stabilization could be attained effectively by means of private storage aids. Since then, intervention measures for cheese have been limited to this type of aid.

Private storage

Private storage aid can be granted for butter and cream, SMP and some types of cheese. In general, it is fixed taking into account the storage costs and the expected evolution of market prices for both fresh and stored products. The aid is paid for a maximum storage period fixed for each product.

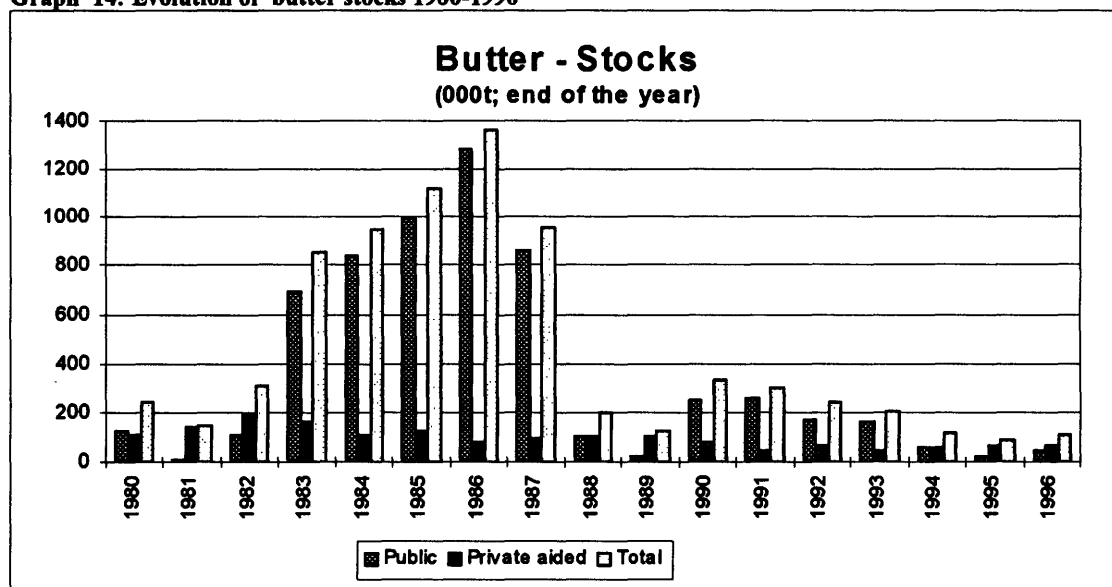
For **butter and cream**, the contract for private storage must normally be concluded for at least 4 months between 15 April and 15 August of the same year. The system of

private storage is applied in parallel to public buying-in, primarily as a buffer against the seasonal variations in butter production.

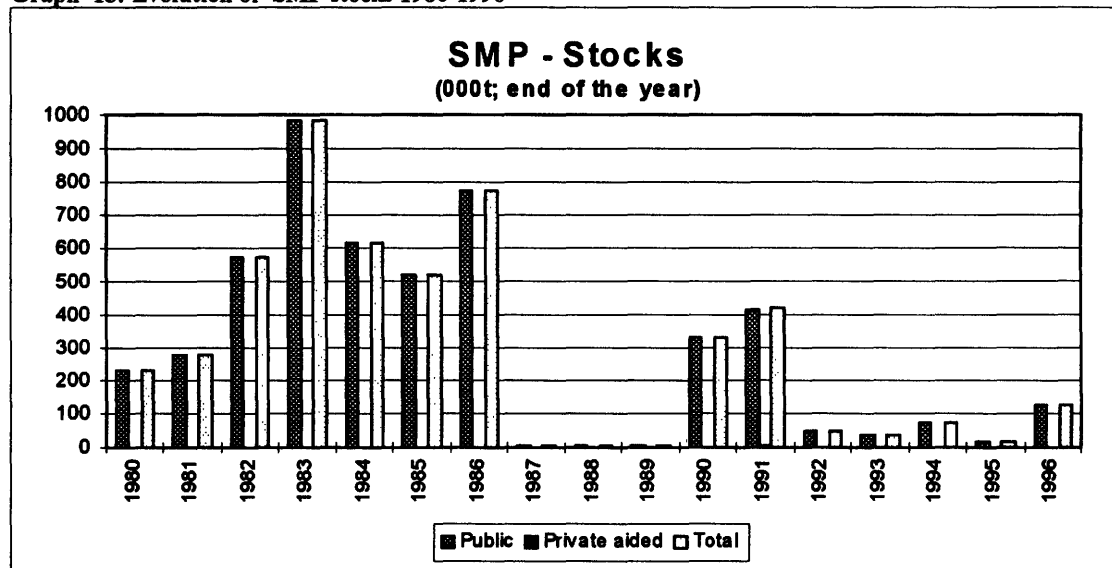
Aid for private storage of SMP is granted, for contracts running at least two months, when intervention buying-in is suspended during the period 1 March to 31 August. Theoretically, private storage of SMP can also be assisted outside this period, but this option is actually not applied.

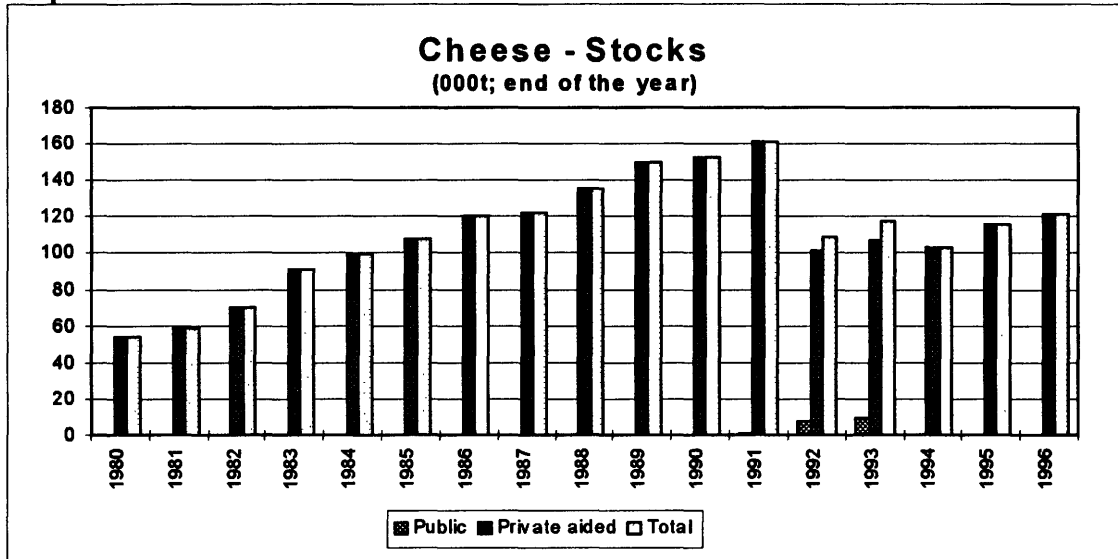
Private storage measures for cheese are limited mainly to Grana-Padano cheese not less than nine months old, Parmigiano-Reggiano cheese not less than 15 months old and Provolone cheese not less than three months old. In addition, aid can be granted for private storage of long-keeping cheeses (Emmental and Gruyère) and certain cheeses produced from ewes' milk (Pecorino, Kefalotyri and Kasserli), but only when it is necessary to address a serious market imbalance.

Graph 14: Evolution of butter stocks 1980-1996



Graph 15: Evolution of SMP stocks 1980-1996



Graph 16: Evolution of cheese stocks 1980-1996

2.1.3. Border regime

Market access

With the implementation of the GATT Uruguay Round agreement in July 1995, the system of threshold prices and variable import levies for certain milk products (pilot products) has been replaced by fixed tariffs. For most of the 116 different tariff positions for milk products (exc. the so-called "composite agrigoods"), the tariffs consist of a specific rate. For some products (for example, Glarus herb cheese, dairy spreads) an ad valorem duty is fixed. In certain other cases (flavored yoghurts or those containing added fruit, nuts or cacao and other buttermilk or cream products) a combination of an ad valorem duty and a specific rate is practiced. Both ad valorem duties and specific rates are due to be reduced by 36% over the 6 years of implementation for each product, with the exception of SMP for which the reduction is only 20%. The reduction in tariffs is being implemented in equal annual installments, beginning on 1 July 1995 and ending on 1 July 2000.

The calculation of tariff equivalents is based on the tariffs for three basic products (butter, SMP and whey powder with a fat content not exceeding 1.5%), for which internal market prices between 1986 and 1988 have been compared with international prices reported to the IDA (International Dairy Agreement). The tariff equivalent for each other dairy product is obtained by weighting the tariff equivalents fixed for the above mentioned basic products. The weights are determined through technical coefficients according to the composition of the products concerned.

A safeguard clause, allowing for an increase in customs duties, applies for most products in the event of import surges (compared to a fixed reference level) or a drop in import prices below certain trigger levels (reference prices).

In addition to the above arrangements under the general regime for imports, there are some specific market access commitments to third countries, offering market access opportunities at reduced tariff rates. By far the most important are the so-called

“current access” (covering the import concessions already granted by the EU during the base period 1986-1988) and “minimum access” (covering supplementary preferential import contingents to be offered by the EU and which are scheduled to increase total imports for the product concerned from at least 3% of domestic consumption during the base period 1986-88 in 1995 to 5% in 2000).

Table 9: Market access in the dairy sector

Market access in the dairy sector					
CURRENT ACCESS					
Product	Quota (In t)	in-quota tariff (ECU/100 kg)	normal tariff 1)	Other terms and conditions	
Butter	76667	86.88	278.4	Origin New Zealand	
Cheese for processing	4500	17.06	245.4	Origin New Zealand: 4000 t Origin Australia: 500 t	
Cheddar	10250	17.06	245.4	Origin New Zealand: 7000 t Origin Australia: 3250 t	
Cheddar	4000	13.75	245.4	Origin Canada: 3250 t	
MINIMUM ACCESS					
Product	Quota initial final (In t)	in-quota tariff (ECU/100 kg)	normal tariff 1)	Other terms and conditions or remarks	
Butter	0 10000	94.8	278.4		
Cheese and curd of which	15273 83400	---	---		
--- Emmental (incl. proc.)	2934 18400	71.9	212.8	Two different tariff positions concerned	
--- Gruyere, Sbrinz (incl. proc.)	734 5200	71.9	212.8	Two different tariff positions concerned	
--- Cheddar	3000 15000	21.0	245.4		
--- Cheese for processing	4000 20000	83.5	245.4		
--- Fresh cheese (pizza)	1111 5300	13.0	271.9	Two different tariff positions concerned	
			13.0	324.9	
--- Other cheeses	3494 19500	ranging from 70.4 to 106.4	ranging from 207.0 to 324.9	15 different tariff positions concerned	
Skimmed milk powder	40401 68000	47.5	143.6		
OTHER MARKET ACCESS AGREEMENTS					
Cheese (Jarlsberg, Ridder)	2200 2200	66.41	221.8	Origin Norway	
EUROPEAN ASSOCIATION AGREEMENTS 2)					
Butter	6600 8250	55.68	278.4		
Milk powder	18800 23750	28.72	143.6	concerns skimmed and whole milk powder	
Cheese	15448 19385	20% of normal tariffs	different		

Notes:

1) Conventional tariff

2) The table reflects the situation at the end of February 1997.

3) The European Association Agreements also include market access commitments for some quantities of condensed milk and yoghurts.

In addition, there are some preferential agreements without contingents concluded with Switzerland (covering special milk for infants and some types of cheese) and some other third countries, such as Bulgaria, Hungary, Romania, Croatia, Bosnia-Herzegovina, Cyprus, Turkey and Israel (covering certain types of cheese, in particular from sheep and buffaloes).

As far as the European Association Agreements (EAA) are concerned, table 9 reflects the situation at the end of February 1997 and takes into account the, in principal, agreed increases of base quantities, as well as the 25% rise in quotas by 2000/01. EAA import quotas are not taken into account in the GATT minimum access quotas.

In any case, due to the relatively low tariff rates offered, it seems very likely that the concessions under the preferential import regime will be used completely. Even if, in the case of cheese, the border protection for some types is somewhat higher than for other dairy products, and while some doubts remain that these products will appeal to EU consumer tastes, interest has been shown by the processing industry.

Expressed in whole milk equivalent, the import concessions under the different market access agreements amount to an increase of around 1.2 mio t by the year 2001 compared to 1995. But this figure may be somewhat overestimated, taking into account that part of the cheese imported in the past under the non-preferential regime will now probably enter the EU within the preferential regime.

Exports

On the export side, the GATT agreement stipulates that, by the year 2000/2001, export subsidies (refunds) should be reduced by 36% and the volume of subsidized exports by 21% compared to the base period. The reduction should be made in linear annual installments, taking as the point of departure the "best" of the references during 1986-90 and 1991-92. The first period applies for butter and SMP, while in the case of cheese and other dairy products, the years 1991-92 have been retained. The commitments on subsidized exports in the dairy sector are split into four categories: butter, SMP, cheese and other milk products. Exports of milk products as so-called "incorporated products", subject only to budgetary constraints, are classified under the group of Non-Annex II products. The export commitments in outlay and volume can be summarized as follows:

Table 10: Export commitments in the dairy sector

Export commitments in the dairy sector					
		Base	1995	2000	Reduction (Base to 2000)
Butter and Butteroil	Quantity (000 t)	505.5	487.8	399.3	-21%
	Outlay (mio ECU)	1481	1392.1	947.8	-36%
SMP	Quantity (000 t)	344.9	335	272.5	-21%
	Outlay (mio ECU)	430.9	406.2	275.8	-36%
Cheese	Quantity (000 t)	406.7	426.5	321.3	-21%
	Outlay (mio ECU)	533.9	594.1	341.7	-36%
Other milk products	Quantity (000 t)	1212.8	1185.4	958.1	-21%
	Outlay (mio ECU)	1090.1	1024.7	697.7	-36%
Incorporated products	Outlay (mio ECU)	648.4	717.4	415	-36%

As mentioned above, the reduction is fixed with respect to a historical base period. But a comparison with the actual level of exports shows that only two categories, "cheese" and "other dairy products", are, in reality, subject to constraints in the short and medium term. In the case of butter, (subsidized) exports in the base period 1986-90 were much higher than in recent years. So, for example, butter exports reached 229,000 t in 1995 and are estimated at 170,000 t in 1996. Despite a projected increase in the medium term, it is expected that butter exports will remain well below the GATT limit (see chapter on market outlook). In the case of SMP, the situation is somewhat different. After two years at relatively low levels, exports increased to 376,000 t in 1995. For 1996, SMP exports are estimated at around 220,000 t. Nevertheless, in the medium term, the GATT commitments on subsidized SMP exports could become binding (see also chapter on market outlook).

It is obvious that the choice of base has a big influence on the evaluation of constraints on the milk sector as a whole. If the "GATT-base" is taken, i.e. the period 1986-90 or the years 1991-92, without taking into account the evolution of exports prior to the implementation of the GATT agreement, the reduction in subsidized exports amounts to around 4.5 mio t of whole milk equivalent by the year 2000/01. With the quantities fixed for the first GATT year, 1995, taken as the base, the constraint is somewhat lower (3.9 mio t). But, if the quantities for the final GATT year are compared with the real exports in 1995 which benefited from refunds, then the reduction corresponds to only around 2 mio t of whole milk equivalent, due to butter exports running well below the GATT commitment.

The following table shows the volume of imports and exports of the main dairy products in recent years. Estimates for 1996 are presented in the chapter dealing with the market outlook.

Table 11: Imports and exports of dairy products in recent years

Imports (000 t)					
	1991	1992	1993	1994	1995
Butter & Butteroil 1)	68	48	65	65	72
SMP	5	3	19	33	42
Cheese	109	110	109	121	83
Other milk products 2)	16	13	10	24	27
<i>of which</i>					
— Other milk powder	0.5	0.5	1.2	5.0	8.8
— Condensed milk	2.2	1.1	0.3	0.6	0.2
— Fresh products	13	11	9	18	18
Casein	58	54	59	87	68
Whey powder	19	11	6	5	9

Notes:

- 1) In butter equivalent.
- 2) Figures are not directly comparable with the aggregate "Other milk products" used in the GATT schedules.
- 3) Figures include inward and outward processing.

Exports (000 t)					
	1991	1992	1993	1994	1995
Butter & Butteroil 1)	322	242	202	163	229
SMP	253	390	284	146	376
Cheese	484	465	524	517	528
Other milk products 2)	1244	1248	1306	1252	1383
<i>of which</i>					
— Other milk powder	617	581	579	587	596
— Condensed milk	316	343	351	286	338
— Fresh products	265	273	324	324	352
— Other	46	51	52	56	97
Casein	58	69	58	57	56
Whey powder	32	32	45	57	54
of which not subsidized (000 t)					
Cheese	56	62	80	84	63
<i>in % of total exports</i>	11.5%	13.3%	15.2%	16.2%	11.9%
Other milk products 2)	58	62	166	165	NA
<i>in % of total exports</i>	4.7%	5.0%	12.7%	13.1%	---

Notes:

NA Figures are not yet available.

1) In butter equivalent.

2) Figures are not directly comparable with the aggregate "Other milk products" used in the GATT schedules.

3) Figures include inward and outward processing.

2.1.4. Special disposal measures

The CMO for milk and milk products provides for a number of measures to facilitate the disposal of dairy products on the internal market. Disposal measures exist for butter (butterfat), SMP and some other uses of liquid skimmed milk.

Butter (and butterfats)

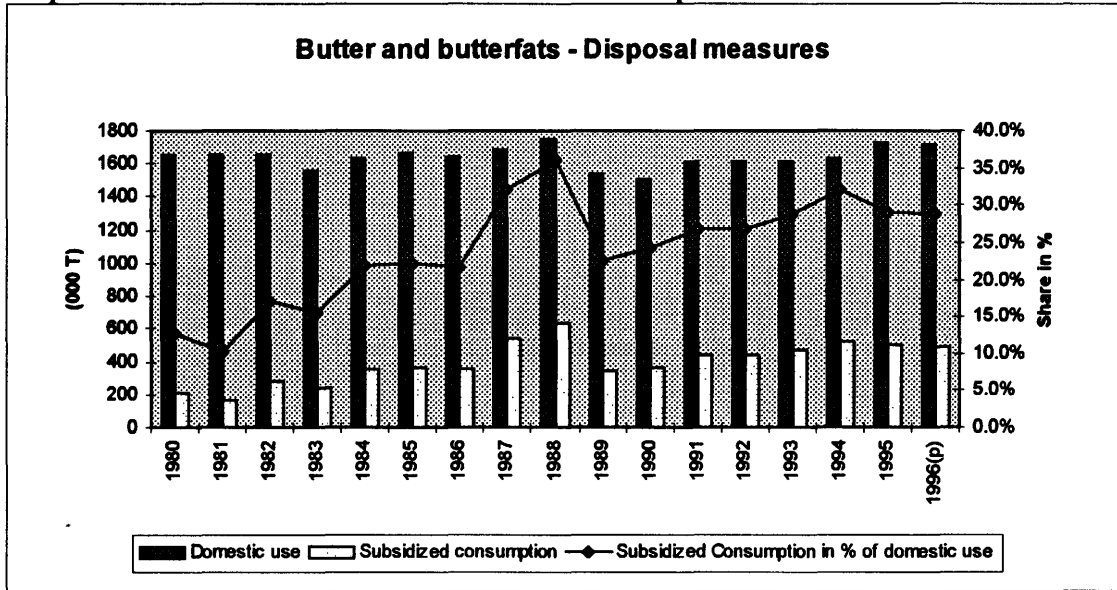
Measures in favor of butterfat include:

- granting aid for the use of butterfats in the manufacture of pastry products, ice cream and other foodstuffs;
- granting a consumer subsidy for non-profit organizations and for welfare recipients;
- subsidizing the consumption of concentrated cooking butter (in order to increase competitiveness with respect to vegetable fats, in particular margarine);
- other special measures.

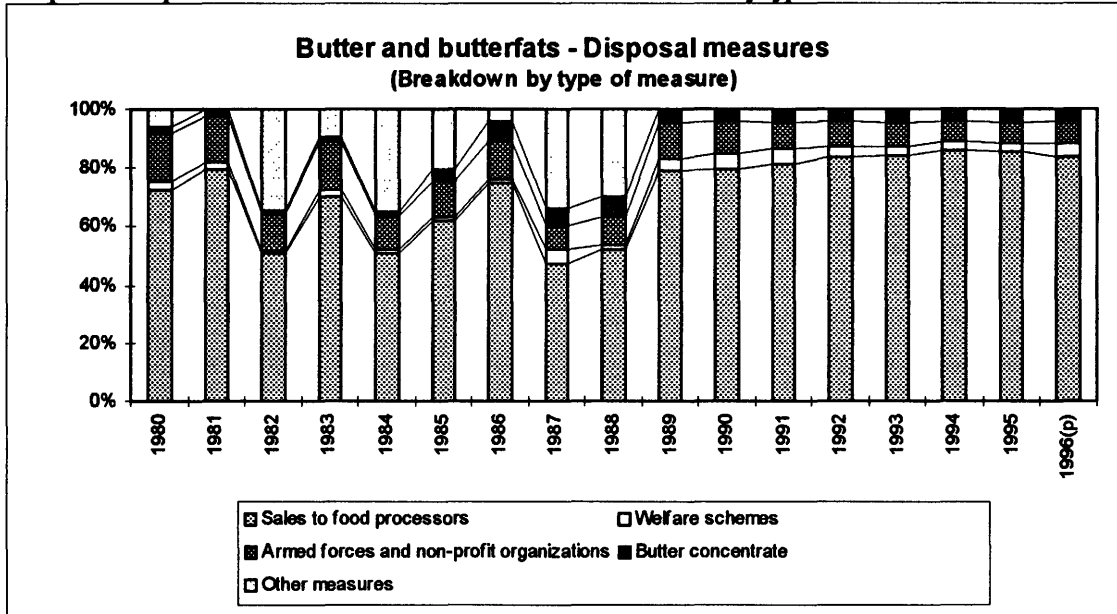
In recent years, subsidised butter, under these special disposal schemes, has accounted for up to 30% of domestic use (see detailed table in the annex). Sales to food processors represent the lion's share with more than 80% of the total. Around 7%

goes to the armed forces and non-profit organizations. Some 4% is absorbed by the manufacture of butter concentrate, and between 3 and 5% is used for social measures in the form of welfare schemes. These shares were relatively stable in recent years.

Graph 17: Butter and butterfats - Total and subsidized consumption 1980-1996

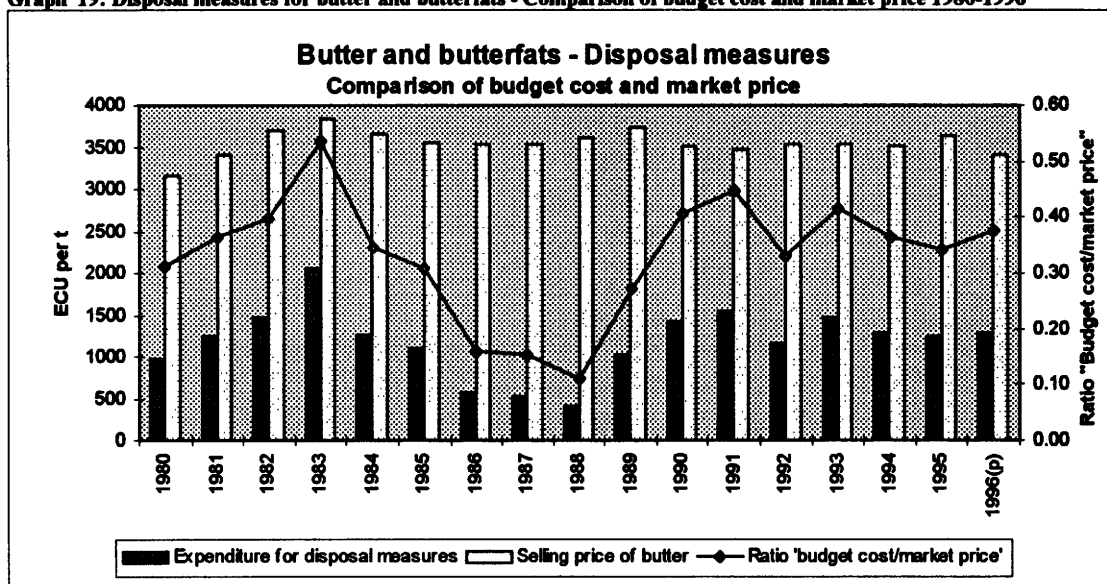


Graph 18: Disposal measures for butter and butterfats - Breakdown by type of measure 1980-1996



The following graph compares the average market price of butter with the amount of subsidy paid on average per tonne under the different disposal measures. On average, over the whole period, the subsidy amounts to a third of the market price. Increasing at the beginning of the period under review from 31% in 1980 to 54% in 1983, the ratio had fallen to 11% by 1988, mainly due to lower EAGGF expenditure as a consequence of reduced intervention stocks, while market prices changed very little. In 1990/91 and 1993, budget expenditure on disposal measures again reached the early eighties level, but was much lower in recent years. At present, it is somewhat above its long term average level.

Graph 19: Disposal measures for butter and butterfats - Comparison of budget cost and market price 1980-1996



Skimmed milk and skimmed milk powder (SMP)

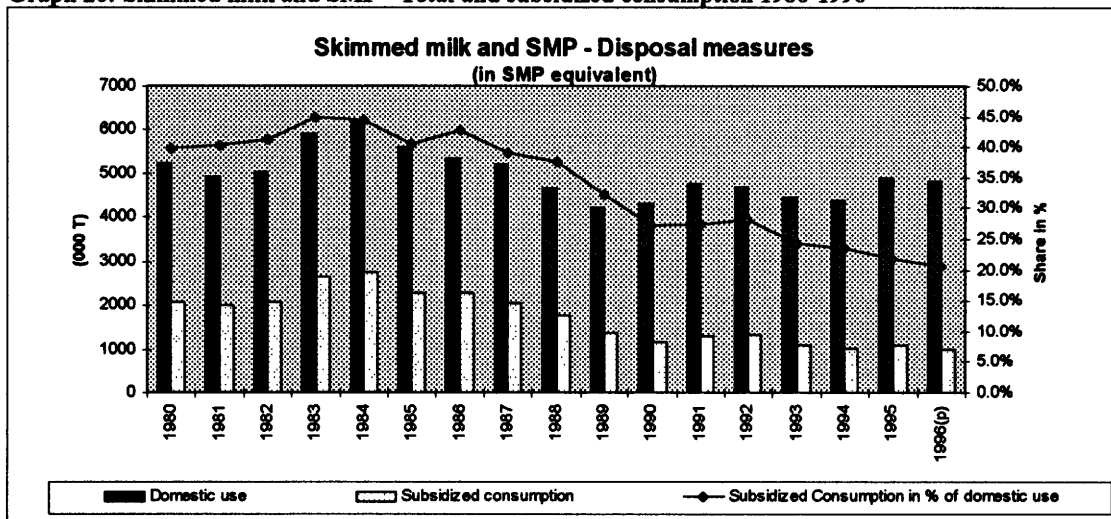
As explained in the chapter dealing with the overview of the milk sector, skimmed milk is released during the process of defatting whole milk. It is subsequently used in different forms: in liquid form as animal feed (returned to farm) and as raw material in the manufacture of other dairy products, such as cheese, fresh products and casein. But most skimmed milk is manufactured into SMP; a product which is easy to store and therefore suitable for intervention measures in the form of public buying-in. The (unsubsidized) use of skimmed milk in the manufacture of other dairy products, even though increasing by up to 80% in recent years, absorbs only a part of the total available volume, so that a "surplus" exists.

The CMO provides for several measures to help dispose of skimmed milk in liquid form and in its dehydrated form as powder (inc. buttermilk powder). Most aid is granted for the use of liquid skimmed milk and SMP in animal feed. It facilitates lower costs, thereby making skimmed milk more competitive in respect of substitutes, in particular vegetable proteins. In the case of liquid skimmed milk for animal feed, aid is granted either for quantities returned to the farm by dairies, or directly used on the farm where it is produced. The amount of aid depends on the intervention price and the supply situation for SMP, the price of calves and the price of competing proteins. Other measures subsidise the use of skimmed milk in casein production.

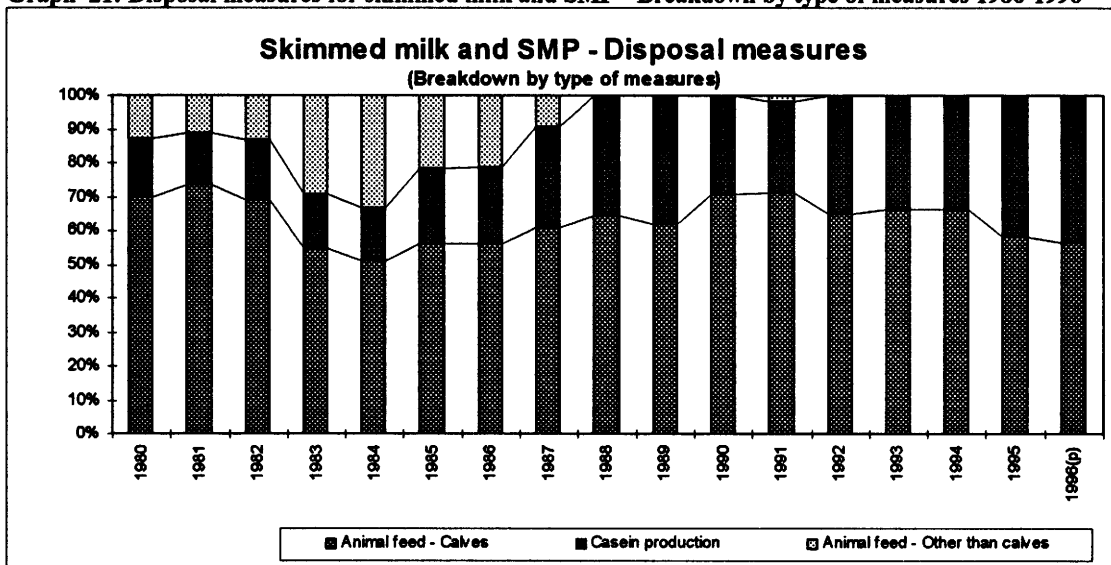
In animal feed, the most obvious (and also cheapest) use of skimmed milk and SMP is its addition to feed for calves. Within the CMO, this kind of aid is considered as "normal" aid, while aid granted for use in feed for other animals (mainly pork and poultry) is known as "special" aid. The aim of this "special" aid is mainly to ensure supplementary outlets if the market situation in the dairy sector is deteriorating. Since 1988, this special measure has been applied only once: in 1991, following German reunification, for 222,000 t of liquid skimmed milk.

As the detailed tables in the annex show, around 14% of domestic use of **liquid skimmed milk** in recent years benefited from subsidies, the bulk of which concerned aid for casein manufacturing. Over the last 15 years, the absolute and relative importance of subsidized use in animal feed decreased, especially since the special aid was not applied in recent years. However, the share for casein production increased from 46% in 1980 to more than 95% in 1996, but without a corresponding increase in absolute volume. Subsidized use of SMP during the same period also decreased, both in absolute and relative terms, but still more than half of total domestic use in 1996 was affected by disposal measures. Since 1988, the measures exclusively concern use in feedingstuffs for calves.

Graph 20: Skimmed milk and SMP - Total and subsidized consumption 1980-1996



Graph 21: Disposal measures for skimmed milk and SMP - Breakdown by type of measures 1980-1996

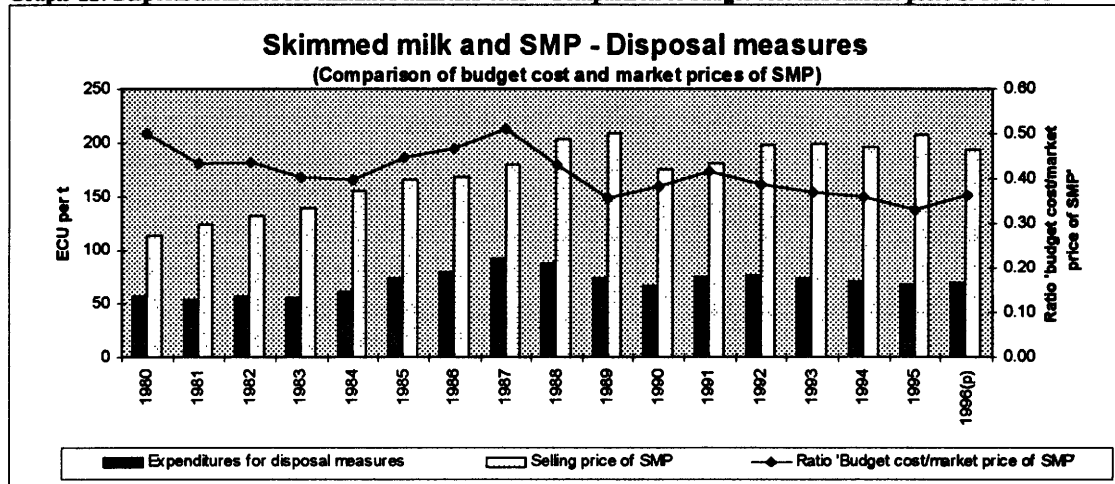


On average over the period 1980-1996, the support for skimmed milk and SMP via disposal measures reached around 41% of the market price.¹⁾ There is an overall tendency downwards, interrupted briefly in the period 1984-87 and once again in the

¹⁾ The different measures have been converted in skimmed milk equivalent (respectively in SMP equivalent) in order to compare the subsidy paid on average per t of skimmed milk with the average market price.

years 1990-91. The relative support level decreased from around 50% of the market price in 1980 to about 36% in 1996.

Graph 22: Disposal measures for skimmed milk and SMP - Comparison of budget cost and market price 1980-1996



Promotion scheme

In 1992, after the abolition of the coresponsibility levy which financed market development measures, a new Community programme for the promotion of dairy products was established, with an annual budget of 10 mio ECU. The annual promotion programme focuses each year on one particular commodity (for example, liquid milk). Promotion measures are limited to the internal EU market. A new school milk programme was also established in 1992.

2.2 Milk quota system

In 1984, the Council introduced into the CMO for milk and milk products general rules governing the implementation of a scheme of additional levy ¹⁾ (also called "superlevy") based on a system of reference quantities for each holding, the so-called "milk quota system".²⁾ In the context of a substantial and increasing surplus, and given that the guarantee thresholds in operation at that time³⁾ were proving ineffective in restoring market balance between supply and demand in the sector, the milk quota system was

¹⁾ The name "additional" (or super) levy was chosen since another levy, the coresponsibility levy, already existed. The proceeds from the coresponsibility levy, introduced in 1977, were used for seventeen years to finance market development measures, market surveys or research into new products. They also served to finance certain disposal measures such as the distribution of milk in schools (school milk program) or the special disposal measures for butterfat. As part of the 1992 CAP reform, the Council decided to abolish the coresponsibility level with effect from 1 April 1993.

²⁾ Until 1992, the legal provisions for the additional levy system were a part of Council Reg. (EEC) 804/68 governing the CMO for milk and milk products. In 1992, the legislation concerning the milk quota system was simplified and consolidated. The basic rules are now contained in Council Reg. (EEC) 3950/92 with implementing rules laid down in Commission Reg. (EEC) 536/93.

³⁾ As a first reaction to the steadily increasing surplus, the coresponsibility levy was introduced in 1977. The system of guarantee thresholds in the milk sector followed in 1982. If the quantities of milk delivered by Community producers exceeded the guarantee threshold, fixed yearly by the Council together with the institutional prices, the Council, acting on a proposal from the Commission, adopted appropriate measures to offset the additional costs. So, for example, when in 1982 the guarantee threshold (fixed at the level of deliveries in 1981 plus 0.5%) was far exceeded, the Council decided that the 1983/84 prices should not be increased by more than 2.33%, subject to the guarantee threshold fixed for 1983 (deliveries in 1981 plus 1%).

preferred to other possible solutions (such as, for example, drastic cuts in support prices), in particular because of its more acceptable consequences as far as agricultural incomes were concerned.

The main purpose of the milk quota system was (and still is) to curb the growth of milk production in order to bind the price support in the sector to the limited quantities of milk which can be financed under the agricultural budget. At the same time, the system should permit the structural development and adjustment required, having regard to the diversity of the situations obtaining in the various member states, regions and collection areas in the Community.

The central element of the system is the fixing of national reference quantities by the Council, which are shared out, at national level, so that each producer has his own individual reference quantity, for deliveries to dairies and for direct sales from the farm. A dissuasive levy applies to any quantity in excess, if the national reference is exceeded. Member states may allocate unused reference quantities to producers at purchaser or national level (equalization arrangements; see table 14 below). Since the beginning of the reference period 1990/91, the levy has been fixed at 115% of the target price for milk.¹⁾

At the request of member states in 1985, it was decided to permit the exchange of quotas for deliveries and quotas for direct sales, on the basis of objective and duly justified statistical data, to take account of structural changes affecting, on the one hand, deliveries to purchasers and, on the other hand, direct sales to consumers. This principle was changed in 1992 in order to reflect economic realities. Since 1993/94, the producers have been entitled to have their quota adjusted on condition that their requests are duly justified by the need to take account of changes in their marketing requirements.²⁾ At the same time, the provisions on checks were tightened up in order to ensure the correct payment of the levy due.³⁾ Within the global national reference quantities, a national reserve may be created by means of a linear, across-the-board, deduction or by means of special buy-out programs. The national reserve includes also the individual quotas of producers who have not produced at all, and have not transferred quotas to other producers during the previous twelve months. The released quantities may be re-allocated, according to objective criteria, approved by the Commission (for example, to new entrants or small producers).

In addition to the individual reference quantities, a reference (or representative) fat content for the delivered milk is fixed, which is to be taken into account when the

¹⁾ Until 1992, different levies were applied for deliveries and direct sales. During the first four periods, a further differentiation within the category of deliveries was applied by fixing the levy at 75% of the target price in the case of distribution of national wholesale quota to individual farmers (the so-called "formula A") and at 100% in the case of distribution of national wholesale quota to individual dairies ("formula B"). Starting from the fifth quota year, the levy under formula A was raised and also fixed at 100%. For direct sales, a levy of 75% was fixed. Since 1992/93, the levy is 115% for both deliveries and direct sales.

²⁾ In this respect, the breakdown of the total quota into quota for direct sales and quota for deliveries can change up to the first of March of the milk quota year. But, the corresponding changes in deliveries and direct sales must level out, so that the global quota remains unchanged.

³⁾ The controls to be carried out by member states must be based on a risk analysis. In the case of direct sales, checks must be carried out on at least 5% of the producers yearly. This intensification of the controls responds to complaints of the Court of Auditors about the available information on direct sales from farms in order to control the correct application of this part of the milk quota system. (The respective figure for dairies is 40%.)

definitive delivery volumes for each producer are determined. For this purpose, the average fat content of the milk delivered by each producer is compared with his fixed representative fat content. Then, the volume of delivered milk (or milk equivalent) is adjusted, i.e. increased or decreased, by 0.18% per 0.1 g of additional or lower fat per kg of milk.¹⁾

In 1984, the Council decided to allocate a reference quantity of milk to individual member states for 5 successive periods of 12 months, from the beginning of April 1984 to the end of March 1989.²⁾ Each member state was allocated a wholesale quota (deliveries to dairies) and a quota for direct sales, and was free to choose the formula for implementation of national reference quantities at the individual producer level:

- formula A: distribution of national wholesale quota to individual producers,
- or
- formula B: distribution of national wholesale quota to individual dairies.

This system was simplified by Council decision in 1992. Whereas under the old system, the additional levy was due either from the producer or dairies depending on the formula chosen by the member states, under the current system the purchasers are liable for the levy and obliged to pay the amount due which is deducted from the price of milk paid to producers who owe the levy.

At the time of introduction, the A formula was chosen by Belgium, Germany, the Netherlands and Northern Ireland. During the second year of the quotas, Northern Ireland applied the B formula with more leeway in the allocation to individual producers. The Netherlands adopted the B formula from the fifth year on. The other member states opted for the B formula from the beginning.

In three member states (Italy, Greece and Spain), the full and correct application of the milk quota system did not take place for several years. The Council of Ministers agreed in 1992 to consider an increase in the total guaranteed quantities of these three member states with effect from 1 April 1993 in order to permit a rapid transition to full compliance with the quota arrangements. Certain conditions were attached which each of the three member states was required to respect. After significant progress had taken place in the effective implementation of the milk quota system, the Council, in the context of the 1994/95 price fixing, finally confirmed the increases of milk quotas for Spain and, in the context of the 1995/96 price fixing the increases for Italy and Greece, which were granted on a provisional basis in 1992.³⁾

At its inception, milk quotas were fixed on a global basis for each member state, by reference to 1981 deliveries plus 1%.⁴⁾ During the transition year 1984/85, the norm applied was 1981 plus 2%. However, for the distribution of the global reference

¹⁾ If the volume of delivered milk is expressed in litres, a coefficient of 0.971 applies for the conversion in kg (i.e. 1 l of milk = 0.971 kg of milk or, inversely, 1 kg of milk = 1.029866 l of milk).

²⁾ When the quotas were introduced, the target price of milk was frozen, the intervention prices for butter decreased and for SMP increased, and the coresponsibility levy was raised by 1% to 3%.

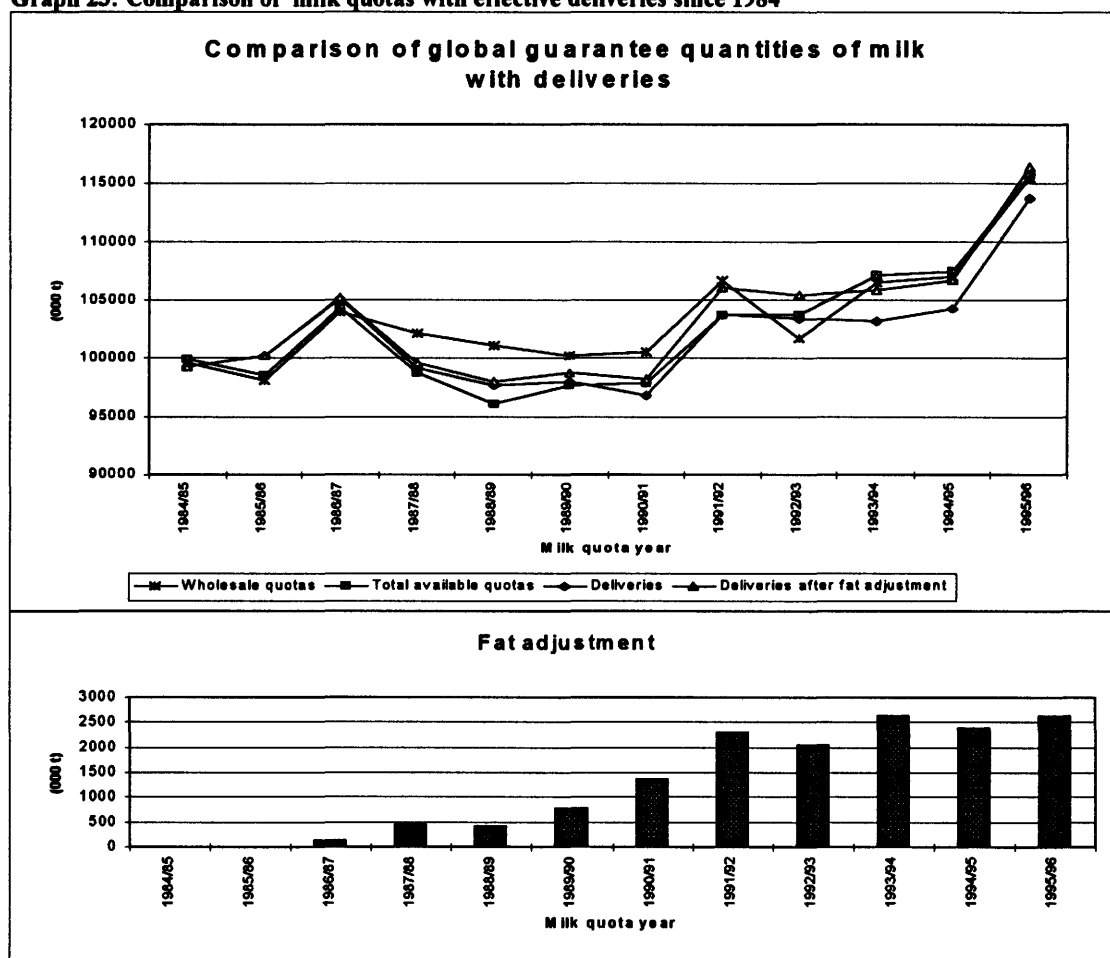
³⁾ For more details on the problems of implementation of the milk quota system in Italy, Greece and Spain see the Commission reports contained in documents COM(93) 109 final, COM(94) 64 final, COM(94) 150 final and COM(95) 147 final.

⁴⁾ Two exceptions were made for Italy and Ireland. For both, the year 1983 was retained, which represented an advantage for these member states.

quantities to individual producers or dairies, member states were free to choose the reference year and the percentage deduction to be applied, in order to respect the overall fixed national quantities. Most member states chose 1983 as the reference year, with different criteria for the necessary reductions. In the first year of application (April 1984 to March 1985), the global wholesale quota for the then ten member states was fixed at 99.524 mio t. An additional Community reserve of 0.393 mio t was initially allocated to Luxembourg (25000 t), Ireland (303000 t) and Northern Ireland (65000 t)¹⁾, so that the total available quantities for deliveries stood at 99.917 mio t; or -3.7% below the volume delivered in the year 1983.²⁾ The reference quantities for direct sales were fixed at 3.761 mio t.

The following graph and table summarize the evolution of milk quotas since 1984.

Graph 23: Comparison of milk quotas with effective deliveries since 1984



Note: Total available quotas are wholesale quotas after taking into account quota suspension, Community reserve and transfers from quotas for direct sales. Figures refer to 10 member states from 1984/85 to 1985/86, to 11 member states from 1986/87 to 1990/91 and to 12 member states from 1991/92 to 1994/95. Figures for the quota year 1995/96 relate to EU-15.

¹⁾ The purpose of the Community reserve was to facilitate the application of the milk quota system in those member states where difficulties occurred. This reserve was increased several times in order to take into account the social needs of certain member states and also the special situation of certain producers. So, for example, the Community reserve was increased by 50000 t for Spain from 1 April 1987 and was set, from 1 April 1989, at 1039886 t, of which 1039886 t were allocated under Article 3b of Reg. (EEC) 857/84 (in the context of the so-called "pacquet Nallet" as the temporary suspension of quotas was reduced from 5.5% to 4.5%) and 502233 t under Article 3a of the same Regulation (in order to take into account the SLOM cases). The SLOM reserve was increased in March 1991 to 600000 t.

²⁾ Initially, a reduction by -5% was foreseen. The coresponsibility level was fixed at 3% instead of the proposed 1%.

Table 12: Evolution of milk quotas since 1984

Evolution of milk quotas since 1984								
Period	Deliveries to dairies					Available quantities	Direct sales	Total Quota
	Guarantee	Suspended	Reserve					
			EU	SLOM	+1%			
1984/85 (1)	99,524,000	---	393,000	0	0	99,917,000	3,761,000	103,678,000
1985/86 (1)	99,078,574	---	393,000	0	0	99,471,574	3,334,426	102,806,000
1986/87 (2)	103,988,574	---	393,000	0	0	104,381,574	3,824,426	108,206,000
1987/88 (2)	102,096,143	3,778,103	443,000	0	0	98,761,040	3,531,077	102,292,117
1988/89 (2)	101,059,108	5,396,485	443,000	0	0	96,105,623	3,519,502	99,625,125
1989/90 (2)	100,209,222	4,517,603	443,000	502,233	1,039,886	97,676,738	3,519,502	101,196,240
1990/91 (2)	100,559,222	4,679,486	443,000	502,233	1,039,886	97,864,855	3,369,502	101,234,357
1991/92 (3)	106,657,695	4,985,666	443,000	600,000	1,039,886	103,754,915	3,126,290	106,881,205
1992/93 (3)	101,672,029	---	443,000	600,000	1,039,886	103,754,915	3,097,295	106,852,210
1993/94 (3)						106,498,294	2,547,635	109,045,929
1994/95 (3)						107,062,302	1,983,627	109,045,929
1995/96 (4)						115,381,011	2,070,447	117,451,458
1996/97 (4)						115,577,440	1,915,193	117,492,633

Notes: Figures are expressed in t.
 (1) EC-10
 (2) EC-10 plus Spain
 (3) EC-12 (with the new German Länder)
 (4) EU-15

Since the fall in production recorded in 1984 and 1985 proved insufficient to restore market balance, the Council decided in April 1986 on a further reduction of the total guaranteed quantities, to be spread over 1987/88 and 1988/89. Under this measure, the voluntary cessation of milk production was encouraged by granting to farmers who discontinued production an annual allowance of 6 ECU per 100 kg for seven years. If the envisaged 3% cut was not reached by means of this Community cessation scheme, the remaining quantity was to be obtained by an across-the-board reduction of individual producer quota. So, the guaranteed quantity was reduced by 2% in 1987/88, and by a further 1% in 1988/89, but excluding those quantities which had been allocated to countries from the Community reserve.

In addition, as a result of the Council decisions of 16 December 1986, a further production cut was sought from 1 April 1987 by a temporary across-the-board suspension of 4% of the quotas for the fourth period (1987/88), 5.5% for the fifth period (1988/89) and 4.5% for the three subsequent years. Dairy farmers received degressive income compensation financed by the EAGGF. In addition, a limited supplement to be made from national funds could also be granted by member states.

Meanwhile, the Council prolonged quotas for another 3 years until the end of March 1992. National references remained at the 1988/89 level, with the temporary suspension scheme continuing as outlined above. At the beginning of the milk quota year 1991/92, the milk quota system was extended to Portugal, which until then had benefited from a transitional period, and the reference quantities were adjusted in order to take into account German reunification. At the same time, as part of the decisions on the agricultural prices for 1991/92, the Council decided to make a further reduction of 2% in the guaranteed total quantities. To facilitate this cut and the mobilization of the requisite quantities for producers having entered into non-marketing or conversion

commitments at the time of the milk quota allocation (SLOM)¹⁾ or, depending on the member state, for producers whose situation continued to cause concern, a system of voluntary repurchase (with limited Community financing) was also decided in this context.

In Italy, which, in principle, opted for the A formula, special difficulties occurred in the effective application of the milk quota system from the beginning. The national authorities had laid down a legal framework for the collection of additional levies, but UNALAT, the association of producer groups which represented practically the whole dairy industry, had failed to apply it, and had in particular failed to allocate individual reference quantities to its members; amongst other reasons because production already exceeded the quota allocated to it.²⁾

In Greece, an overrun in production occurred in the 1988/89 milk year. Additional levies were charged to the milk industry by the Greek authorities in late 1992 for excess production in 1988/89, but were not collected immediately, and levies for 1990/91 and subsequent milk years were established with considerable delay. Greece was entitled to apply country-wide compensation, as it was authorised to deem an official body to be a group of purchasers.

In Spain, although individual reference quantities for deliveries were provisionally allocated in 1987, no system was established to permit additional levies to be collected. Following a re-assessment of production statistics in 1991, it transpired that production had substantially exceeded the national reference quantity, with excess deliveries amounting to some 1.5 mio t in 1990/91.

The situation in these three member states came to the fore in particular in the years 1991/92, as all three countries requested increases in their national guaranteed quantities, whereas the Commission proposals were in favour of a general cut in quotas. Spain and Italy asserted that, as a result of shortcomings in their national production statistics, production in the original reference year had been underestimated, and therefore higher national guaranteed quantities should have been claimed initially. All three asserted that structural changes, in particular rapid urbanization, had led to increased demand for milk and milk products, thus increasing the gap between demand and the national production quotas. However, the latter reason was not considered by the Commission as a valid argument for a quota increase.

In 1992, but before the final decisions on the reform of the CAP, the Council decided to maintain the guaranteed quantities for the period 1992/93 at the same level as in 1991/92. The suspension of reference quantities, which, until then had been temporary, became definitive and the wholesale quotas were correspondingly adjusted. The consolidated new legislation³⁾, maintaining the principles of the previous provisions, made certain adjustments, such as:

¹⁾ SLOM is the abbreviation for the Dutch terms "Slacht en Omschakelingsregeling Melkveebestand"; a national program for slaughtering and restructuring of the dairy cow herd introduced in 1979.

²⁾ A full re-assessment of production conducted in 1991 showed excess production of some 2.5 mio t in that year.

³⁾ Reg. (EEC) 2074/92 from the 30 June 1992, which was replaced on 28 December 1992 by Reg. (EEC) 3950/92.

- the individual reference quantities to be those available on the holding at 31 March 1993;
- the abolition of the two formulas for quota distribution;
- fixing of the additional levy at 115% of the target price, both for deliveries and for direct sales;
- permanent transfers between the two types of quota are possible at the producers duly justified request;
- the Community reserve was abolished and the quantities divided between the member states and incorporated into the global national quantities;
- the principle of temporary leasing of unused quotas was extended, with certain derogations;
- the quotas remained, in principle, linked to holdings, but with greater flexibility in certain cases for structural and objective reasons;
- the provisions on checks were tightened up, as were the rules ensuring payment of the levy due.

In the context of the 1992 CAP reform, the Commission proposed major changes for the milk sector (such as, for example, a further cut in milk quotas of 3%, a relatively substantial reduction in institutional prices of -10% to be compensated by an annual dairy cow premium linked to stocking rates, etc.)¹⁾. The Council, however, did not accept all these proposals and for the most part confirmed the changes already introduced into the market organization, by taking the following decisions:

- extension of the system of milk quotas until 31 March 2000, accompanied by simplification of the rules applicable;
 - an increase in the guaranteed quantities for Spain, Greece and Italy for 1993/94 on a provisional basis (see above);
 - the abolition of the coresponsibility levy from 1 April 1993;
 - a new framework regulation providing for the financing of measures to promote milk and milk products;
 - a 5 % cut in the intervention price for butter, spread over the marketing years 1993/94 (3%) and 1994/95 (2%),
- and, last but not least,
- the principle of a reduction of the total guaranteed quantities by a further 2% spread over the periods 1993/94 and 1994/95, depending on developments in the market for milk and milk products.

Concerning the last point, the Council decided not to implement these reductions having analysed the market in 1993, 1994 and 1995. Furthermore, the increases in Spanish, Greek and Italian quotas were confirmed. In its proposals for the 1995/96 price package, the Commission underlined that, although the current situation on the market for milk and milk products seems fairly balanced, this stability is still fragile, and cloaks a structural surplus which consistently requires large-scale intervention (including disposal measures for quite significant volumes). In order to improve the long term market situation, the Commission judged it essential to send a clear signal to producers that they should no longer seek to maximise the fat content of their milk and proposed, for this reason, a further reduction of 2% in the butter intervention price.

¹⁾ For more details on the 1992 reform proposals made by the Commission see documents COM(91) 100 final, COM(91) 258 final/3 and COM(91) 409 final.

The Council, however, decided to maintain the butter intervention price at the 1994/95 level.

In the context of the 1996/97 price package, no changes were made, in relation to the level of milk quotas or the institutional prices. During the discussions on the price package, member states' requests centered on an extension of the leasing period (until 31 March) and a quota increase for Greece (plus 150,000 t) and Spain (plus 1 mio t). Italy also requested an increase in its reference quantities. For 1997/98, quotas have been fixed at the same level as in the previous year, and the Commission proposed a roll-over of institutional prices in the context of the 1997/98 price package. Table 13 shows the level of milk quotas applied per member state, at present.¹⁾

Table 13: Milk reference quantities in the 1996/97 milk quota year per member state

Milk reference quantities per member state 1996/97						
	Reference quantities for deliveries to dairies		Reference quantities for direct sales		Total reference quantities	
	(000 t)	in % of total	(000 t)	in % of total	(000 t)	in % of total
Belgium	3109.639	2.69%	200.792	10.48%	3310.431	2.82%
Denmark	4454.639	3.85%	0.709	0.04%	4455.348	3.79%
Germany	27764.778	24.02%	100.038	5.22%	27864.816	23.72%
--- of which ex-GDR	6244.566	5.40%	8.801	0.46%	6253.367	5.32%
Greece	629.817	0.54%	0.696	0.04%	630.513	0.54%
Spain	5438.118	4.71%	128.832	6.73%	5566.950	4.74%
France	23749.650	20.55%	486.148	25.38%	24235.798	20.63%
Ireland	5235.723	4.53%	10.041	0.52%	5245.764	4.46%
Italy	9698.399	8.39%	231.661	12.10%	9930.060	8.45%
Luxembourg	268.098	0.23%	0.951	0.05%	269.049	0.23%
Netherlands	10988.039	9.51%	86.653	4.52%	11074.692	9.43%
Austria	2382.377	2.06%	367.000	19.16%	2749.377	2.34%
Portugal	1835.461	1.59%	37.000	1.93%	1872.461	1.59%
Finland	2384.327	2.06%	10.000	0.52%	2394.327	2.04%
Sweden	3300.000	2.86%	3.000	0.16%	3303.000	2.81%
United Kingdom	14338.375	12.41%	251.672	13.14%	14590.047	12.42%
EU-15	115577.440	100.00%	1915.193	100.00%	117492.633	100.00%

Note: Reference quantities after transfer "direct sales/wholesals" at the end of the quota year

As already mentioned, the milk quota legislation was completely revised in 1992. Important changes were introduced, in particular, from the view point of strengthening member state competence. Following on from the subsidiarity principle, the current legislation permits a significant margin of manoeuvre to member states, which is normally used. The most important aspects relate to quota management, as, for example, rules for the (permanent and temporary) transfer of quotas, handling of the national reserve, equalization of over- and under-production between producers, national adjustment programs, etc.

As far as the transfer of milk quotas is concerned, the reference quantities are, in general, attached to the land and cannot be freely traded. This means that, when a farm is sold or leased, milk quotas are transferred to the new owner or tenant. If a part of

¹⁾ The evolution of institutional prices is summarized in a separate table in the annex of this report.

the reference quantities is not transferred together with the farm, then this part is included in the national reserve for later re-allocation to other dairy farmers. Starting from the fourth year of the quota arrangements, farmers were allowed to lease temporarily a limited part of their quota to one or more other farmers. The transfer of (unused) quotas from one member state to another is not allowed.

The 1992 revision of the legislation confirmed in general these general rules, but introduced greater flexibility in certain cases. In order to continue with the restructuring of milk production and to contribute to improvements in the environment, certain exceptions from the general rule of tying quota to land were agreed. Member states were allowed to continue with national restructuring programs by handling the reference quantities in a more flexible manner but respecting objective criteria. Therefore, transfer of quotas without land is possible, but only either (a) on a limited regional basis, for certain categories of farmers and for structural reasons, or (b) under an individual prior authorisation scheme. The rules applied for transfer of milk quotas vary considerably from one country to another. While in some member states, the milk quota market is relatively unregulated (as, for example, in the UK and the Netherlands), there is in some others (France and Denmark, for example) a 100% administrative redistribution of quota released from farms that cease production.

Unfortunately, very little information on the value of quotas in the different member states (or even regions) is available at EU level. In general, the price of milk quotas (for purchase or lease) - and also the trade volume - depends not only on the milk price itself (or even more so on the margins on milk production) and the level of the additional levy. It also depends on the regulatory framework, such as, for example, transfer restrictions or provisions for the depreciation of expenditure for quotas. In this respect, the economic consequences can be quite different from one member state to another. It can be argued that a system of completely free tradable quotas could provide an economically optimal allocation of production rights as the most efficient dairy farmers with high margins should be best able to bid for available quota. However, there are some important arguments in favour of quota restrictions. The binding of the quota to land, for example, contributed significantly to maintaining dairying in less competitive areas, especially mountain and less-developed areas (locking-in effect) because production cannot freely respond to differences and changes in costs, technology or demand.

Originally, many dairy farmers were strongly opposed to the implementation of quotas but have since become strong supporters because of the additional revenue (windfall gains) provided by the sale or the lease of reference quantities. But very often, farmers fail to take account of the fact that the higher values ascribed to milk quota generally affect also the value for other fixed assets such as land. Since 1984, with continued cuts in the global reference quantities, the price for the transfer of permanent production rights increased much faster than the value of produced milk. The very limited restrictions on temporary quota transfers (leasing) have certainly resulted in a larger trade volume, but, in many cases to the detriment of permanent transfer in the form of quota sales. It has been the efficient dairy operations (with the highest margins) which have acquired most quota in recent years and become even more efficient.

In any case, rising quota values imply either higher fixed costs (if quotas are purchased as a permanent asset) or higher variable costs (through short-term lease or rent arrangements) for new entrants or those wishing to expand milk production and, therefore a reduction of competitive advantage for these dairy farmers. This argument will become more and more important over time against the background of an unavoidable and, from an economic point of view, also necessary structural change towards larger dairy holdings. On the other hand, the milk price support undoubtedly allows some smaller, less efficient producers to remain in the sector while creating a kind of entry barrier for new farmers. It also means that young entrants to farming have to find additional capital either to buy out other family interests (raising the problem of whether to use average or marginal quota values) or to acquire extra quota. It should be of course remembered in this context that the much more flexible new EU regulation of 1992 offers a number of options for handling this kind of problem at national level, especially as far as the possibility of national restructuring programs and the role of the national milk quota reserve are concerned.

2.3. Budgetary cost of the regime

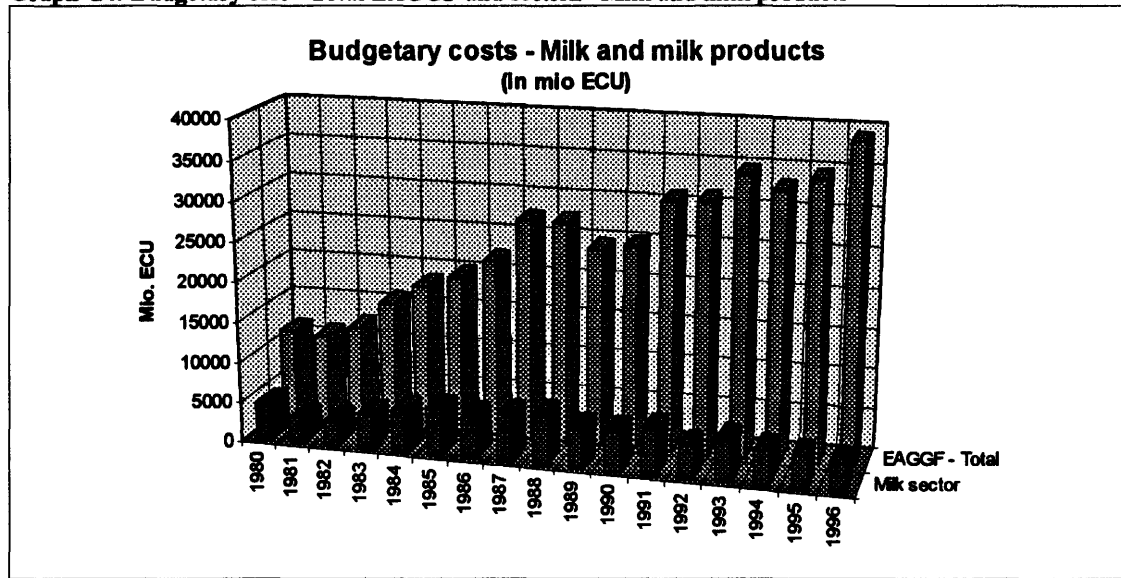
In 1980, spending on the milk sector accounted for almost 41% of total EAGGF expenditure. Up to 1989, it was the most costly sector of the Common Agricultural Policy (CAP), notwithstanding the fact that its share fell to around 20%. By 1995, this percentage was close to 12%. In 1996, it was only 9.2%. Even if part of this decline in relative importance can be attributed to the accession of countries where other agricultural sectors play a more dominant role, the absolute figures show clearly that the budgetary cost of the CMO for milk and milk products has not contributed to the increasing expenditure on the CAP. On the contrary, expenditure for milk in 1995 for 15 member states was lower than in 1980 for 9 countries.

Table 14: Budgetary cost of the CMO for milk and milk products

Budgetary costs - Milk and milk products														
Year	EAGGF total (Mio. ECU)	MLK 1)		Export refunds		Disposal measures 3)		Storage costs 4)		Other costs 5)		Financial contribution by milk producers		MLK 2)
		total (Mio. ECU)	In % of FEOGA total	total (Mio. ECU)	In % of Milk total	total (Mio. ECU)	In % of Milk total	total (Mio. ECU)	In % of Milk total	total (Mio. ECU)	In % of Milk total	total (Mio. ECU)	In % of Milk total	
1980	11292	4593.9	40.7%	2587.8	58.7%	1557.9	32.3%	513.1	10.7%	158.0	3.3%	-222.9	-4.8%	4816.8
1981	10952	3184.4	29.1%	1727.9	47.2%	1431.4	38.1%	328.9	9.0%	174.7	4.8%	-478.5	-13.1%	3662.9
1982	12371	3198.1	25.9%	1391.3	37.2%	1798.6	48.2%	306.7	8.2%	238.8	6.4%	-537.3	-14.4%	3735.4
1983	15786	4285.3	27.1%	1216.0	28.9%	2210.9	48.9%	1099.0	22.6%	286.8	6.0%	-527.4	-11.0%	4812.7
1984	18331	5224.7	28.5%	1726.4	28.9%	2411.8	40.4%	1605.9	28.9%	229.8	3.8%	-749.2	-12.8%	5973.9
1985	19728	5759.9	29.2%	1854.8	28.0%	2371.3	37.1%	1972.8	30.6%	198.3	3.1%	-637.3	-10.0%	6397.2
1986	22119	5232.9	23.7%	1982.1	38.3%	2302.0	38.7%	1497.5	28.2%	168.4	2.8%	-717.1	-12.1%	5950.0
1987	27482	5836.6	21.2%	2637.7	40.6%	2514.7	38.0%	1203.3	18.9%	152.9	2.3%	-672.1	-10.3%	6508.6
1988	27427	6143.2	22.4%	3149.6	48.9%	2084.4	31.1%	842.5	12.0%	633.9	9.4%	-567.2	-8.9%	6710.4
1989	24407	4987.1	20.4%	2868.6	48.6%	1617.0	27.9%	571.6	9.7%	820.0	14.0%	-890.2	-16.1%	5877.2
1990	25069	4955.9	19.8%	1930.8	36.4%	1556.3	29.3%	1081.6	20.4%	735.5	13.9%	-348.3	-6.8%	5304.2
1991	30961	5636.5	18.2%	2249.0	37.6%	1908.8	31.9%	1081.2	18.1%	749.9	12.9%	-352.4	-6.9%	5988.9
1992	31117	4006.8	12.9%	2056.2	47.0%	1827.7	41.6%	-188.5	-4.3%	679.4	16.9%	-368.0	-8.4%	4374.8
1993	34590	5211.2	15.1%	2287.5	41.8%	1762.4	32.0%	293.8	5.3%	1166.6	21.2%	-299.1	-5.4%	5510.3
1994	32970	4248.8	12.9%	1926.8	45.3%	1603.2	37.7%	226.0	5.3%	494.9	11.6%	-2.0	0.0%	4250.9
1995	34503	4028.7	11.7%	2267.1	56.1%	1531.3	37.2%	-40.1	-1.0%	359.9	8.7%	-89.4	-2.2%	4118.2
1996	39108	3582.0	9.2%	1605.2	42.5%	1508.6	40.0%	293.1	7.8%	368.9	9.8%	-193.7	-5.1%	3775.8

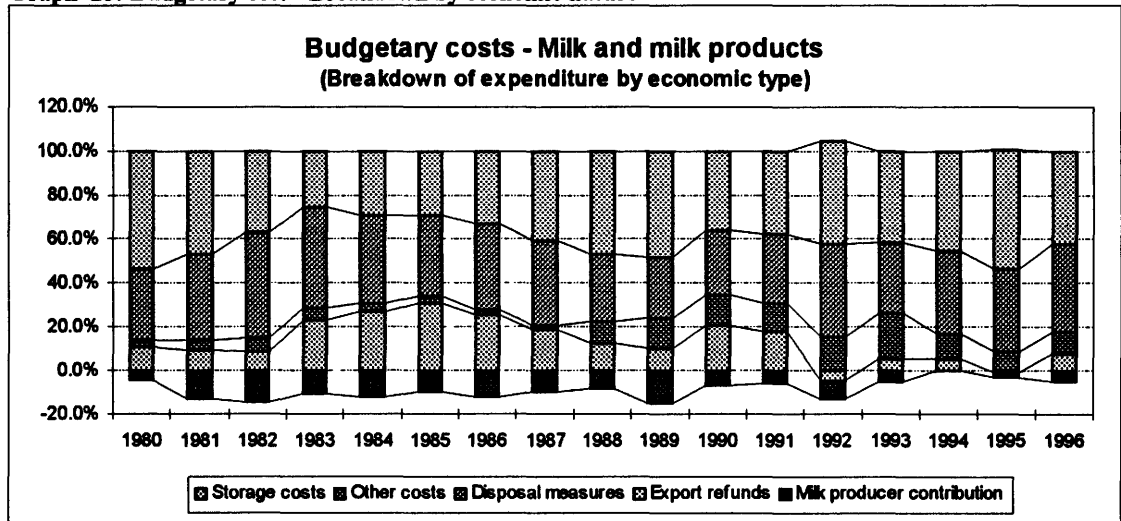
- Notes:
- 1) Net expenditure (i.e. after deduction of financial contribution of milk producers)
 - 2) Gross expenditure (i.e. before deduction of financial contribution of milk producers)
 - 3) Aid for skimmed milk and SMP, consumption aid and special disposal measures for butter, aid for processing and promotion, school milk
 - 4) Incl. private storage aids
 - 5) Definitive cessation or reduction of milk production, compensation for temporary suspension of milk quotas and surrender of milk quotas; other measures

Graph 24: Budgetary cost - Total EAGGF and section "Milk and milk products"



Within a total expenditure for the EAGGF Guarantee for 1996 of 39,108 mio ECU, milk and milk products accounted for 3,582 mio ECU. Of this, expenditure on export refunds amounted to 1,605 mio ECU (42.5% of total expenditures for the CMO milk and milk products), whilst that on the disposal of milk products amounted to 1,509 mio ECU (40.0%). Both categories remained the most important ones over the whole period 1980-96, despite some important fluctuations over time as far as the other budget headings are concerned, such as the big increase in storage costs in the periods 1983-87 and 1990-91. Since the suppression of the coresponsibility levy in 1993, the item "financial contribution by milk producers" concerns the additional levy (or superlevy) payments in the case of production above quota.

Graph 25: Budgetary cost - Breakdown by economic nature



3. MARKET OUTLOOK

3.1 Current world market situation and short term outlook

The current market situation in the dairy sector can be characterised as relatively stable. The world market is developing favourably and the period of shrinking world production, due to the collapse of the Eastern Bloc, seems to be at an end. In 1996, **world milk production** increased for the second consecutive year, with increases in most of the big producer regions.¹⁾ However, due to unfavourable climatic conditions and relatively high feed prices, the increase in production remained below that of 1995.

After rising for most of 1995, **international prices** for dairy products peaked by year end. Factors behind the buoyant prices of 1995 included the declining value of the US dollar relative to most other currencies, the surge in Russian imports to offset declining production, strong demand growth in many importing countries (particularly in Asia), unexpectedly strong domestic demand in several traditional dairy exporters and production levels below expectations in Australia and New Zealand early in the year, and in the United States during the second half of the year. Among the major dairy products, butter prices benefited most from these strong prices. After a steady decline for most of 1996, world dairy prices appear to have stabilised. There are even some signs of underlying strength, particularly in milk powder and cheese - not only in the short but also in the medium term.

For the main producer countries, USDA estimates **cow milk production** in 1996 at around 385 mio t, nearly unchanged from 1995.²⁾ Significant production decline in the former Soviet Union, and a small decrease in the United States were more than offset by increases in other regions, in particular South America, Oceania and India. According to USDA forecasts, cow milk production will rise slightly to 387 mio t (+0.6) in 1997. Projected increases in the United States, South America, Oceania and some Asian countries are expected to more than offset a further decline in the ex-USSR. In most countries, milk cow numbers continued to decline during 1996, but rising output per cow maintained production at a relatively stable level. This trend is likely to continue in 1997. For the major dairy products, only cheese production increased in 1996. Butter production was unchanged and output of non-fat dry milk (skimmed milk powder) was down. USDA expects a further decline in SMP production in 1997. Cheese and butter manufacture are likely to increase by, respectively, 2% and 1%.

International trade in the most important dairy products increased in 1995 despite the stronger prices. However, it seems that these did impact on the somewhat weakened trade flows in 1996. USDA estimates total **butter** exports in 1996 at 533,000 t, slightly below 1995, due to lower shipments by both the US and the EU. USDA predicts that exports in 1997 will rise to 572,000 t with Oceania and Argentina contributing most of the increase. US exports in 1996 and 1997 are estimated at historically low levels. On the import side, Russia is expected to increase imports from 235,000 t in 1996 to 245,000 t in 1997. No major changes are expected for the other main importing countries.

¹⁾ Total world cow milk production in 1996 is estimated by FAO at around 467.6 mio t, up by 0.9% from 1995. The same modest growth rate is indicated by FAO for total world milk production, estimated at 537 mio t in 1996.

²⁾ USDA: "Dairy: World Markets and Trade", published in January 1997.

Total **cheese** exports in 1996 are estimated at 967,000 t, slightly above 1995 levels. Rapid growth (+6.9%) is expected in 1997, particularly for Argentina, New Zealand and Australia. Brazilian imports were up sharply in 1995 as domestic importers raced to beat an expected tariff increase, but should now return to normal levels. USDA forecasts a modest increase in imports for Japan, the US and Switzerland.

Exports of **non-fat dry milk (SMP)** reached 1.1 mio t in 1995, but preliminary trade data for 1996 suggest a drop of around 200,000 t. US and EU exports were particularly affected by lower demand, especially from Mexico, Brazil and Japan. In 1997, exports are expected to recover about half the 1996 loss. USDA predicts the biggest increases for Australia and New Zealand, but has also announced the need to step up US Dairy Export Incentive Program (DEIP) activities in order to react to the recent change and expected evolution in international milk prices.

Finally, trade in **whole milk powder (WMP)**, which rose steadily up to 1995, saw a decline in 1996. A recovery is expected by USDA in 1997.

*3.2 World market perspectives*¹⁾

The FAO, in its analysis of the impact of the Uruguay Round Agreement, has estimated **world milk production** at 559 mio t by the year 2000. This represents an increase of around 22 mio t or 4.1% with respect to 1996. Consumption should broadly reflect this development. At global level, the growth in production is expected to result from both a rise in the number of cows and improved yields. In contrast to past trends, output is expected to rise primarily in the same areas as consumption. Higher production is also anticipated in a number of low-cost producing countries that ship unsubsidised exports.

After several years of decline, **production in the developed countries** stabilised somewhat since 1993, and is expected to rise slightly by 2 mio t in the period to the end of the century. Production in the EU and Canada is likely to decrease somewhat. Contracting production is expected to continue in the former centrally planned developed countries. The FAO forecasts relatively strong increases in output (almost 20%) in Australia and New Zealand, in response to increasing international demand. However, compared to the forecasts for these countries from other sources (USDA, OECD, ABARE, FAPRI, etc.), the FAO prognosis is relatively modest. Among the other big developed countries, FAO forecasts positive growth rates in the US (1.1%) and Japan (0.8%).

Milk production in the developing countries has steadily increased for several years. This trend is expected to continue, even intensify, in the coming years. FAO forecasts an average yearly increase in output of 2.9% over the period 1987-89 to 2000. India, the largest producer amongst the developing countries, with an expected growth rate of +3.7%, accounts for most of the increase. However, other Asian countries will also significantly increase milk output. More modest growth is projected in Latin America

¹⁾ This chapter summarises the main findings of the OECD Agricultural Outlook (an update is regularly published in spring each year) and an analysis carried out at the beginning of 1996 by FAO on the impact of the Uruguay Round Agreement. For the long-term perspectives, the Food and Agricultural Policy Research Institute (FAPRI) Baseline Projections and the United States Department for Agriculture (USDA) Agricultural Baseline Projections to 2005 (both concluded in February 1997) have been used.

and the Caribbean, partly in response to higher demand due to rapid urbanisation. In addition, several low-cost producing countries in South America are likely to benefit from an improvement in international trade conditions. By contrast, in Africa, difficult economic conditions coupled with inadequate feed supplies, are expected to continue to restrict dairy development.

According to the FAO, the overall level of **trade in milk and milk products** is not expected to change significantly as a result of the Uruguay Round, even though prices by the year 2000 are expected to be significantly higher than during 1987-89. However, there will be some redistribution in terms of regional origin and destination. The reduced volume of subsidised exports available to several developed countries will to an extent be offset by increased exports from Oceania. Some growth in export opportunities is likely to accrue to the developing countries, especially in Latin America. A decrease in the proportion of subsidised exports of milk and milk products is expected to result in higher prices which could have a moderately positive impact on global export earnings, but could limit imports by the developing countries.¹⁾ In contrast, imports by the developed countries should rise as a result of minimum access agreements under the Uruguay Round.

As far as total world **consumption of milk** is concerned, the FAO predicts a modest yearly increase of 0.5% between 1987-89 and 2000, more or less in line with total production. Consumption in developed countries is expected to fall slightly (-0.6%). In the developing countries, it will increase substantially by +2.6% per year. In the FAO forecasts, lower consumption in the **developed countries** in 2000 will be largely due to the contraction of demand in eastern Europe and the former USSR. Among the other developed countries, a significant increase is expected only for the US and Japan due to higher cheese and fresh product consumption. Japan will have one of the highest growth rates among the developed countries; nevertheless, per capita consumption in 2000 will reach only around 70 kg/head as against 190 kg on average for other developed countries with a long dairying tradition. In general, a continued decrease in per capita consumption of butter and milk fat in the developed countries will not be fully offset by an increase in demand for cheese and protein-rich fresh milk products.

For the **developing countries**, the FAO predicts a continuation of recent trends. Globally, consumption is expected to increase by 2.6% per year between 1987-89 and 2000. Consequently, the share held by these countries with respect to total world consumption will increase in this period from 30% to 39%. However, as they will make up around 80% of total world population by 2000, per capita consumption in the developing countries will remain relatively low. The FAO puts it at around 39 kg/head, or about a fifth of that in developed countries. The perspectives for consumption are most favourable in Asia and Latin America. Growing population and urbanisation, coupled with some increase in average incomes, will be the main factors underpinning rising consumption. Consumption of milk and milk products is projected to grow most rapidly in Asia, where economic growth is likely to be strongest. Other regions in the

¹⁾ Some other analyses have concluded that improved economic perspectives in some Southeast Asian and Latin American countries should stimulate not only internal consumption but also import demand. The FAO forecast seems to underestimate this possible development.

world, in particular Africa, should also see some improvements, but mainly due to higher population; per capita consumption could even decrease in some cases.

Most of these FAO findings are shared by the OECD in its most recent five-year assessment of trends and prospects in the major agricultural commodity markets. Nevertheless, there are some divergent points of view on some items and also more detailed analyses for individual milk products. Therefore, the main results of the most up-to-date **OECD agricultural outlook exercise** are also summarised as follows.¹⁾

After a period of near stability between 1991 and 1993, **milk production in the OECD area** picked up again in recent years. This upward trend is set to continue at a yearly average of around 1% between 1995 and the year 2001. By then, milk production in the OECD area is forecast to reach about 280 mio t. In countries where milk production is subject to a quota system (i.e. the EU, Norway, Switzerland and Canada), milk output is expected to remain close to current levels, provided that quotas are maintained. Thus, production growth is expected to be concentrated in those countries not subject to a quota system, and will be particularly strong in countries with a low level of support for the dairy sector, and where farmers can respond rapidly to new market opportunities.

In **Australia and New Zealand**, where farmgate prices are largely determined by world prices, the prospect of higher international prices for dairy products, as well as improved access to third country markets as a result of the GATT Uruguay Round Agreement, should stimulate milk production. Furthermore, OECD expects that dairy farming is likely to remain more profitable than beef and sheep farming, thereby stimulating switches to the dairy sector in some areas. In Australia, moreover, farmers are hoping to achieve substantial increases in milk yields based on genetic improvements and greater use of compound feed. According to the OECD, milk production is likely to rise by more than 30% in Australia (from 8.5 to 11.2 mio t between 1995 and 2001) and by about 19% in New Zealand (from 9.4 to 11.2 mio t).

According to the OECD, several factors will lead to relatively big increases in US milk production by 2001 (+7.8% or about 5.5 mio t compared to 1995). The OECD is anticipating wider use of the hormone rBST which is likely to translate into higher milk yields. In addition, the cost of coarse grain is likely to drop below its high 1995 level. Finally, the new farm legislation (FAIR Act) abolishes the regulations which, until now, have penalised farmers who increased their output. Dairy farmers, producing on a profitable basis, will be able to step up production, even with reduced price support. Moreover, dairy production can be expected to develop more rapidly in regions where it is most profitable (along the west coast in particular) because of the gradual abolition of guaranteed prices and the programmed cut-back in the number of milk marketing orders.

In **Mexico**, the implementation of support programmes for dairy production and the PROCAMPO programme, which aims to promote livestock rather than crop production, are expected to boost milk output by around 3 mio t or +38% from 1995 to 2001.

¹⁾ OECD: The agricultural Outlook 1997-2001, Paris 1997.

As for the **other world regions** (apart from the CIS and the CEECs), milk production is projected to increase more rapidly than in the OECD area. The rise in output is expected to be particularly marked in South America (Argentina, Chile and especially Uruguay) and Asia (Southeast Asia and India in particular). It will be driven by higher producer prices due to soaring domestic demand and the conclusion of regional trading arrangements.

OECD projects a slight drop in **butter production** in the OECD area and a steady expansion, in line with the rise in consumption, in the rest of the world. Overall, world production is expected to increase from 6.7 mio t in 1995 to around 6.9 mio t in 2001. Within the OECD area, butter output is expected to fall or level out in most of the main producing countries, with the exception of Australia where production should rise sharply driven by good export prospects. **Butter consumption** in the OECD area appears to be stabilising. It is expected to fall only slightly by -0.3% per annum between 1995 and 2001, as against -1% per annum between 1985 and 1995. Besides some changes in consumer preferences, the OECD explains this recent evolution mainly by the fall in prices relative to competing fats, as a result of the drop in butter support prices, especially in the US and the EU, as well as the rise in world prices for vegetable oils. In the rest of the world, butter consumption is forecast to grow by about 6% until the end of the forecast period. Rising demand is driven by vigorous income growth in Asia and Latin America, and by favourable prices relative to vegetable oils. In the CIS, consumption is expected to rise very slightly, while a slight fall is likely in the CEECs, where consumer preferences are shifting from basic dairy products to new ones such as yoghurt.

It is likely that there will be a relatively big rise in **SMP production** in Australia (due to good export prospects) and also in Mexico and, but to a lesser extent, in Japan (due to increasing internal demand in both countries). Nevertheless, total output in the OECD area is projected to fall by 8% between 1995 and 2001. This is mainly due to lower production in the US, the EU and Canada, where production should concentrate more on the more profitable manufacture of cheese and/or WMP. SMP output in the rest of the world, which accounts for only about 20% of total world production, is likely to remain more or less at the same level. Overall, world production of SMP is expected to decline by about -6% between 1995 and 2001, in line with the drop in world consumption. **Consumption of SMP** in the OECD area is forecast to fall by about 10% between 1995 and 2001, mainly due to reduced demand in the EU and the US. In Mexico, demand is forecast to pick up after the sharp fall in 1994, when the devaluation of the peso led to much higher prices for imported SMP. It is projected to be about 100,000 t or +50% higher than during the period 1991-1995. In the rest of the world, consumption will continue to fall, though this decline is expected to be offset by rising WMP consumption.

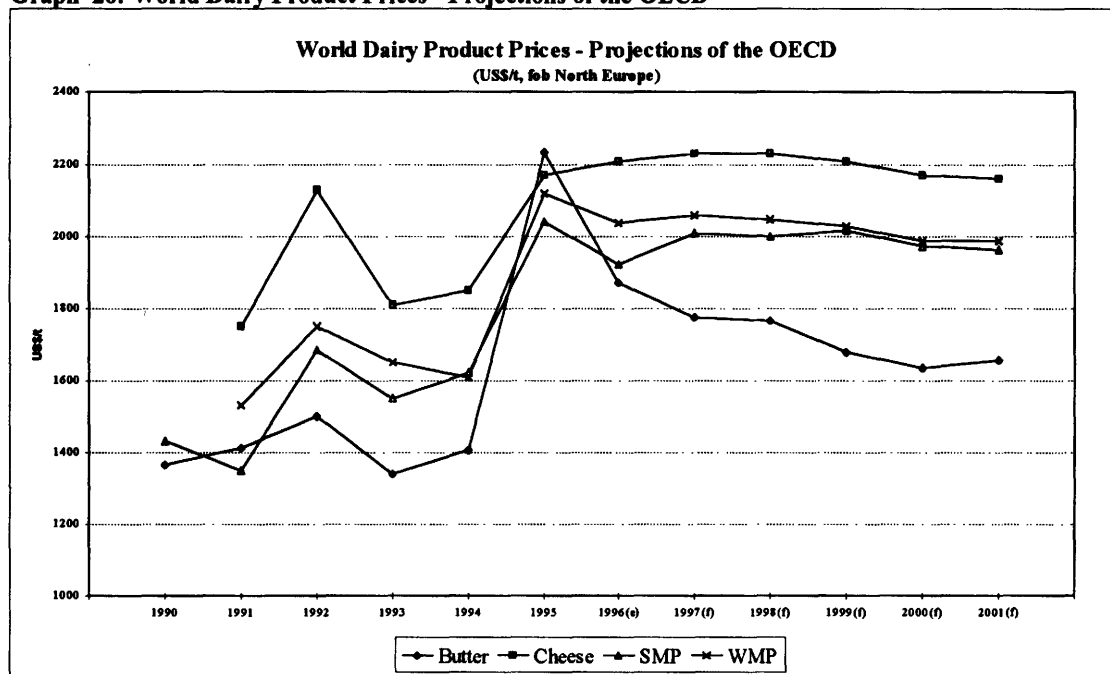
OECD prospects for **production and demand of WMP** are quite positive. World production is predicted to increase from 2.5 mio t in 1995 to 2.7 mio t in 2001, an increase of around 8%. The rise should occur both in the OECD area (mainly in New Zealand and, but to a lesser extent, the EU), and in the rest of the world. Outside the OECD area, especially in developing countries, WMP production is reflecting an increase in domestic demand.

Cheese production is expected to increase in all OECD countries over the forecast period. According to the OECD, cheese output is likely to increase most significantly in New Zealand and Australia from, respectively, 200,000 t and 240,000 t in 1995 to around 300,000 t in both by 2001. Production is set to increase steadily in the rest of the world also. Overall, world production by 2001 is forecast at 15.2 mio t, up by around 10% from 13.8 mio t in 1995. This development is due mainly to the strong increase in cheese consumption in nearly all regions of the world. In the OECD countries, **cheese consumption** has been growing at an average annual rate of almost 3% since 1980. This is expected to slow to about 1.5% between 1995 and 2001, given the relatively high per capita intake in the main consumer countries. For the EU, where consumption is greatest, a modest increase by around 1.2% (+0.8% per head) per year is expected. However, in some other OECD countries (New Zealand, Mexico), and in the rest of the world, demand will remain relatively strong.

Like the FAO, OECD underlines that the increase in **world dairy consumption** will be generated mainly by Asia and Latin America, due to higher incomes and changing consumer tastes. In addition, in some countries like China, urbanisation will play an important role. Consequently, consumption of dairy products in the non-OECD area (excl. the CIS) is expected to rise by 1-2% yearly on average between 1996 and 2001. In the OECD area, consumption of dairy products will probably change very little.

OECD predicts **world market prices** for dairy products in the medium term well above the levels of the first half of the 1990s. This is attributed mainly to the decline in subsidised exports resulting from the Uruguay Round Agreement and the reduction in surplus stocks. Together with strong demand in a number of non-OECD countries, especially Asia and Latin America, and a contraction in world production of SMP, this will lead to a closer balance between the supply and demand of dairy products.

The **price of cheese** is expected to remain firm, staying more or less at the high level reached in 1995, due to steadily rising demand in nearly all OECD countries, which represent the larger part of the market. Due to increased supply for export, the price will fall somewhat by the end of the forecast period and the OECD predicts that it will reach about US\$ 2200 per t by the year 2001, some 12% above the 1991-95 average. The **world price for SMP** is expected to remain steady, reaching US\$ 2000 per t in 2001. This is about 19% above its 1991-95 level. Lower import demand by non-OECD countries is compensated by higher imports and a fall in production in the OECD region. Furthermore, a shift from SMP to WMP exports by New Zealand is likely, and the Uruguay Round commitments for subsidised SMP exports are biting for some countries. **WMP world market prices** will also remain relatively high, at around US\$ 2000, because of strong demand. As for cheese, a small decline is predicted by the end of the forecast period. Finally, the **world market price for butter** is expected to continue to fall from its 1995 record level, which was due to a surge in import demand in Russia. After the sharp drop in 1996, butter prices are likely to gradually decrease reaching around US\$ 1650 per t in 2001. Nevertheless, this will still be about 4% above the 1991-95 average.

Graph 26: World Dairy Product Prices - Projections of the OECD

As international prices for cheese, SMP and WMP are expected to rise, the difference between domestic and world prices for these products will narrow. This, coupled with relatively small volumes of public stocks, especially in the US and the EU, could make prices of some dairy products more sensitive to changes in supply and demand in the international market. According to the OECD, mainly butter and SMP prices will be affected and might show quite important fluctuations, the extent of which is difficult to quantify.

For **trade in dairy products**, butter and SMP exports of OECD countries are likely to increase slightly between 1995 and 2001, while WMP exports should remain more or less stable. Cheese exports however are set to rise steadily. This OECD forecast is based on a number of factors. As far as butter is concerned, policy reforms in OECD countries have brought about lower public stocks and thus lower export availability. In addition, production growth in non-OECD countries is expected to outpace growth in consumption, reducing the import requirements of this region.¹⁾ On the other hand, import demand is likely to increase in certain other OECD countries. The expected drop in SMP import demand in the rest of the world, where there is a tendency to substitute WMP for SMP, will be more or less compensated by higher imports by some OECD countries, mainly Mexico and Japan. In general, trade among non-OECD countries is expected to grow, while imports of dairy products by the poorest developing countries, especially those in Africa, are expected to decline.

As already pointed out above, the OECD expects that Uruguay Round commitments on subsidised exports and improved market access are likely to shift market shares to countries with low level of support for their dairy industry and liberal milk supply policy (no quota restrictions, etc.). In addition, this shift in market shares would reflect different export strategies on the part of Australia and New Zealand. Unlike Australia, where the objective is to increase exports of all types of dairy products, especially to

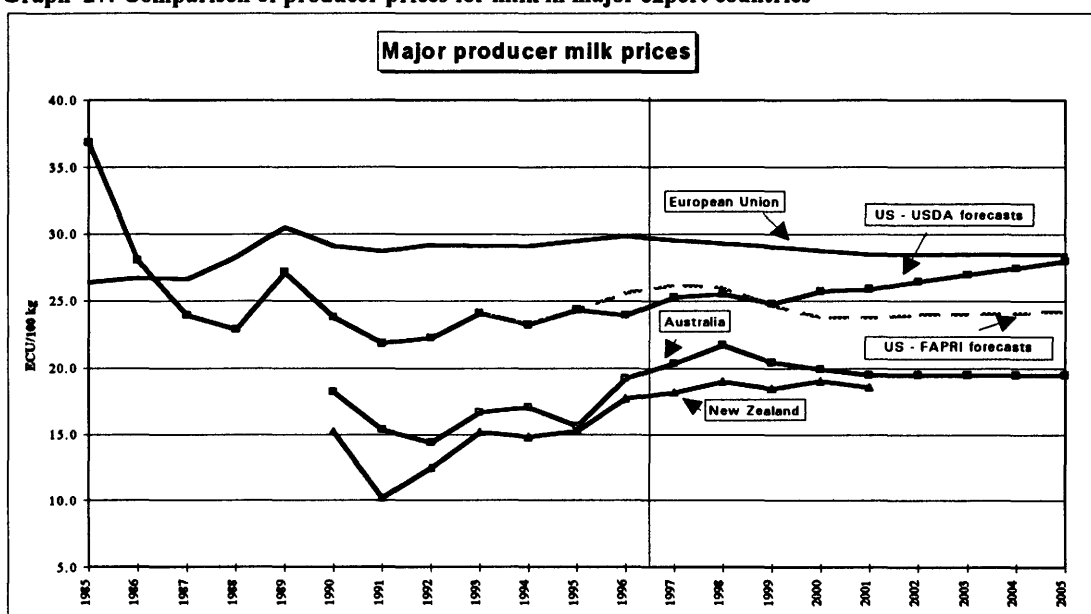
¹⁾ In the OECD forecast, net imports of butter from the CIS are assumed at 180,000 t between 1996 and 2001.

Asian countries, New Zealand is expected to promote and increase sales of products for which demand and price prospects are brightest, namely cheese and WMP. Overall, according to the OECD experts, the EU will lose market share to Oceania for nearly all dairy products. The cheese sector, in particular, seems to be affected. The US and Canadian market shares are not expected to change substantially.

As regards the **long-term prospects** for the dairy sector, recently published analyses by the USDA and FAPRI, covering the period up to the year 2005/06, tend in general to confirm the main findings of the OECD medium-term exercise, and indicate that the above-mentioned trends are likely to continue in the long-term. Production of milk and dairy products, as well as exports, are set to increase significantly in Oceania, while in the EU only the cheese sector will grow further. Quite important increases in world trade are likely over the next ten years, but the scope for growth in EU exports is very limited. Only in the case of butter, an increase in EU exports seems likely. The main beneficiaries of this expansion of world markets will be Australia and New Zealand. No major changes are expected for the US and Canada.

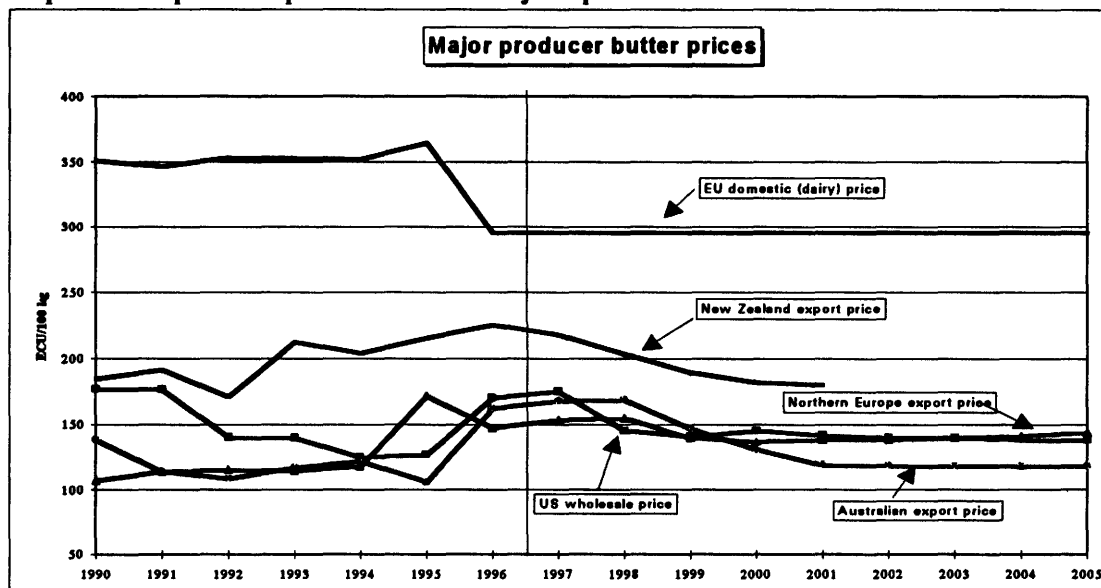
The following table and graphs show the prices for the main dairy products in the EU and other major exporters.¹⁾ Despite the increase recorded in recent years, milk producer prices in Australia and New Zealand remain well below prices in the US and, in particular, the EU. The price gaps, although decreasing over the forecast period, are projected to remain relatively big. According to the FAPRI forecasts, the EU milk price, assuming unchanged support prices, would still be nearly 20% higher than the US price. The USDA, however, predicts a strong increase in US milk prices, bringing them close to EU levels by the end of the forecast period. For butter, the differences between EU prices and those in other countries are much greater and are expected to increase further by the year 2000. However, prices for SMP are expected to move closer in the future.

Graph 27: Comparison of producer prices for milk in major export countries

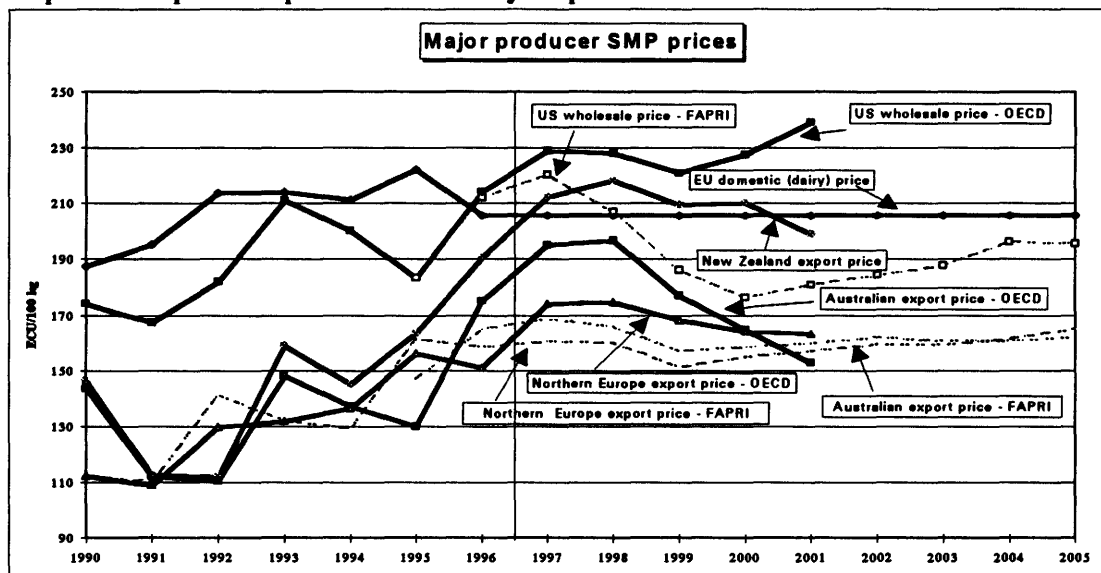


¹⁾ International price comparisons are difficult to make due to over or undervalued exchange rates, differences in qualities and representativity, etc. Nevertheless, they can give an impression of the order of magnitude of the differences in competitiveness.

Graph 28: Comparison of prices for butter in major export countries



Graph 29: Comparison of prices for SMP in major export countries



Graph 30: Comparison of prices for cheese in major export countries

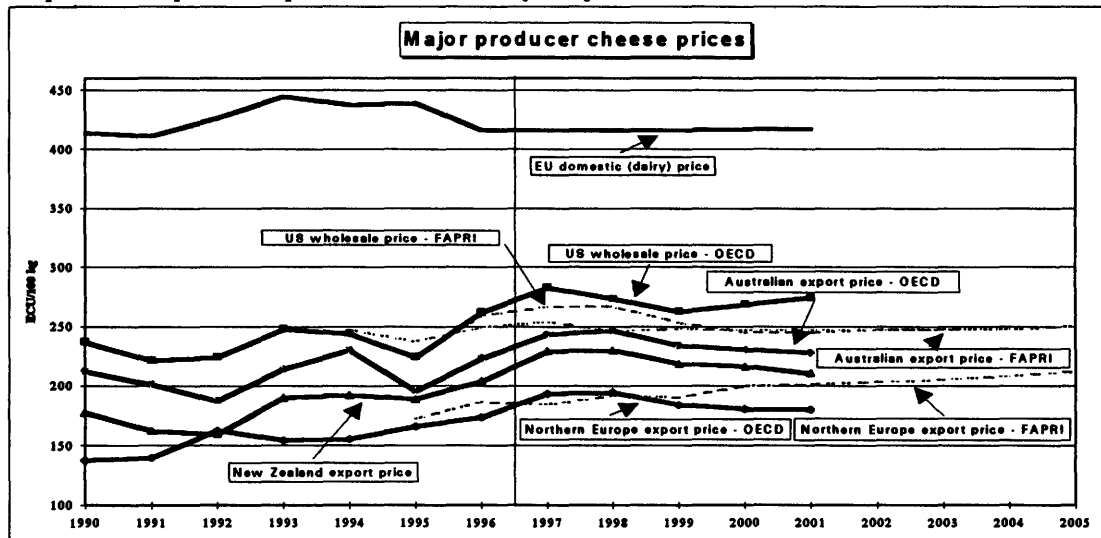


Table 15: Comparison of dairy prices in major export countries

		Dairy prices major producers								
ECU/100 kg		1990	1991	1992	1993	1994	1995	1996(e)	2000(f)	2005(f)
MILK										
	producer price									
EU	3.7% fat	29.1	28.7	29.2	29.1	29.1	29.5	29.8	28.8	28.5
US	all milk average	23.8	21.8	22.2	24.1	23.2	24.3	23.9	25.7	28.0
New Zealand	all milk/av. farmgate	15.2	10.2	12.5	15.2	14.8	15.3	17.7	19.0	NA
Australia	weighted av. all milk	18.2	15.4	14.4	16.7	17.1	15.6	19.2	19.9	19.5
BUTTER										
EU	wholesale, 82% butterfat	351.2	346.6	353.6	353.1	352.0	364.8	295.4	295.4	295.4
US	wholesale, grade A	176.8	176.7	140.2	140.0	124.9	127.2	169.9	145.0	138.0
New Zealand	exp. pr. (unit value fob)	184.7	191.7	170.9	212.4	203.8	215.5	225.5	181.9	NA
Australia	exp. pr. (unit value fob)	138.4	113.8	108.7	116.9	122.1	105.7	162.3	130.9	118.2
SMP										
EU	wholesale	187.5	195.1	213.6	213.9	211.3	222.0	205.5	205.5	205.5
US	wholesale (non fat dry milk)	174.1	167.2	181.9	210.9	200.0	183.3	214.0	227.5	258.4
New Zealand	exp. pr. (unit value fob)	146.3	112.8	112.2	159.1	145.0	163.5	190.6	209.9	NA
Australia	exp. pr. (unit value fob)	143.4	112.1	110.5	148.1	137.1	130.1	175.2	164.7	155.0
CHEESE										
EU	Emmental (Koin)	414.0	411.2	426.4	444.6	437.3	439.0	416.0	417.0	NA
US	wholes. Am. (Wisconsin)	236.6	221.3	224.0	247.6	243.7	224.1	262.0	268.3	280.2
New Zealand	exp. pr. (unit value fob)	177.3	162.2	159.5	189.8	192.1	188.7	203.8	216.3	NA
Australia	exp. pr. (unit value fob)	212.0	201.3	187.6	214.1	230.3	195.6	223.1	230.5	228.8
exchange rate	US\$/ECU	1.273	1.239	1.298	1.171	1.190	1.306	1.271	1.200	1.200

Notes: EU prices 1990-96 Eurostat, EU prices 2000 and 2005 for milk: 92% target price, for butter: 90% interv. price, for SMP: interv. price, for cheese: OECD projections
 US prices 1990-95 USDA, US milk price projection: USDA; butter, smp and cheese: OECD (until 2001) and FAPRI projections (2001-2005)
 New Zealand and Australia: OECD (until 2001) and FAPRI (2001-2005) projections

3.3 EU market forecasts

For the medium- and longer term outlook for the milk sector in the EU, it has been assumed that the status-quo will prevail, that milk quotas will remain unchanged during the forecast period and that actual deliveries will adapt to the reference quantities. It is also assumed that milk fat content will increase further, reducing the quantities which can be delivered to dairies without the additional levy penalty. Furthermore, the delivery ratio is expected to continue to increase slightly as in the past.

On these assumptions, **cow milk production** is forecast to decrease from an estimated 121.6 mio t in 1996 (a year characterised by production over quota) to around 120.4 mio t in 1998, mainly due to adjustments to the reference quantities. Subsequently, production is expected to decline slightly each year to reach about 119.4 mio t by 2001 and about 118.1 mio t by 2005. Of this quantity, between 93.5% and 94% will be delivered to dairies. The remainder will be used on farm and for direct sales. **Deliveries of cow milk** are estimated at 111.8 mio t in 2001 and 111.0 mio t in 2005. The likely decrease is mainly due to adjustments to take into account the actual situation in some member states, where deliveries are above the reference quantities, and for the projected further increase in milk fat content.

The downward trend in the **number of dairy cows** is expected to continue. On the assumption that milk yields will grow by around 1.75% per year (in line with past trends), the dairy cow herd is forecast to drop from 22.1 mio head at the end of the year 1996 to around 19.9 mio by 2001 and 18.4 mio by 2005.

Based on consumption trends and the estimated evolution of input coefficients for individual dairy products (i.e. the quantity of milk needed to produce individual dairy products), **global demand for milk** (incl. animal feed), expressed in whole milk equivalent, is expected to decrease from 111.8 mio t in 1995 to 110.4 mio t in 2001

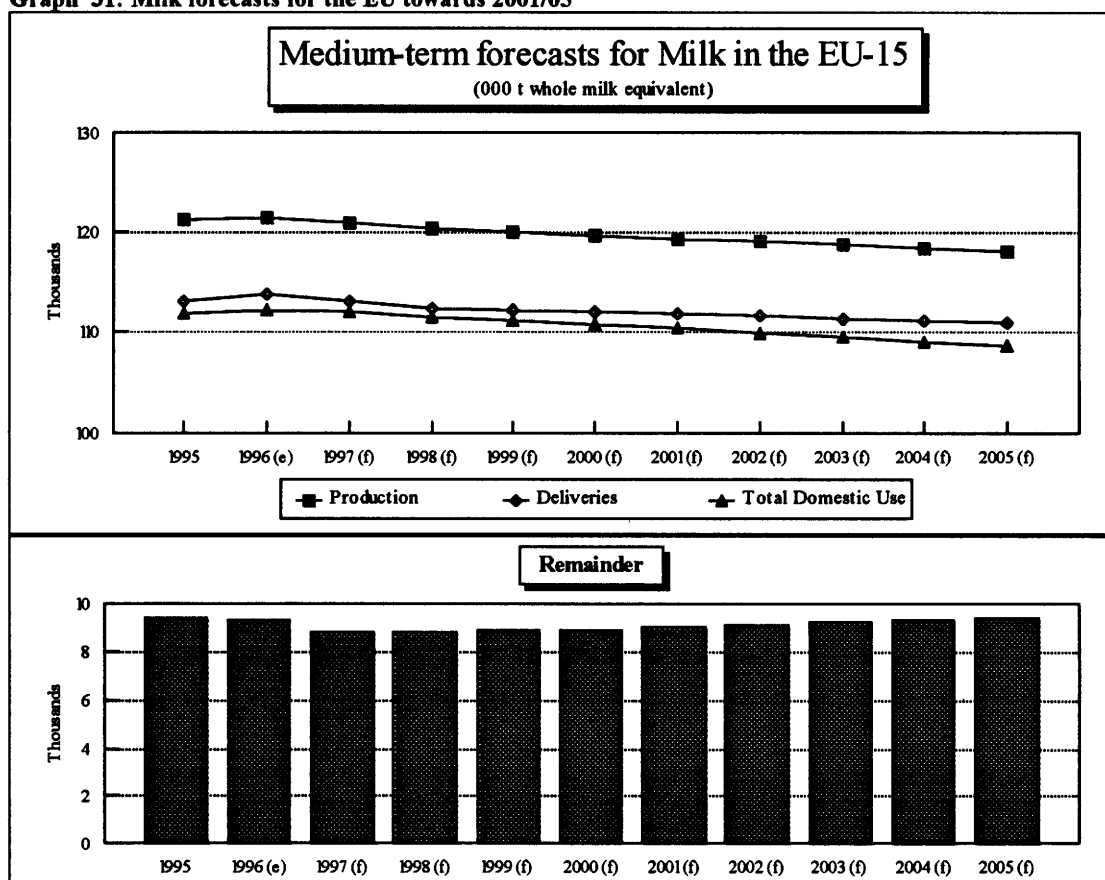
and around 108.7 mio t in 2005. These figures take into account declining consumer uptake of certain dairy products (notably butter) as well as increasing demand for other items, such as cheese and fresh products. On-farm consumption (animal feed) should also drop in line with the expected decline in cattle numbers.¹⁾

Table 16: Milk forecasts for the EU towards 2001/05

Whole Milk	1995	1996 (e)	1997 (f)	1998 (f)	1999 (f)	2000 (f)	2001 (f)	2005 (f)
Production (000 t)	121245	121553	120908	120356	120038	119720	119402	118137
Deliveries (000 t)	113114	113831	113107	112451	112243	112036	111828	110997
Total Domestic Use (000 t)	111797	112205	112117	111513	111156	110817	110378	108707
Remainder (000 t)	9448	9348	8791	8843	8882	8903	9024	9430
Milk yield (kg/cow)	5311	5411	5506	5602	5700	5800	5902	6326
Number of Dairy Cows (000 head)	22555	22098	21603	21135	20716	20306	19904	18373

Note: The remainder (including changes in stocks and net exports) is calculated as follows: Total production - Domestic use of whole milk (converted from consumption of individual milk products) - Feed use on farm.

Graph 31: Milk forecasts for the EU towards 2001/05



These forecasts on production and consumption indicate a surplus (reflecting the whole milk equivalent of net exports as well as stock changes of the different dairy products) of around 9.0 to 9.5 mio t in the 1996-2005 period, with a slight decrease in

¹⁾ The result for global demand for milk should be interpreted with caution due to some rough estimates having been necessary in order to obtain results for the three new member states and some problems of data quality in the dairy sector for EU-12 (where a 1% error represents more than 1 mio t of whole milk equivalent).

the short term but with a tendency to increase once again at the end of the forecast period.¹⁾

Balance sheets for the most important dairy products (butter, cheese and skimmed milk powder) are presented below. These balance sheets take into account import and export commitments under GATT. No further changes in the commitments have been assumed for the period 2001-2005. It is further assumed that production of these products is essentially demand driven (internal demand plus exports), but some adjustments have been made in order to incorporate likely responses within dairy manufacture due to potential GATT constraints in the cheese sector. Therefore, butter and SMP production forecasts incorporate some residual elements.

Table 17: Cheese balance sheet for the EU 1995-2001/05

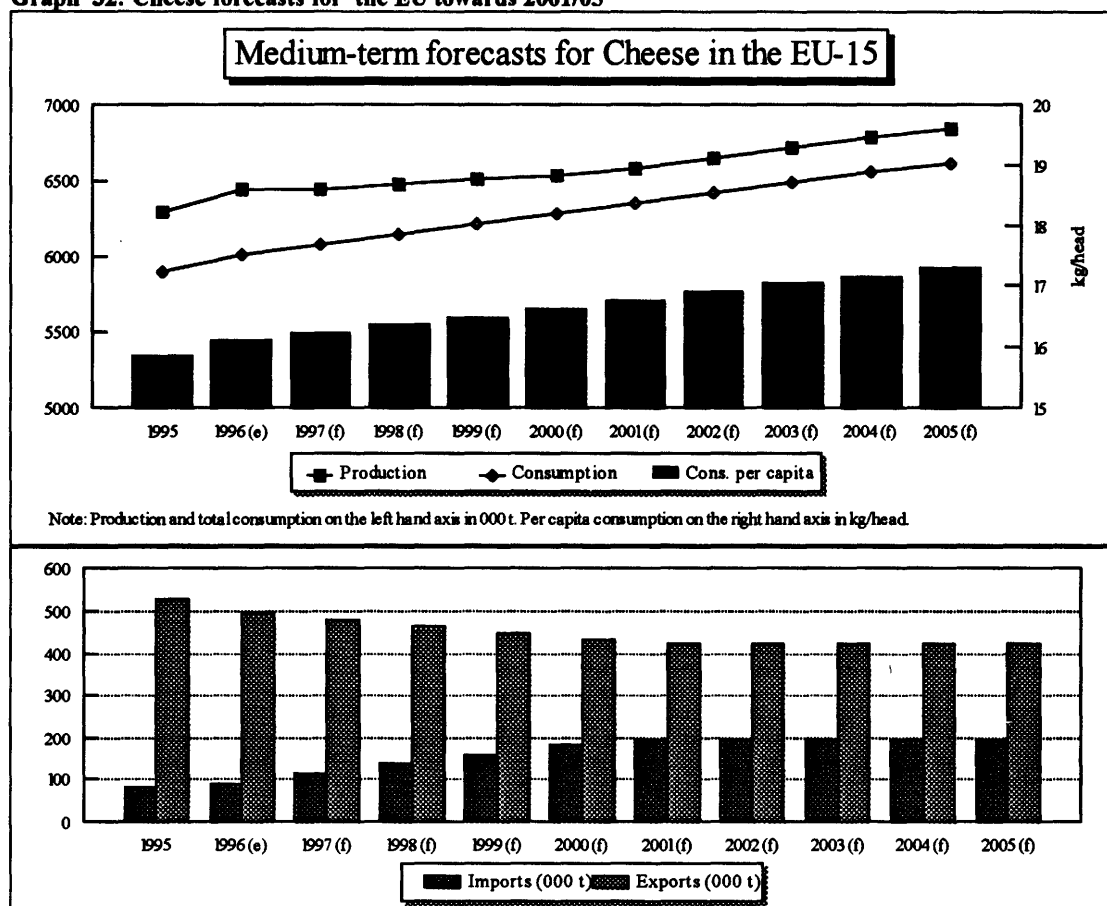
Cheese	1995	1996 (e)	1997 (f)	1998 (f)	1999 (f)	2000 (f)	2001 (f)	2005 (f)
Production (000 t)	6291	6445	6446	6476	6506	6535	6580	6842
Consumption (000 t)	5894	6013	6081	6150	6218	6286	6353	6615
--- per capita (kg)	15.8	16.1	16.2	16.4	16.5	16.6	16.7	17.3
Imports (000 t)	83	90	114	137	160	183	194	194
Exports (000 t)	528	495	479	463	448	432	421	421
Stock changes (000 t)	-48	27	0	0	0	0	0	0
Public stocks (private aided stocks)								
Beginning stocks (000 t)	103	115	121	121	121	121	121	121
Ending stocks (000 t)	115	121	121	121	121	121	121	121

For **cheese**, **domestic use** is expected to continue to increase, but more modestly than in the past. Per capita consumption is forecast to rise from 15.8 kg/head in 1995 to 16.7 kg/head in 2001 and 17.3 kg/head in 2005. This represents an increase of around 0.8% per year. Taking into account the predicted modest growth in population, total consumption of cheese should increase by around 1.1% annually until 2000 and by around 1% per year subsequently. For **exports**, it is assumed that the reduction in subsidised exports due to the GATT commitments can only be partly compensated by an increase in non-subsidised exports. For **imports**, the figures presented in the balance sheet are based on the assumption that the actual level of current access will be maintained and that, in addition, imports of cheese under GATT minimum access and other market access agreements will increase.

Due to the constraining nature of the GATT commitments for cheese, scope for further growth in the cheese sector is limited. **Production of cheese** is still rising but at a lower rate than internal consumption. It seems likely that there will be some kind of adjustment in the structure of dairy production. Cheese production will further absorb increasing quantities of milk, but less compared to a situation without the above mentioned constraints. It has been assumed that this part of milk, which would normally be allocated to cheese production, will be used by dairies for the manufacture of other dairy products, in particular for butter and skimmed milk powder (which can be sold into intervention).

¹⁾ In addition, as noted already, a significant part of internal consumption is subsidised. In 1995, for example, internal subsidised consumption amounted to around 11 mio t of milk equivalent.

Graph 32: Cheese forecasts for the EU towards 2001/05



In the case of **butter**, domestic **consumption** is likely to continue to fall but more slowly than in the past. Per capita consumption is forecast to drop from 4.7 kg/head in 1995 to 4.4 kg/head by 2001 and 4.2 kg/head by 2005. This represents an annual decrease of around -1.0%. Total consumption of butter should fall by around -0.7% per year until 2000 and by -0.8% subsequently. These forecasts are essentially based on past trends, but take into account the slower rate of decline in more recent years.

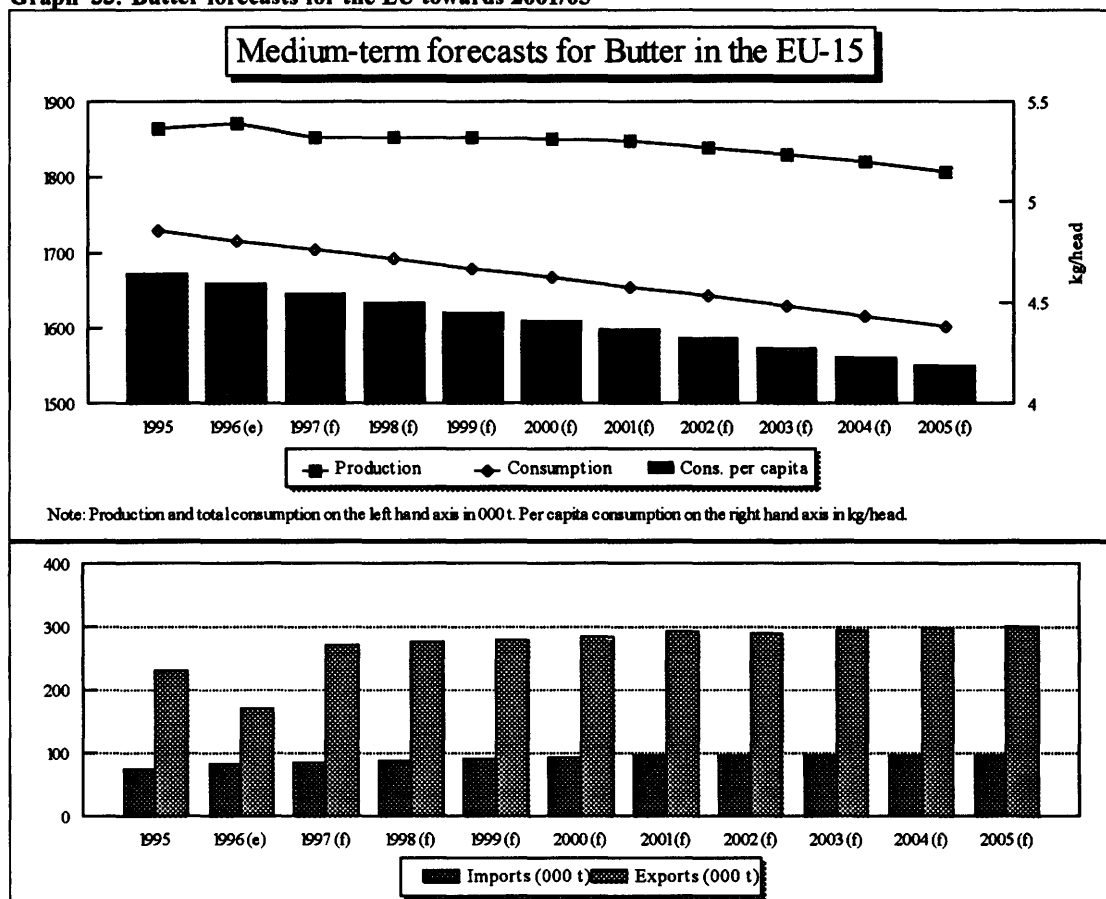
Table 18: Butter balance sheet for the EU 1995-2001/05

Butter	1995	1996 (e)	1997 (f)	1998 (f)	1999 (f)	2000 (f)	2001 (f)	2005 (f)
Production (000 t)	1864	1870	1852	1852	1851	1849	1847	1807
Consumption (000 t)	1728	1716	1704	1692	1680	1668	1655	1601
— per capita (kg)	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.2
Imports (000 t)	72	80	83	86	89	92	95	95
Exports (000 t)	229	170	270	275	280	285	293	301
Stock changes (000 t)	-21	64	-39	-29	-20	-12	-6	0
Public stocks (intervention and private aided stocks)								
Beginning stocks (000 t)	118	85	107	68	39	18	7	0
Ending stocks (000 t)	85	107	68	39	18	7	0	0

Butter production is expected to remain relatively stable over the 1997-2001 period and to fall slightly afterwards. **Imports** of butter should increase by around 15,000 t due to the GATT agreement (increase in minimum access tariff quotas) and other import commitments. On the **export** side, the margin to fulfil GATT commitments is more than sufficient. Nevertheless, relatively high exports (around 300,000 t at the end

of the forecast period) are necessary in order to keep intervention stocks down. According to some market experts, the maximum volume of butter that could be disposed of on the world markets would be limited at around 250,000 t per year. If this holds true, other market outlets must be found for around 2.5 mio t of milk during the period 1997-2001 and for even more in subsequent years.

Graph 33: Butter forecasts for the EU towards 2001/05



Finally, for **skimmed milk powder**, forecasts indicate a further drop in **consumption**, mainly in animal feed use, while human consumption is projected to remain more or less stable. Due to lower availability of milk and increasing use of skimmed milk in the manufacture of other dairy products (fresh products, cheese), **SMP production** is likely to decline also, but to a lesser extent than consumption.

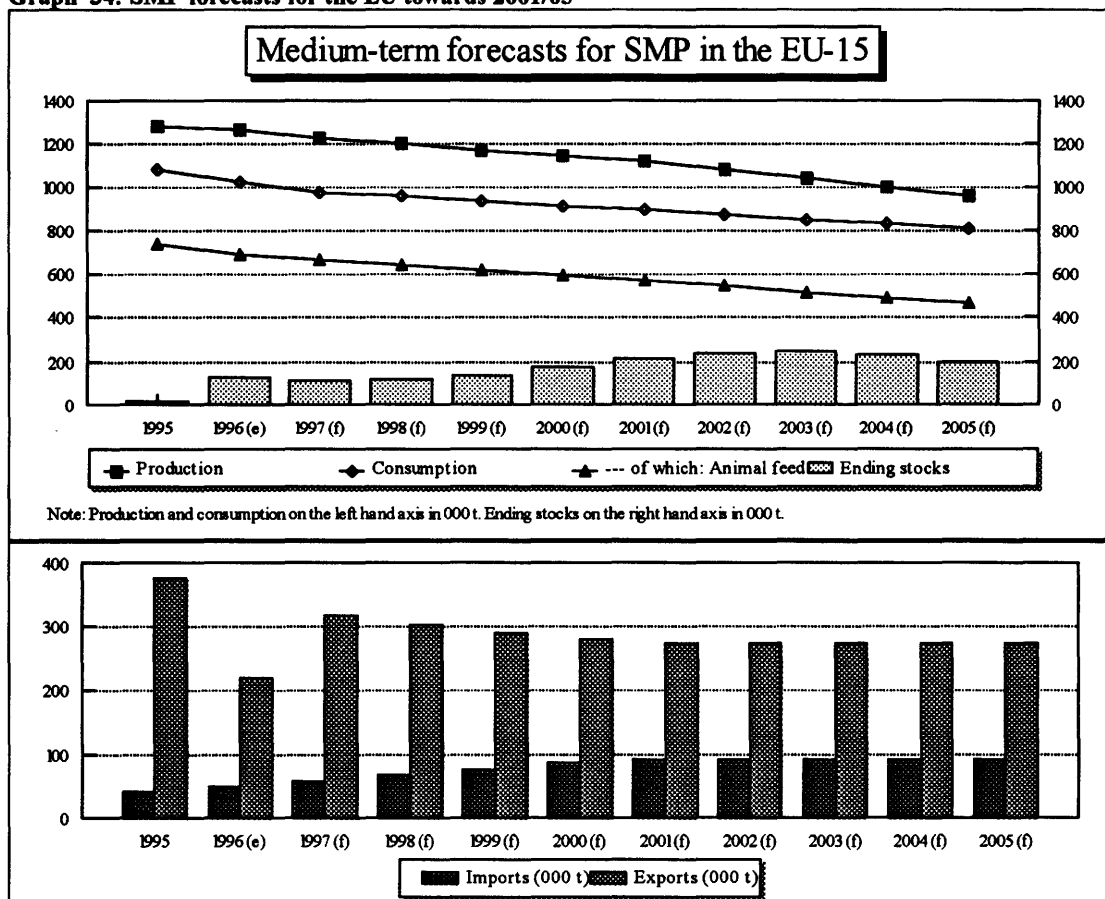
Table 19: SMP balance sheet for the EU 1995-2001/05

SMP	1995	1996 (e)	1997 (f)	1998 (f)	1999 (f)	2000 (f)	2001 (f)	2005 (f)
Production (000 t)	1276	1260	1224	1197	1171	1145	1119	961
Consumption (000 t)	1084	1028	979	958	937	916	895	811
— of which human consumption	348	334	310	314	318	322	326	341
— other (animal feed)	736	694	669	644	619	594	569	470
Imports (000 t)	42	50	58	67	76	86	92	92
Exports (000 t)	376	220	316	304	291	279	273	273
Stock changes (000 t)	-142	62	-13	2	19	36	43	-31
Public stocks (intervention and private aided stocks)								
Beginning stocks (000 t)	72	14	125	113	115	134	170	228
Ending stocks (000 t)	14	125	113	115	134	170	213	197

Note: Figures include buttermilk powder

On the other hand, imports of SMP are expected to increase (due to GATT minimum access and other market access commitments), while subsidised exports are limited. Excluding the possibility of exports without refunds, the forecasts envisage a situation where intervention stocks for skimmed milk powder tend to increase as the GATT commitments on subsidised exports become binding.

Graph 34: SMP forecasts for the EU towards 2001/05



The following table summarises the medium-term forecasts on production and consumption for the **other main dairy products**. Consumption forecasts for the individual products are based on trends for domestic use per capita. For production, which is mainly demand driven, the final figures have been established following checks against a global balance on supply of milk and its use in dairies. This simplified approach seems justified in most cases because a relatively stable ratio of production over consumption can be observed for most of the products under review.

Consumption of fresh products will continue to rise, but more slowly given the already high level of nearly 104 kg/head. **Domestic use of other milk powder** (mainly whole milk powder) is also expected to increase slightly, while there is a strong upward tendency in internal demand for cream. Finally, **consumption of concentrated milk** is expected to continue to decline further.

As with cheese, there is GATT pressure for the category “**other milk products**”. The volume of subsidised exports must be reduced from 1.185 mio t (all products taken

together) from July 95/June 96 to 958,100 t by July 2000/June 2001. Expressed in milk equivalent, this represents a volume of about 1.2 mio t.

Table 20: Forecasts for other main dairy products for the EU towards 2001/05

Fresh Products	1995	1996 (e)	1997 (f)	1998 (f)	1999 (f)	2000 (f)	2001 (f)	2005 (f)
Production (000 t)	38891	38791	38906	39067	39227	39386	39543	40129
Consumption (000 t)	38554	38555	38713	38872	39032	39190	39346	39929
— per capita (kg)	103.8	103.5	103.6	103.7	103.8	104.0	104.1	104.6
Cream	1995	1996 (e)	1997 (f)	1998 (f)	1999 (f)	2000 (f)	2001 (f)	2005 (f)
Production (000 t)	1483	1482	1522	1564	1605	1646	1688	1854
Consumption (000 t)	1406	1411	1450	1489	1528	1568	1607	1766
— per capita (kg)	3.8	3.8	3.9	4.0	4.1	4.2	4.3	4.6
Concentrated Milk	1995	1996 (e)	1997 (f)	1998 (f)	1999 (f)	2000 (f)	2001 (f)	2005 (f)
Production (000 t)	1299	1275	1254	1247	1240	1233	1226	1195
Consumption (000 t)	998	989	984	978	973	967	962	937
— per capita (kg)	2.7	2.7	2.6	2.6	2.6	2.6	2.5	2.5
Other Milk Powder	1995	1996 (e)	1997 (f)	1998 (f)	1999 (f)	2000 (f)	2001 (f)	2005 (f)
Production (000 t)	988	933	954	978	1002	1027	1051	1147
Consumption (000 t)	442	454	466	477	489	501	513	560
— per capita (kg)	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5

Note: Cream is excluded from fresh products. Other milk powder comprises whole milk powder, partly skimmed milk powder and cream milk powder.

CONCLUSIONS

The dairy sector, which is the most important agricultural activity in almost all EU member states and in the EU as a whole, experienced major changes since the introduction of its Common Market Organisation (CMO) in 1968. The most significant change was certainly the implementation of the milk quota system in 1984. At that time, the sector was suffering from a serious market imbalance, which translated into huge intervention stocks of butter and SMP, and laid a heavy burden on the EAGGF budget.

Strong supply control measures, tightened-up intervention rules, and lower support prices have contributed to improve market balance and to ensure budgetary control in the milk sector. In general, the current market situation is quite stable, notwithstanding some problems for SMP (mainly due to the BSE crisis in the beef sector) and for cheese, where the impact of the GATT Uruguay Round has begun to be felt. However, the EU milk sector is still characterised by a significant structural surplus, which has to be exported (the bulk with subsidies) or stocked. In addition, a significant part of internal consumption is subsidised by means of special disposal measures, spending on which represents around a third of the market price. Producer prices, and also the income of dairy farmers, depend mostly on prices to absorb excess production in the form of butter and SMP, by intervention or by internal disposal measures.

The medium and long-term outlook for the EU dairy sector does not indicate major changes compared to the current situation. Nevertheless, the sector is likely to come under increased pressure in the years ahead. Overall, internal demand is not expected to increase but rather to decline. On the external front, for some key dairy products, market access is increasing (higher volumes combined with lower tariffs), and subsidised exports are limited. Although there is some scope for EU exports without refunds, for example for certain cheeses, yoghurt, etc., this will not be sufficient to fully compensate for the inevitable reduction in subsidised exports, and additional imports.

World markets for dairy products are expected to expand, with prices developing favourably in the medium and long-term. However, according to all market analysts, the main beneficiaries of this improved world market situation will be countries with low production costs and a low level of support for the dairy sector, where production can evolve freely and, where as a result, farmers can respond rapidly to new market opportunities. Overall, it is expected that the EU will lose market share, mainly to Australia and New Zealand, for nearly all dairy products. Although the differences between domestic and world prices are expected to narrow in the coming years, the price gap between the EU and other main producer countries is projected to remain relatively large.

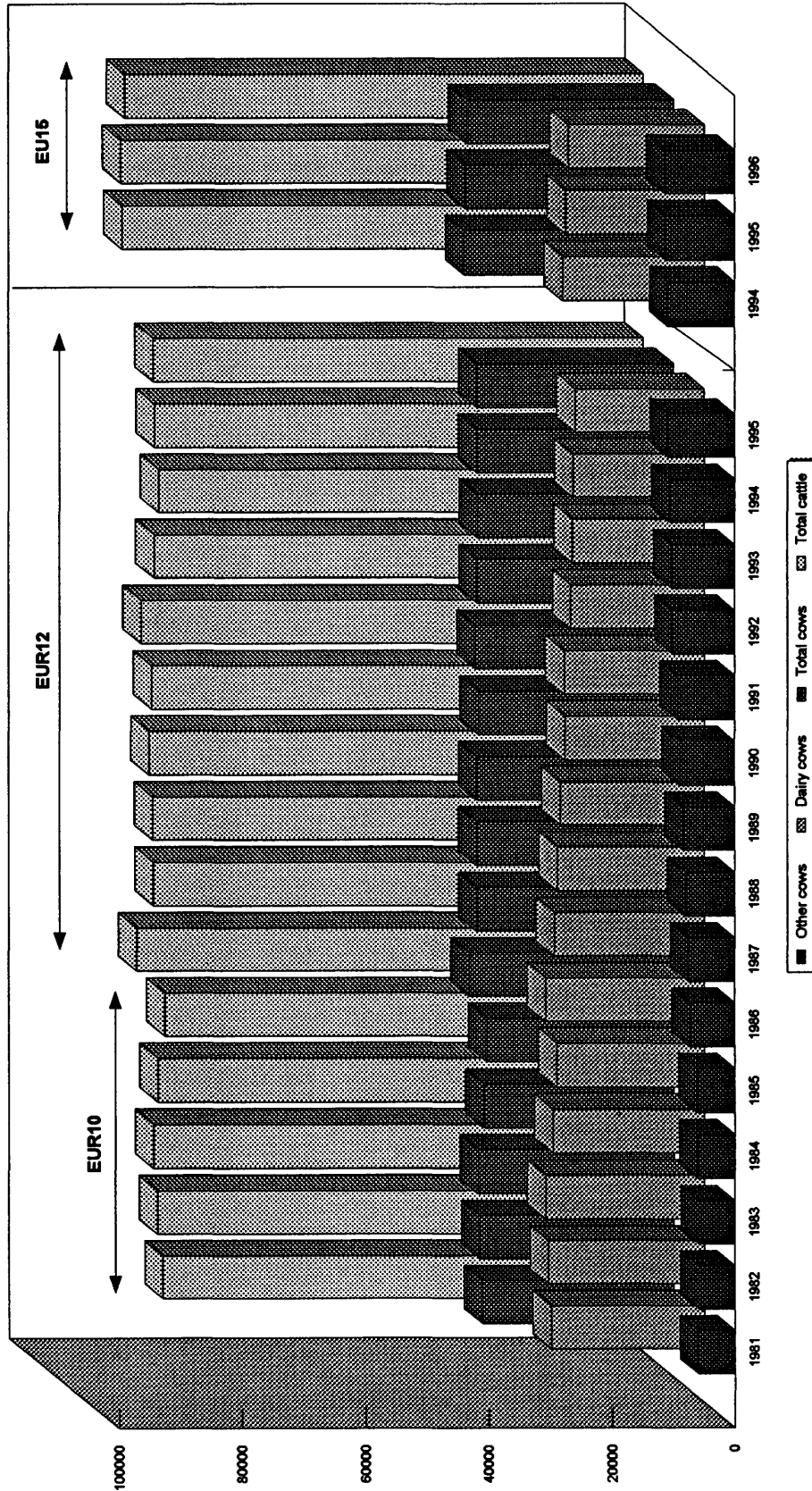
Against this background, it seems likely that market prices in the EU will remain under pressure, due to the internal surplus situation, increasing access to EU markets and difficult conditions for participating in the favourable development of world markets. Certainly, competitive producers have a margin and the tendency towards larger dairy holdings, in order to benefit from economies of scale, will continue to characterise the evolution of the EU dairy sector in the future. However, within the current regulatory

framework, quota availability will be a major problem for new entrants and those wishing to expand their production. Purchase, leasing or rent of quotas implies higher costs and, therefore, a reduction in competitive advantage. This issue will become more and more important over time as, due to the expected structural change towards larger dairy holdings, increasing volumes of milk will be affected.

ANNEXES

Evolution of cattle herd in the EU

(Results of December Survey - 1000 Head)



Share of each category in % of total cattle

	EUR10						EUR12						EU16			
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cows - Total	39.8%	39.8%	39.8%	39.2%	39.0%	40.3%	40.2%	39.8%	39.7%	39.5%	40.1%	40.4%	40.4%	40.2%	39.9%	39.9%
Dairy cows	32.0%	32.2%	32.4%	31.3%	30.9%	31.4%	30.6%	30.0%	28.5%	28.0%	27.3%	27.3%	26.9%	27.3%	26.6%	26.6%
Other cows	7.8%	7.6%	7.4%	7.8%	8.1%	9.0%	9.5%	10.2%	11.3%	11.5%	12.8%	13.1%	13.4%	12.9%	13.3%	13.3%

Producer Price of Cow's Milk										
Evolution 1973-1996										
in ECU (nominal terms)										
	actual fat content					standardized fat content (3.7%)				
	1973	1979	1984	1990	1996 (p)	1973	1979	1984	1990	1996 (p)
Germany (old)	12.88	22.56	27.81	30.94	31.03	12.61	22.08	27.26	29.86	29.34
Germany (new)	---	---	---	---	30.61	---	---	---	---	28.95
France	11.54	18.31	23.67	27.43	29.72	11.46	18.07	22.99	26.82	28.72
Italy	13.03	23.02	32.98	39.35	36.41	13.08	23.11	33.04	39.42	36.46
Netherlands	12.40	20.66	27.77	31.72	32.15	11.94	19.78	26.12	29.43	29.60
Belgium	10.88	18.80	23.02	27.93	29.57	11.40	18.94	23.17	25.95	27.47
Luxembourg	12.18	18.69	23.04	33.97	30.31	12.16	18.40	22.80	33.28	28.92
United Kingdom	9.30	16.75	24.03	25.13	30.60	9.14	16.40	23.25	24.26	29.48
Ireland	8.66	16.85	21.28	24.49	28.34	8.93	17.30	21.64	25.05	28.86
Denmark	12.54	21.36	28.60	36.53	32.60	11.33	19.56	26.39	34.11	30.17
Greece	9.69	17.96	25.83	28.51	31.76	10.20	18.91	27.19	30.89	31.76
Spain	12.35	20.49	24.39	28.49	27.28	12.98	21.53	25.63	29.51	27.35
Portugal 1)	---	13.01	19.03	21.19	19.75	---	19.65	28.75	32.03	28.94
EC-9	11.61	19.86	26.19	29.95	31.22	11.43	19.47	25.49	29.00	29.96
EC-10	11.60	19.84	26.18	29.94	31.22	11.42	19.47	25.51	29.01	29.98
EC-12	---	---	26.02	29.72	30.81	---	---	25.54	29.09	29.81
EC-12 (new)	---	---	---	---	30.71	---	---	---	---	29.69
Austria 2)	---	21.20	30.69	39.41	28.00	---	---	---	---	27.40
Finland 2)	14.15	24.27	43.63	53.27	29.34	---	---	---	---	30.78
Sweden 2)	16.47	27.03	37.95	40.33	38.03	---	---	---	---	36.47
EU-15	---	---	---	---	30.82	---	---	---	---	29.84
in national currency (nominal terms)										
	actual fat content					standardized fat content (3.7%)				
	1973	1979	1984	1990	1996 (p)	1973	1979	1984	1990	1996 (p)
Germany (old)	42.20	56.65	62.25	63.50	59.25	41.30	55.43	61.02	61.28	56.04
Germany (new)	---	---	---	---	58.44	---	---	---	---	55.27
France	63.12	106.75	162.62	190.53	192.99	62.67	105.33	158.01	186.12	186.47
Italy	9333	26212	45555	59893	71317	9373	26312	45638	59993	71423
Netherlands	42.51	56.80	70.07	73.33	68.78	40.95	54.37	65.92	65.65	63.34
Belgium	520	755	1046	1185	1162	545	761	1053	1101	1080
Luxembourg	582	750.7	1047	1441	1191	581	739	1036	1412	1137
United Kingdom	4.67	10.83	14.19	17.94	24.91	4.59	10.60	13.73	17.32	23.99
Ireland	4.35	11.28	15.45	18.80	22.48	4.49	11.58	15.71	19.23	22.90
Denmark	93	154	233	287	240	84	141	215	268	222
Greece	358	912	2282	5743	9706	377	960	2402	6221	9706
Spain	887	1884	3087	3684	4386	932	1980	3244	3816	4396
Portugal 1)	---	905	2201	3838	3867	---	1367	3326	5800	5665
Austria 2)	---	388.25	482.93	569.14	376.23	---	---	---	---	368.00
Finland 2)	66.59	129.19	206.09	258.64	171.00	---	---	---	---	283.00
Sweden 2)	88.60	158.70	247.10	303.30	323.83	---	---	---	---	197.00
in national currency (real terms based on 1990)										
	actual fat content					standardized fat content (3.7%)				
	1973	1979	1984	1990	1996 (p)	1973	1979	1984	1990	1996 (p)
Germany (old)	75.46	77.32	68.08	63.50	50.00	73.86	75.65	66.74	61.28	47.29
Germany (new)	---	---	---	---	49.32	---	---	---	---	46.64
France	242.49	223.19	200.57	190.53	169.50	240.76	220.22	194.88	186.12	163.77
Italy	70332	79672	65537	59893	53759	70637.00	79976	65657	59993	53839
Netherlands	88.27	77.44	74.69	73.33	58.48	85.03	74.12	70.26	65.65	53.85
Belgium	1397	1256	1218	1185	1009	1463.87	1265	1226	1101	938
Luxembourg	1469	1238	1188	1441	1024	1467.81	1219	1175	1412	977
United Kingdom	24.84	24.11	20.07	17.94	20.57	24.41	23.60	19.42	17.32	19.82
Ireland	24.94	27.98	19.16	18.80	19.53	25.73	28.73	19.48	19.23	19.89
Denmark	342	307	296	287	213	308.94	281	273	268	197
Greece	6237	6482	6061	5743	4660	6564.91	6823	6380	6221	4660
Spain	6787	5254	4554	3684	3292	7131.31	5521	4786	3816	3299
Portugal 1)	---	4393	4489	3838	2658	---	6639	6784	5800	3894
Austria 2)	---	569.70	555.09	569.14	314.94	---	---	---	---	308.15
Finland 2)	292.71	269.97	277.79	258.64	151.77	---	---	---	---	251.27
Sweden 2)	366.27	357.37	358.53	303.30	262.83	---	---	---	---	159.69

Source: EUROSTAT

Notes: (p) Figures for 1996 are provisional.

1) For Portugal, available price series begins in 1980.

2) The producer series for the three new member states are not directly comparable with the series for the other EU member countries. Nevertheless, they allow a comparison over time.

Producer Price of Cow's Milk

Evolution 1973-1996

Annual rate of growth in % (average)

Prices in ECU (nominal terms)

	actual fat content							standardized fat content (3.7%)						
	1973/79	1979/84	1984/90	1990/96	1973/84	1984/96	1973/96	1973/79	1979/84	1984/90	1990/96	1973/84	1984/96	1973/96
Germany (old)	9.8%	4.3%	1.8%	0.0%	7.2%	0.9%	3.6%	9.8%	4.3%	1.5%	-0.3%	7.3%	0.6%	3.7%
Germany (new)	---	---	---	---	---	---	---	---	---	---	---	---	---	---
France	8.0%	5.3%	2.5%	1.3%	6.7%	1.9%	4.2%	7.9%	4.9%	2.6%	1.1%	6.5%	1.9%	4.1%
Italy	9.9%	7.5%	3.0%	-1.3%	8.8%	0.8%	4.6%	10.0%	7.4%	3.0%	-1.3%	8.8%	0.8%	4.6%
Netherlands	8.9%	6.1%	2.2%	0.2%	7.6%	1.2%	4.2%	8.8%	5.7%	2.0%	0.1%	7.4%	1.0%	4.0%
Belgium	9.5%	4.1%	3.3%	1.0%	7.1%	2.1%	4.4%	8.8%	4.1%	1.9%	1.0%	6.7%	1.4%	3.9%
Luxemburg	7.4%	4.3%	6.7%	-1.9%	6.0%	2.3%	4.0%	7.1%	4.4%	6.5%	-2.3%	5.9%	2.0%	3.8%
United Kingdom	10.3%	7.5%	0.7%	3.3%	9.0%	2.0%	5.3%	10.2%	7.2%	0.7%	3.3%	8.9%	2.0%	5.2%
Ireland	11.7%	4.8%	2.4%	2.5%	6.5%	2.4%	5.3%	11.7%	4.6%	2.5%	2.4%	8.4%	2.4%	5.2%
Denmark	9.3%	6.0%	4.2%	-1.9%	7.8%	1.1%	4.2%	9.5%	6.2%	4.4%	-2.0%	8.0%	1.1%	4.4%
Greece	10.8%	7.5%	1.7%	1.8%	9.3%	1.7%	5.3%	10.8%	7.5%	2.1%	0.5%	9.3%	1.3%	5.1%
Spain	8.8%	3.5%	2.6%	-0.7%	6.4%	0.9%	3.5%	8.8%	3.5%	2.4%	-1.3%	6.4%	0.5%	3.3%
Portugal 1)	---	7.9%	1.8%	-1.2%	---	0.3%	---	---	7.9%	1.8%	-1.7%	---	0.1%	---
EU-9	9.4%	5.7%	2.3%	0.7%	7.7%	1.5%	4.4%	9.3%	5.5%	2.2%	0.5%	7.6%	1.4%	4.3%
EU-10	9.4%	5.7%	2.3%	0.7%	7.7%	1.5%	4.4%	9.3%	5.6%	2.2%	0.5%	7.6%	1.4%	4.3%
EU-12	---	---	2.2%	0.6%	---	1.4%	---	---	---	2.2%	0.4%	---	1.3%	---
EU-12 (new)	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Austria 2)	---	7.7%	4.3%	-5.5%	---	-0.8%	---	---	---	---	---	---	---	---
Finland 2)	9.4%	12.4%	3.4%	-9.5%	10.8%	-3.3%	3.2%	---	---	---	---	---	---	---
Sweden 2)	8.6%	7.0%	1.0%	-1.0%	7.8%	0.0%	3.7%	---	---	---	---	---	---	---
EU-15	---	---	---	---	---	---	---	---	---	---	---	---	---	---

in national currency (nominal terms)

	actual fat content							standardized fat content (3.7%)						
	1973/79	1979/84	1984/90	1990/96	1973/84	1984/96	1973/96	1973/79	1979/84	1984/90	1990/96	1973/84	1984/96	1973/96
Germany (old)	5.0%	1.9%	0.3%	-1.1%	3.6%	-0.4%	1.5%	5.0%	1.9%	0.1%	-1.5%	3.6%	-0.7%	1.3%
Germany (new)	---	---	---	---	---	---	---	---	---	---	---	---	---	---
France	9.2%	8.8%	2.7%	0.2%	8.0%	1.4%	5.0%	9.0%	8.4%	2.8%	0.0%	8.8%	1.4%	4.9%
Italy	18.8%	11.7%	4.7%	3.0%	15.5%	3.8%	9.2%	18.8%	11.6%	4.7%	2.9%	15.5%	3.8%	9.2%
Netherlands	4.9%	4.3%	0.8%	-1.1%	4.8%	-0.2%	2.1%	4.8%	3.9%	-0.1%	-0.6%	4.4%	-0.3%	1.9%
Belgium	6.4%	6.7%	2.1%	-0.3%	6.8%	0.9%	3.6%	5.7%	6.0%	0.7%	-0.3%	6.2%	0.2%	3.0%
Luxemburg	4.3%	6.9%	5.5%	-3.1%	5.5%	1.1%	3.2%	4.1%	7.0%	5.3%	-3.5%	5.4%	0.8%	3.0%
United Kingdom	15.0%	5.6%	4.0%	5.6%	10.6%	4.8%	7.6%	15.0%	5.3%	3.9%	5.6%	10.5%	4.8%	7.5%
Ireland	17.2%	6.5%	3.3%	3.0%	12.2%	3.2%	7.4%	17.1%	6.3%	3.4%	3.0%	12.1%	3.2%	7.3%
Denmark	8.8%	8.6%	3.5%	-2.9%	6.7%	0.2%	4.2%	9.0%	8.8%	3.7%	-3.1%	8.9%	0.3%	4.3%
Greece	16.9%	20.1%	16.6%	9.1%	18.3%	12.6%	15.4%	16.9%	20.1%	17.2%	7.7%	18.3%	12.3%	15.2%
Spain	13.4%	10.4%	3.0%	2.9%	12.0%	3.0%	7.2%	13.4%	10.4%	2.7%	2.4%	12.0%	2.6%	7.0%
Portugal 1)	---	19.5%	9.7%	0.1%	---	4.6%	---	---	19.5%	9.7%	-0.4%	---	4.5%	---
Austria 2)	---	4.5%	2.8%	-6.7%	---	-2.1%	---	---	---	---	---	---	---	---
Finland 2)	11.7%	9.8%	3.9%	-6.7%	10.8%	-1.5%	4.2%	---	---	---	---	---	---	---
Sweden 2)	10.2%	9.3%	3.5%	1.1%	9.8%	2.3%	5.8%	---	---	---	---	---	---	---

in national currency (real terms based on 1990)

	actual fat content							standardized fat content (3.7%)						
	1973/79	1979/84	1984/90	1990/96	1973/84	1984/96	1973/96	1973/79	1979/84	1984/90	1990/96	1973/84	1984/96	1973/96
Germany (old)	0.4%	-2.5%	-1.2%	-3.9%	-0.9%	-2.5%	-1.8%	0.4%	-2.5%	-1.4%	-4.2%	-0.9%	-2.8%	-1.9%
Germany (new)	---	---	---	---	---	---	---	---	---	---	---	---	---	---
France	-1.4%	-2.1%	-0.9%	-1.9%	-1.7%	-1.4%	-1.5%	-1.5%	-2.4%	-0.8%	-2.1%	-1.9%	-1.4%	-1.7%
Italy	2.1%	-3.8%	-1.5%	-1.8%	-0.6%	-1.6%	-1.2%	2.1%	-3.9%	-1.5%	-1.8%	-0.7%	-1.6%	-1.2%
Netherlands	-2.2%	-0.7%	-0.3%	-3.7%	-1.2%	-2.0%	-1.8%	-2.3%	-1.1%	-1.1%	-3.2%	-1.7%	-2.2%	-2.0%
Belgium	-1.8%	-0.6%	-0.5%	-2.6%	-1.2%	-1.6%	-1.4%	-2.4%	-0.6%	-1.8%	-2.6%	-1.6%	-2.2%	-1.9%
Luxemburg	-2.8%	-0.8%	3.3%	-5.5%	-1.9%	-1.2%	-1.6%	-3.1%	-0.7%	3.1%	-6.0%	-2.0%	-1.5%	-1.8%
United Kingdom	-0.5%	-3.6%	-1.9%	2.3%	-1.9%	0.2%	-0.8%	-0.6%	-3.8%	-1.9%	2.3%	-2.1%	0.2%	-0.9%
Ireland	1.9%	-7.3%	-0.3%	0.6%	-2.4%	0.2%	-1.1%	1.9%	-7.5%	-0.2%	0.6%	-2.5%	0.2%	-1.1%
Denmark	-1.8%	-0.7%	-0.5%	-4.8%	-1.3%	-2.7%	-2.0%	-1.6%	-0.6%	-0.3%	-5.0%	-1.3%	-2.7%	-1.9%
Greece	0.6%	-1.3%	-0.9%	-3.4%	-0.3%	-2.2%	-1.3%	0.6%	-1.3%	-0.4%	-4.7%	-0.3%	-2.6%	-1.5%
Spain	-4.2%	-2.8%	-3.5%	-1.9%	-3.8%	-2.7%	-3.1%	-4.2%	-2.8%	-3.7%	-2.4%	-3.6%	-3.1%	-3.3%
Portugal 1)	---	0.4%	-2.6%	-5.9%	---	-4.3%	---	---	0.4%	-2.6%	-6.4%	---	-4.5%	---
Austria 2)	---	-0.5%	0.4%	-9.4%	---	-4.6%	---	---	---	---	---	---	---	---
Finland 2)	-1.3%	0.6%	-1.2%	-8.5%	-0.5%	-4.9%	2.8%	---	---	---	---	---	---	---
Sweden 2)	-0.4%	0.1%	-2.7%	-2.4%	-0.2%	-2.6%	1.4%	---	---	---	---	---	---	---

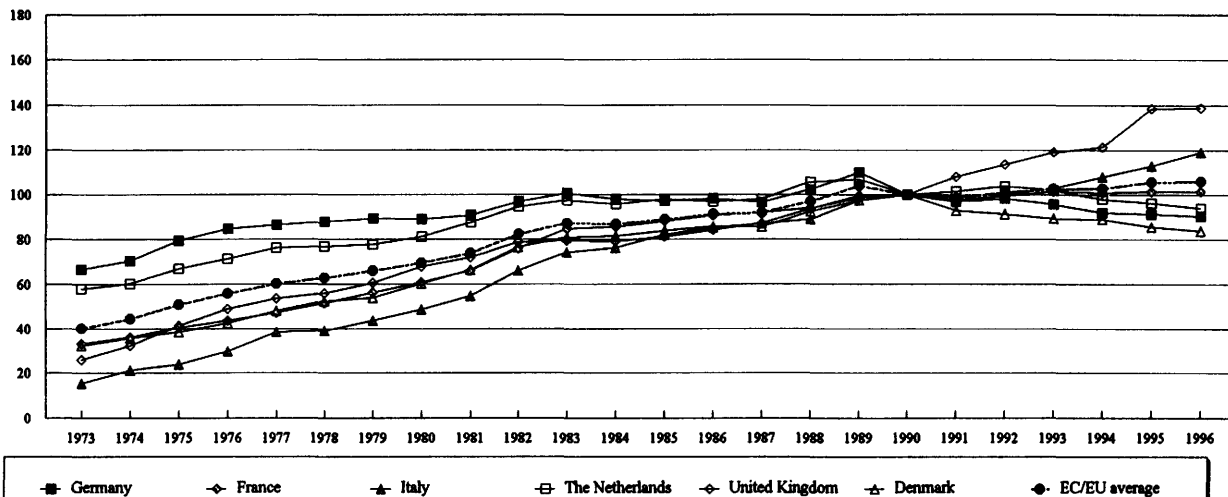
Source: EUROSTAT

Notes: (p) Figures for 1996 are provisional or estimates.

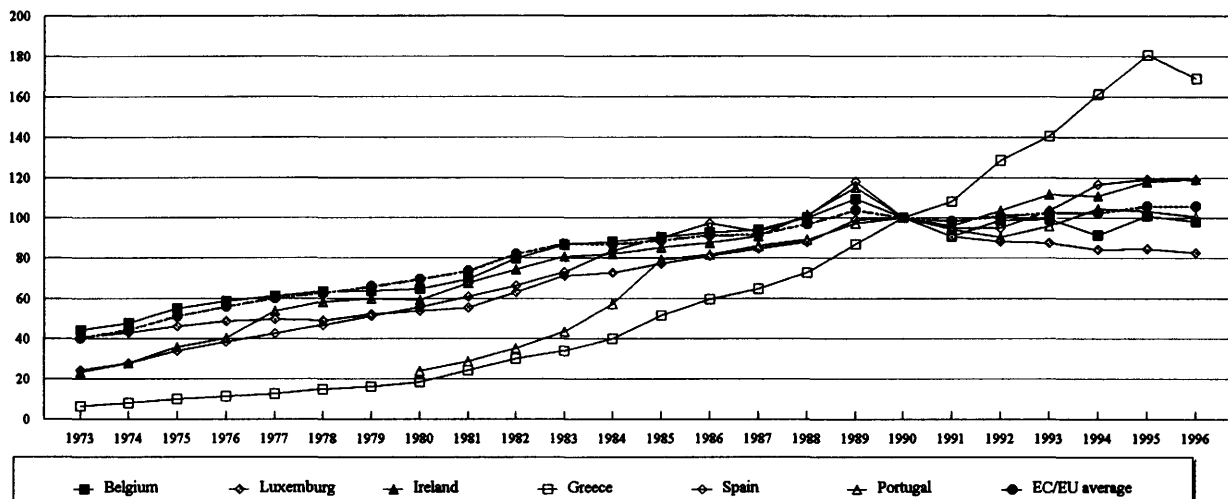
1) For Portugal, available price series begins in 1980.

2) The producer series for the three new member states are not directly comparable with the series for the other EU member countries. Nevertheless, they allow a comparison over time.

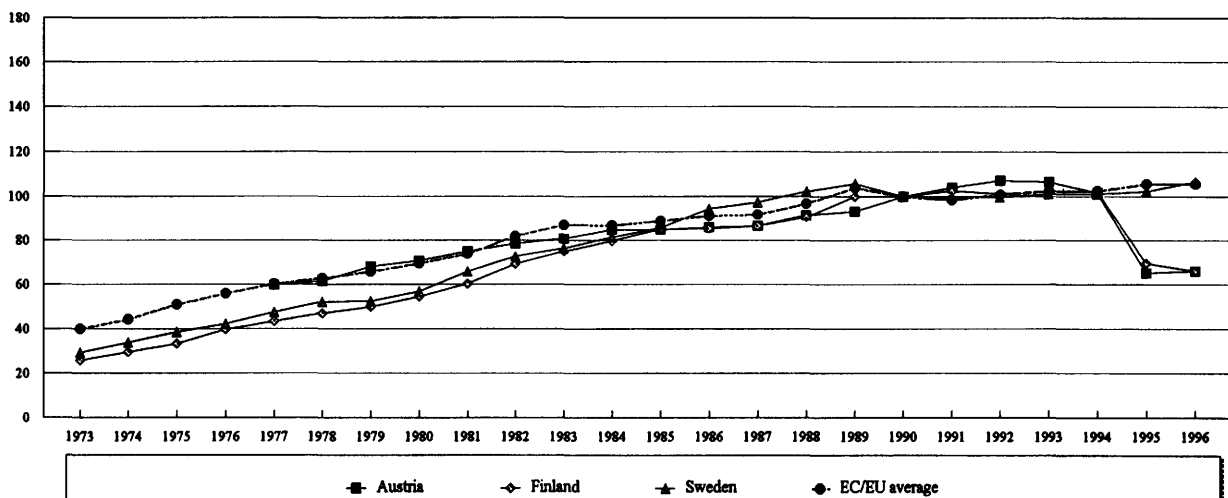
Producer Price Indices - Cow milk (actual fat content)
(based on nominal prices in national currency; 1990 = 100)



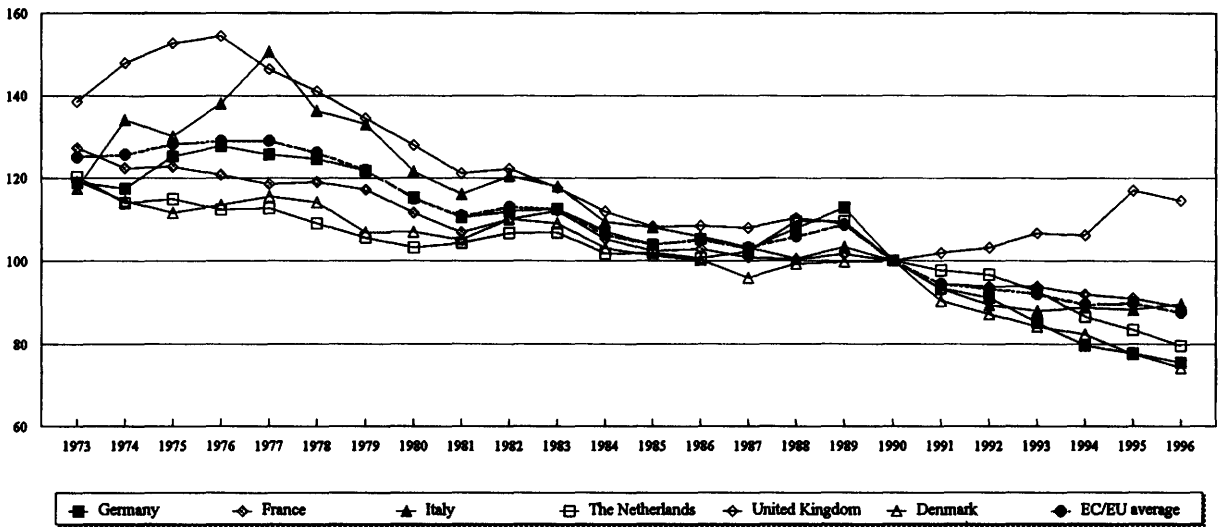
Producer Price Indices - Cow milk (at actual fat content)
(based on nominal prices in national currency; 1990 = 100)



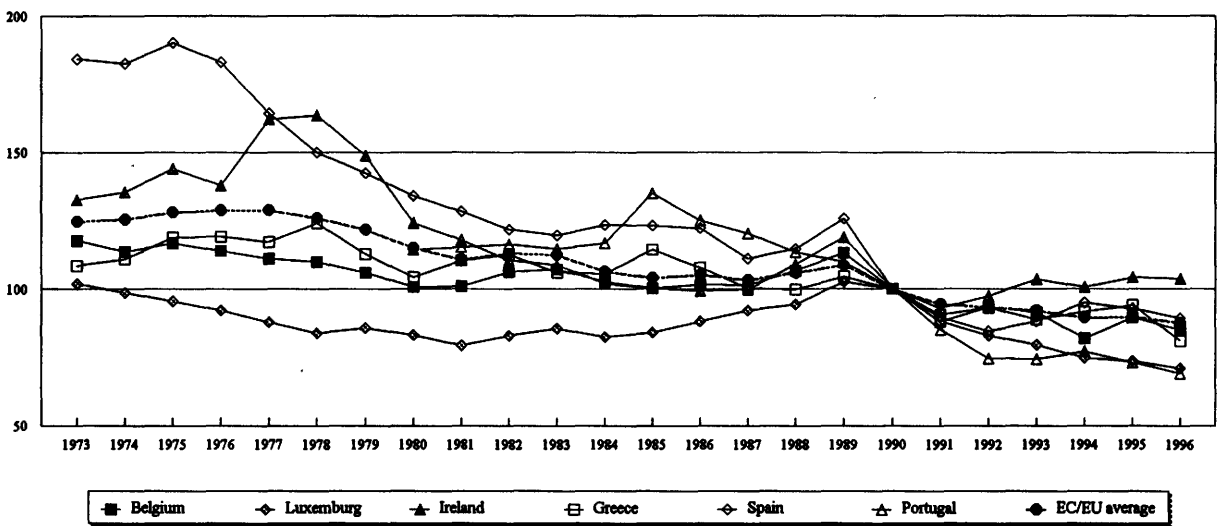
Producer Price Indices - Cow milk (at actual fat content)
(based on nominal prices in national currency; 1990 = 100)



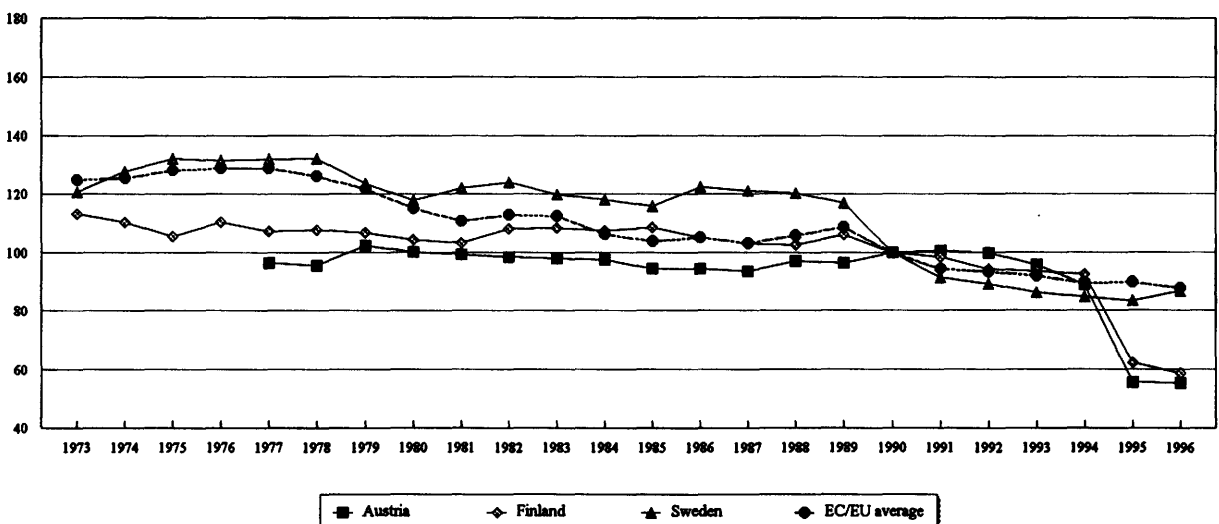
Producer Price Indices - Cow milk (actual fat content)
(based on real prices in national currency; 1990 = 100)



Producer Price Indices - Cow milk (at actual fat content)
(based on real prices in national currency; 1990 = 100)



Producer Price Indices - Cow milk (at actual fat content)
(based on real prices in national currency; 1990 = 100)



Structure of Dairy Cow Holdings - 1993

	All Holdings			Holdings with 1-2 Dairy Cows			Holdings with 3-9 Dairy Cows			Holdings with 10-19 Dairy Cows					
	Number of holdings (000)	Share of Total %	Number of animals (000)	Number of holdings (000)	Share of Total %	Number of animals (000)	Number of holdings (000)	Share of Total %	Number of animals (000)	Number of holdings (000)	Share of Total %	Number of animals (000)			
Germany	236	100.0%	5364	21	9.0%	31	0.6%	54	23.0%	321	6.0%	66	27.9%	935	17.4%
France	169	100.0%	4613	7	4.1%	10	0.2%	15	8.9%	94	2.0%	37	21.9%	523	11.3%
Italy	147	100.0%	2287	35	23.9%	54	2.4%	53	36.2%	279	12.2%	28	19.8%	369	16.1%
Netherlands	43	100.0%	1804	2	5.1%	3	0.2%	3	6.9%	17	0.9%	5	11.6%	73	4.1%
Belgium	25	100.0%	702	1	3.6%	1	0.2%	3	11.6%	18	2.8%	6	24.1%	86	12.2%
Luxembourg	2	100.0%	51	0	1.7%	0	0.1%	0	3.6%	0	0.7%	0	12.1%	3	6.5%
United Kingdom	40	100.0%	2786	1	3.6%	2	0.1%	2	4.6%	10	0.4%	3	8.3%	37	1.3%
Ireland	47	100.0%	1274	3	7.3%	5	0.4%	6	13.1%	39	3.0%	11	24.5%	159	12.5%
Denmark	18	100.0%	714	1	4.3%	1	0.2%	1	6.2%	6	0.9%	2	11.7%	31	4.4%
Greece	39	100.0%	219	20	50.6%	29	13.2%	14	36.9%	67	30.6%	3	8.0%	40	16.4%
Spain	148	100.0%	1371	46	31.1%	63	4.6%	57	38.5%	298	21.7%	27	18.2%	359	26.2%
Portugal	99	100.0%	375	62	62.6%	80	21.3%	30	30.2%	120	32.0%	5	5.0%	71	18.8%
EC-12	1013	100.0%	21559	200	19.7%	279	1.3%	239	23.6%	1270	5.9%	193	19.0%	2687	12.5%
Finland 1)	47	100.0%	490	3	6.1%	4	0.9%	20	43.1%	130	26.5%	20	43.3%	273	65.7%
Sweden	20	100.0%	525	1	3.8%	1	0.2%	2	12.0%	15	2.9%	5	26.5%	77	14.6%
Austria	116	100.0%	898	33	28.6%	68	7.6%	52	46.1%	346	38.5%	26	22.7%	376	41.9%
Germany	46	19.4%	1084	35	14.7%	1282	23.9%	11	4.9%	688	13.0%	3	1.2%	1003	18.7%
France	40	23.7%	966	51	30.2%	1873	49.6%	18	10.7%	1061	23.0%	1	0.6%	86	1.9%
Italy	11	7.2%	245	11	7.3%	365	18.1%	7	4.5%	436	18.1%	3	2.2%	520	22.7%
Netherlands	6	13.3%	141	13	29.0%	492	27.5%	13	30.2%	860	47.7%	2	3.9%	218	12.1%
Belgium	5	21.2%	125	6	26.1%	236	33.7%	3	13.6%	209	29.9%	0	0.9%	26	3.6%
Luxembourg	0	23.9%	9	1	48.0%	28	65.2%	0	10.3%	10	18.2%	0	0.4%	1	1.5%
United Kingdom	3	8.6%	82	8	20.0%	316	11.3%	14	34.6%	953	36.6%	9	22.7%	1346	48.3%
Ireland	9	18.3%	213	10	21.5%	370	29.1%	6	12.7%	375	29.4%	1	1.7%	114	8.9%
Denmark	3	16.0%	70	6	32.4%	225	31.9%	5	26.1%	303	42.5%	1	3.2%	76	10.7%
Greece	1	2.4%	22	1	2.9%	29	13.1%	0	0.9%	21	8.6%	0	0.2%	11	5.0%
Spain	9	6.1%	200	6	4.1%	201	14.7%	2	1.4%	136	9.9%	1	0.7%	114	8.3%
Portugal	1	1.0%	34	1	0.7%	27	7.2%	0	0.4%	24	6.4%	0	0.1%	19	5.1%
EC-12	134	13.2%	3201	147	14.8%	5463	26.3%	80	7.9%	5126	23.9%	21	2.0%	3533	16.4%
Finland 1)	3	6.6%	69	0	0.7%	11	2.2%	0	0.1%	2	0.4%	0	0.0%	1	0.2%
Sweden	5	28.0%	124	5	23.9%	175	33.4%	2	7.5%	100	19.0%	0	1.0%	32	6.1%
Austria	4	3.0%	84	1	0.4%	20	2.3%	0	0.1%	5	0.6%	NA	NA	NA	NA

Source: EUROSTAT
 Note: 1) Figures based on the Agricultural Census 1990.

Structure of Dairy Cow Holdings 1973-1993

	1993			1991			1987			1985		
	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)
Germany 1)	236	5364	23	275	4769	17	337	5390	16	369	5581	15
France	169	4613	27	201	4969	25	291	5841	20	329	6506	20
Italy	147	2287	16	197	2536	13	310	3024	10	338	3075	9
Netherlands	43	1804	42	48	1909	40	58	2166	38	61	2412	39
Belgium	25	702	28	29	806	28	38	922	24	45	973	22
Luxemburg	2	51	33	2	52	31	2	64	32	2	70	31
United Kingdom	40	2786	69	42	2779	66	48	3052	63	53	3257	62
Ireland	47	1274	27	51	1293	26	69	1444	21	77	1528	20
Denmark	18	714	40	21	742	36	27	811	30	32	896	28
Greece	39	219	6	47	214	5	61	232	4	73	219	3
Spain	148	1371	9	185	1516	8	251	1783	7	—	—	—
Portugal	99	375	4	100	394	4	108	388	4	—	—	—
EC-12	1013	21559	21	1198	21978	18	1600	25116	16	—	—	—
EC-10	766	19813	26	912	20068	22	1242	22845	18	1379	24518	18
EC-9	726	19594	27	865	19854	23	1181	22713	19	1305	24299	19
Austria	116	898	8	—	—	—	—	—	—	—	—	—
Finland 2)	47	490	10	—	—	—	—	—	—	—	—	—
Sweden	20	525	26	—	—	—	—	—	—	—	—	—

	1983			1979			1977			1973		
	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)	Number of holdings (000)	animals (000)	Average Size 3)
Germany 1)	397	5529	14	456	5442	12	519	5417	10	630	5486	9
France	427	7195	17	518	7453	14	576	7510	13	697	7683	11
Italy	424	3068	7	483	3074	6	453	2945	6	607	3051	5
Netherlands	64	2557	40	75	2369	32	83	2245	27	99	2255	23
Belgium	49	984	20	58	981	17	66	983	15	85	1000	12
Luxemburg	3	69	27	3	68	21	4	68	18	5	68	14
United Kingdom	58	3334	57	63	3348	53	72	3327	46	93	3544	38
Ireland	86	1535	18	106	1503	14	120	1484	12	144	1431	10
Denmark	35	1003	28	47	1071	23	56	1099	20	72	1086	15
Greece	77	237	3	—	—	—	—	—	—	—	—	—
Spain	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	—	—	—	—	—	—
EC-12	—	—	—	—	—	—	—	—	—	—	—	—
EC-10	1621	25512	16	—	—	—	—	—	—	—	—	—
EC-9	1544	25275	16	1810	25309	14	1950	25078	13	2432	25604	11

Source: EUROSTAT

- Note:
- 1) From 1993 the data for EC and Germany refer to Germany as constituted after 3.10.1990.
 - 2) Figures based on the Agricultural Census 1990.
 - 3) Average number of animals per holding.

Structure of Dairies by annual milk collection

(Situation on 31 December of year)

	Year	All Dairies				Dairies with milk collection of 5000 t/year and under				Dairies with milk collection of 5001 t/year to 20000 t/year			
		Number of dairies (1)	Share of Total %	Milk collected (000 t)	Share of Total %	Number of dairies (1)	Share of Total %	Milk collected (000 t)	Share of Total %	Number of dairies (1)	Share of Total %	Milk collected (000 t)	Share of Total %
Germany	1994	284	100.0%	26047	100.0%	43	15.1%	81	0.3%	41	14.4%	448	1.7%
France	1994	815	100.0%	23724	100.0%	496	60.9%	887	3.7%	132	16.2%	1357	5.7%
Italy	1994	2182	100.0%	9710	100.0%	1834	84.1%	2431	25.0%	262	12.0%	2588	26.6%
Netherlands 4)	1994	19	100.0%	10496	100.0%	---	---	---	---	---	---	---	---
Belgium	1994	86	100.0%	2919	100.0%	50	58.1%	9	0.3%	8	9.3%	79	2.7%
Luxemburg 8)	1994	1	100.0%	252	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
United Kingdom	1991	648	100.0%	14105	100.0%	515	79.5%	477	3.4%	65	10.0%	696	4.9%
Ireland	1994	71	100.0%	5271	100.0%	15	21.1%	33	0.6%	24	33.8%	304	5.8%
Denmark	1994	42	100.0%	4429	100.0%	14	33.3%	31	0.7%	13	31.0%	147	3.3%
Greece 6)	1994	1010	100.0%	1242	100.0%	990	98.0%	555	44.7%	13	1.3%	108	8.7%
Spain 7)	1994	836	100.0%	4447	100.0%	642	76.8%	337	7.6%	113	13.5%	605	13.6%
Portugal	1994	113	100.0%	1446	100.0%	77	68.1%	97	6.7%	22	19.5%	218	15.1%
EC-12		6107	100.0%	104089	100.0%	4676	76.6%	4937	4.7%	693	11.3%	6549	6.3%
Austria	1994	133	100.0%	2199	100.0%	78	58.6%	150	6.8%	27	20.3%	259	11.8%
Finland	1994	61	100.0%	2385	100.0%	3	4.9%	8	0.3%	24	39.3%	303	12.7%
Sweden 5)	1994	13	100.0%	3357	100.0%	4	30.8%	1	0.0%	2	15.4%	s	---
	Year	Dairies with milk collection of 20001 t/year to 50000 t/year				Dairies with milk collection of 50001 t/year to 100000 t/year				Dairies with milk collection of over 100000 t/year			
		Number of dairies (1)	Share of Total %	Milk collected (000 t)	Share of Total %	Number of dairies (1)	Share of Total %	Milk collected (000 t)	Share of Total %	Number of dairies (1)	Share of Total %	Milk collected (000 t)	Share of Total %
Germany	1994	59	20.8%	2039	7.8%	64	22.5%	4532	17.4%	77	27.1%	18948	72.7%
France	1994	73	9.0%	2431	10.2%	37	4.5%	2601	11.0%	77	9.4%	16448	69.3%
Italy	1994	56	2.6%	1766	18.2%	19	0.9%	1299	13.4%	11	0.5%	1627	16.8%
Netherlands 4)	1994	---	---	---	---	6	31.6%	183	1.7%	13	68.4%	10313	98.3%
Belgium	1994	11	12.8%	372	12.7%	8	9.3%	533	18.3%	9	10.5%	1926	66.0%
Luxemburg 8)	1994	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	252	100.0%
United Kingdom	1991	32	4.9%	1012	7.2%	15	2.3%	1007	7.1%	21	3.2%	10912	77.4%
Ireland	1994	9	12.7%	308	5.8%	12	16.9%	855	16.2%	11	15.5%	3771	71.5%
Denmark	1994	11	26.2%	363	8.2%	0	0.0%	0	0.0%	4	9.5%	3888	67.6%
Greece 2) 6)	1994	7	0.7%	579	46.6%	---	---	---	---	---	---	---	---
Spain 7)	1994	49	5.9%	1048	23.6%	23	2.8%	1290	29.0%	9	1.1%	1167	28.3%
Portugal 3) 5)	1994	7	6.2%	189	13.1%	5	4.4%	943	65.2%	2	1.8%	s	---
EC-12		314	5.1%	10107	9.7%	189	3.1%	13243	12.7%	235	3.6%	69253	66.5%
Austria	1994	13	9.8%	438	19.9%	9	6.8%	601	27.3%	6	4.5%	751	34.1%
Finland	1994	20	32.8%	628	26.3%	7	11.5%	561	23.5%	7	11.5%	885	37.1%
Sweden 5)	1994	0	0.0%	0	0.0%	2	15.4%	s	---	5	38.5%	3204	95.4%

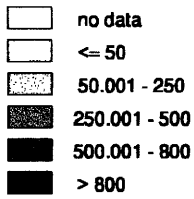
Source: EUROSTAT

Note:

- 1) Unit according to the type of economic activity at undertaking level.
- 2) For Greece, more differentiated figures for dairies with an annual collection of 20000 t and above are not available.
- 3) For Portugal, more differentiated figures for dairies with an annual collection of 50000 t and above are not available.
- 4) For the Netherlands, figures are only available for dairies with an annual collection of more than 50000 t.
- 5) s = Statistical secret
- 6) Incl. milk from sheep and goats
- 7) Structural statistics are not reliable because figures for deliveries to dairies are too different from the official annual statistics on milk collection by dairies (incl. milk from sheep and goats)
- 8) Luxemburg is not covered by the official dairy structure survey.

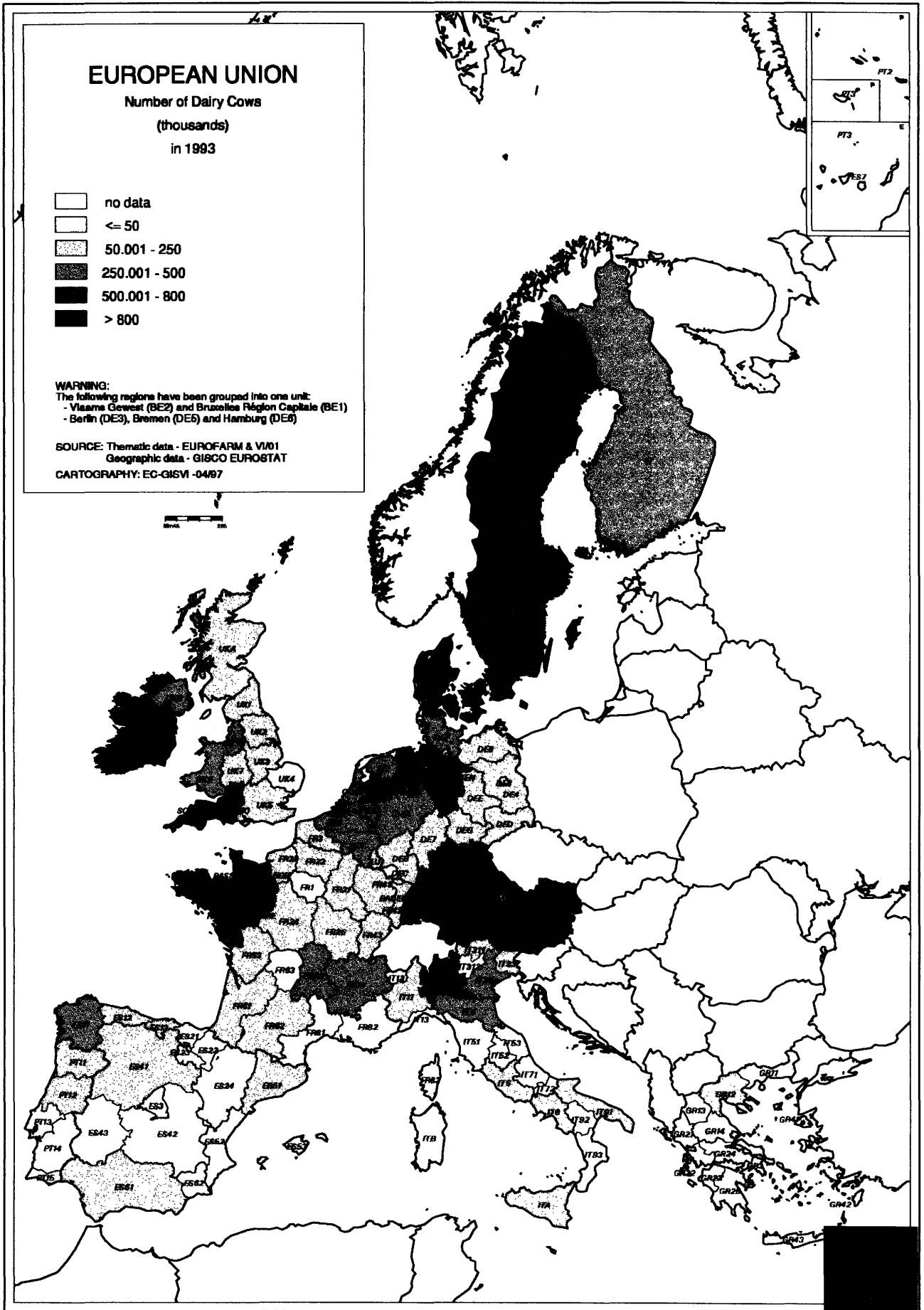
EUROPEAN UNION

Number of Dairy Cows
(thousands)
in 1993









WARNING:
The following regions have been grouped into one unit:
- Vlaams Gewest (BE2) and Bruxelles Région Capitale (BE1)
- Berlin (DE3), Bremen (DE5) and Hamburg (DE6)

SOURCE: Thematic data - EUROFARM & VI/01
Geographic data - GISCO EUROSTAT
CARTOGRAPHY: EC-GISVI - 04/97



EUROPEAN UNION

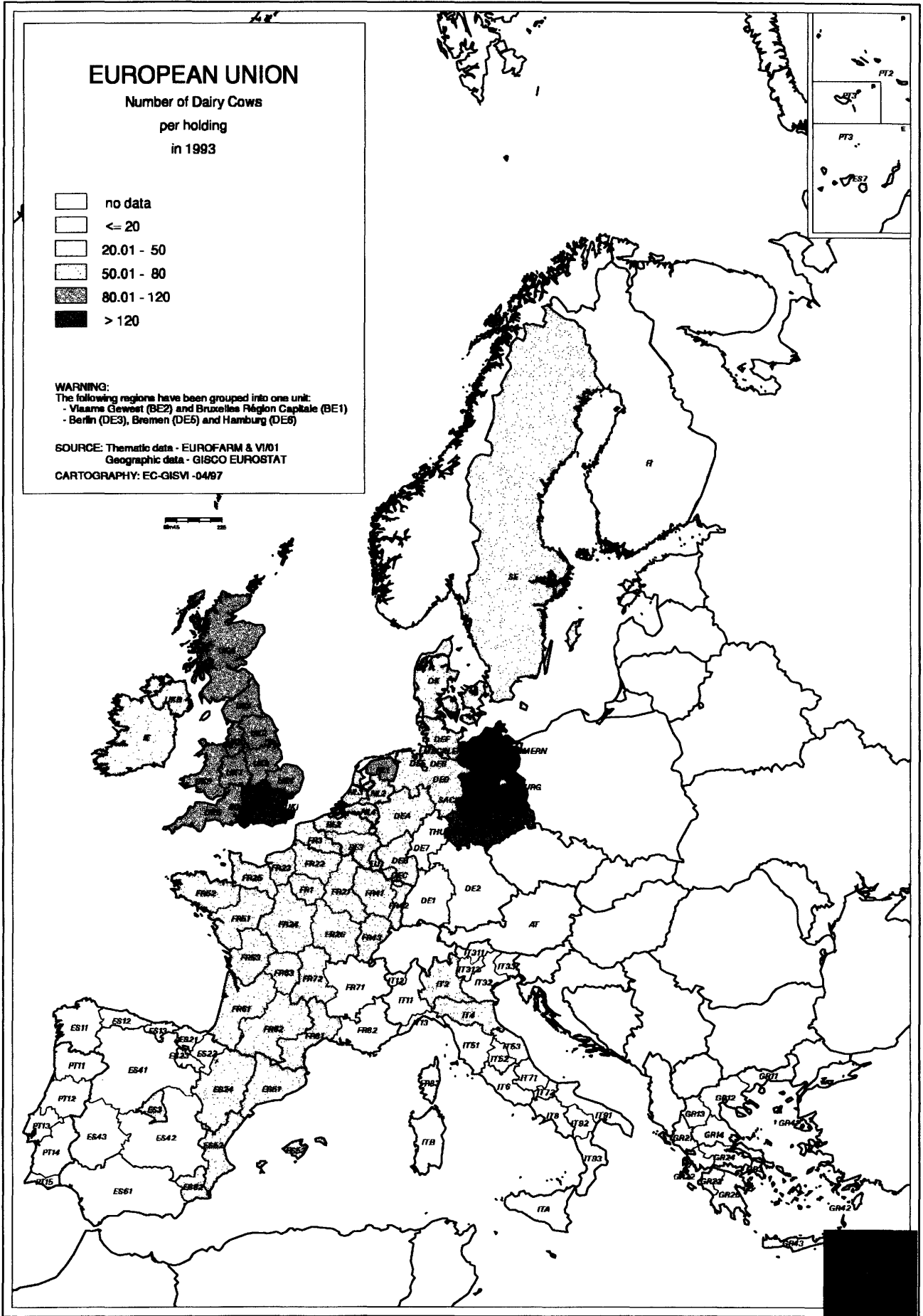
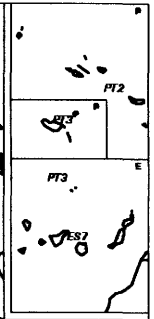
Number of Dairy Cows
per holding
in 1993

-  no data
-  <= 20
-  20.01 - 50
-  50.01 - 80
-  80.01 - 120
-  > 120

WARNING:
The following regions have been grouped into one unit:
- Vlaams Gewest (BE2) and Bruxelles Région Capitale (BE1)
- Berlin (DE3), Bremen (DE5) and Hamburg (DE6)

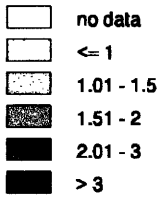
SOURCE: Thematic data - EUROPARM & VI01
Geographic data - GISCO EUROSTAT
CARTOGRAPHY: EC-GISVI -04/97

0 100 200
km



EUROPEAN UNION

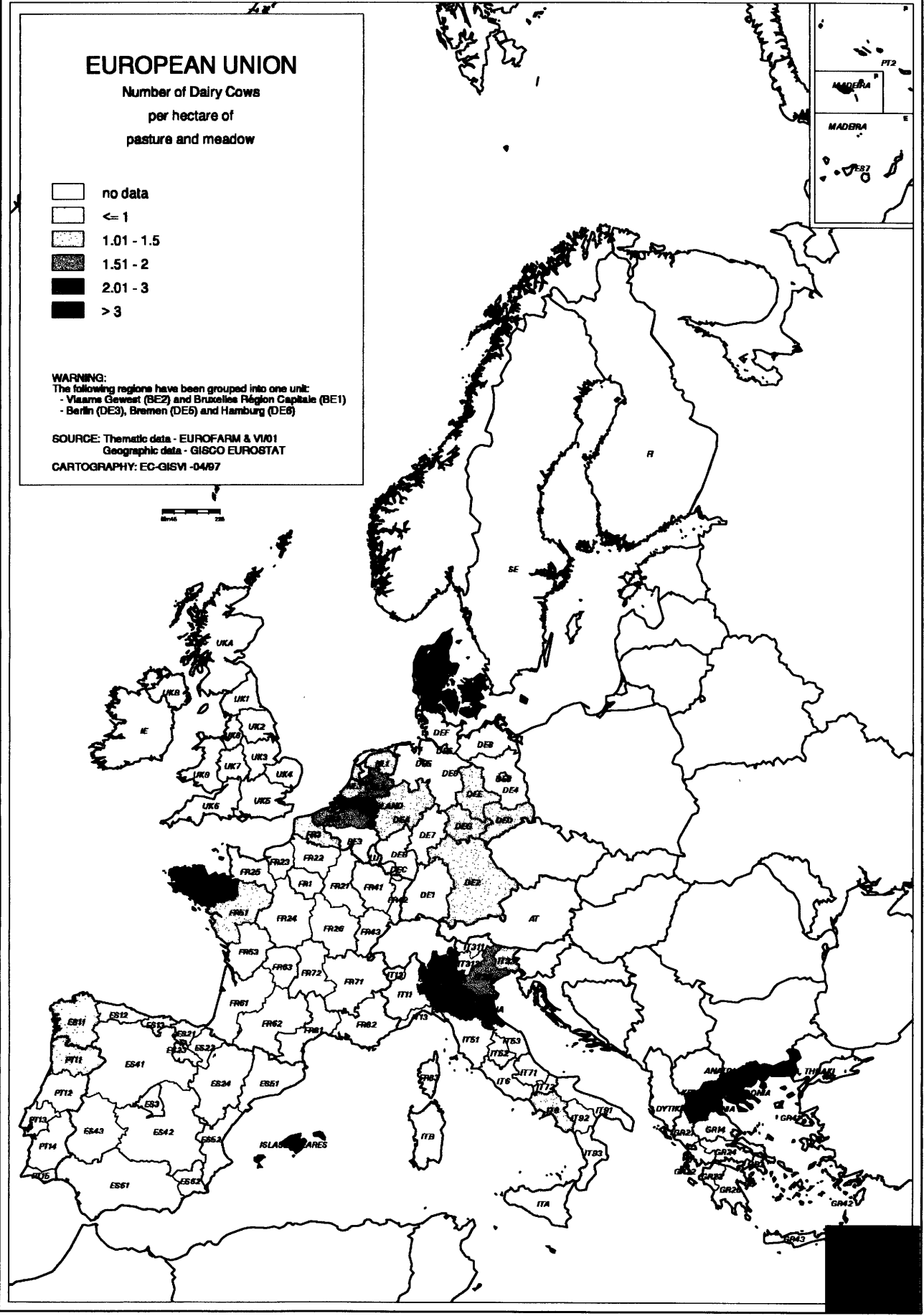
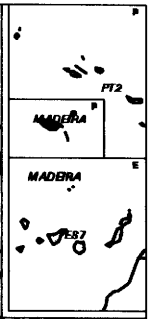
Number of Dairy Cows
per hectare of
pasture and meadow



WARNING:
The following regions have been grouped into one unit:
- Vlaams Gewest (BE2) and Bruxelles Région Capitale (BE1)
- Berlin (DE3), Bremen (DE5) and Hamburg (DE6)

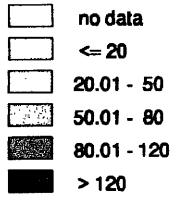
SOURCE: Thematic data - EUROFARM & VI01
Geographic data - GISCO EUROSTAT

CARTOGRAPHY: EC-GISVI -04/87



EUROPEAN UNION

Pastures and Meadows
per dairy holding
(hectares)

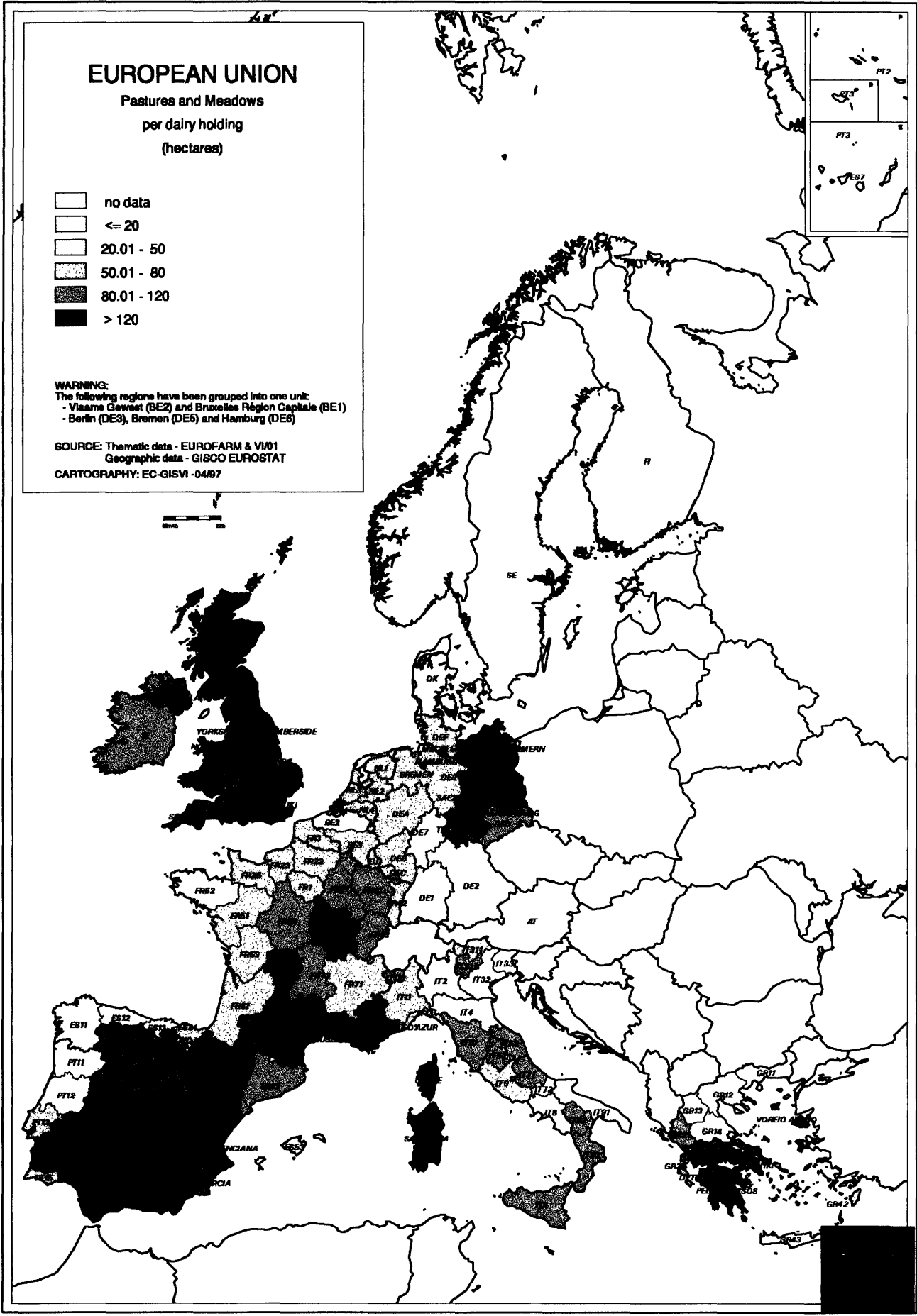
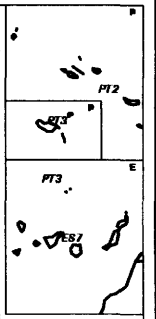


WARNING:

The following regions have been grouped into one unit:
 - Visame Gewest (BE2) and Bruxelles Région Capitale (BE1)
 - Berlin (DE3), Bremen (DE5) and Hamburg (DE6)

SOURCE: Thematic data - EUROFARM & VI/01
 Geographic data - GISCO EUROSTAT

CARTOGRAPHY: EC-GISVI -04/97



Evolution of institutional prices in the EC milk sector
(In ECU per 100 kg) 1) 2)

Period	Target price of milk (3.7% fat content)	Intervention price of butter	Intervention price of skimmed milk powder	Intervention price of cheese		
				Grana Padano 30-60 days	6 months	Parmigiano-Reggiano 6 months
3.3.75-15.9.75	14.92	194.63	88.70	195.85	230.83	250.03
16.9.75-14.3.76	15.59	209.58	88.70	201.45	236.74	255.94
15.3.76-15.9.76	16.29	218.08	90.16	208.91	250.69	271.81
16.9.76-30.4.77	16.76	223.80	91.37	213.79	255.84	276.96
1.5.77-21.5.78	17.35	230.95	94.09	223.72	269.34	292.57
22.5.78-8.4.79	17.70	235.72	95.78	231.13	280.48	306.03
9.4.79-1.7.79	21.40	284.97	115.79	279.43	339.09	369.98
2.7.79-1.6.80	21.40	284.97	115.79	279.43	339.09	369.98
2.6.80-5.4.81	22.26	291.60	121.50	289.61	349.85	380.74
6.4.81-19.5.82	24.26	317.84	132.45	317.20	384.27	418.87
20.5.82-22.5.83	26.81	349.70	146.23	353.04	429.51	469.30
23.5.83-1.4.84	27.43	357.86	149.64	361.28	439.53	480.26
2.4.84-31.3.85	27.43	319.70	165.88	381.75	472.75	521.61
1.4.85-31.3.86	27.84	313.20	174.04	388.93	480.33	529.19
1.4.86-30.6.87	27.84	313.20	174.04	388.93	480.33	529.19
1.7.87-30.6.88	27.84	313.20	174.04	388.93	480.33	529.19
1.7.88-31.3.89	27.84	313.20	174.04	388.93	480.33	529.19
1.4.89-30.4.89	27.84	306.94	174.04	388.93	480.33	529.19
1.5.89-28.2.90	27.84	300.80	174.04	388.93	480.33	529.19
1.3.90-13.5.90	27.84	293.28	172.73	388.93	480.33	529.19
14.5.90-16.6.91	26.81	292.78	172.43	379.67	470.43	519.21
17.6.91-31.5.92	26.81	292.78	172.43	379.67	470.43	519.21
1.6.92-30.6.93	26.81	292.78	172.43	379.67	470.43	519.21
1.7.93-30.6.94	26.06	280.33	172.43	379.67	470.43	519.21
1.7.94-31.1.95	25.66	271.80	170.20	3)	3)	3)
1.2.95-30.6.95 4)	25.66	271.80	170.20	3)	3)	3)
1.2.95-30.6.95	30.98	328.20	205.52	3)	3)	3)
1.7.95-30.6.96	30.98	328.20	205.52	3)	3)	3)
1.7.96-30.6.97	30.98	328.20	205.52	3)	3)	3)

- Notes:
- 1) Since 9.4.79 in ECU according to Council Reg. (CEE) 652/79
 - 2) Only common price for the EC (without the different prices for some member states during transitory years).
 - 3) Intervention of cheese abolished at the beginning of the marketing year 1994/95
 - 4) Since 1.2.95 new agrimonetary system; switch-over coefficient (1.207509) abolished.

Butter and butterfats - Disposal measures																	
	Domestic use 1)	Subsidized consumption 2)	Welfare schemes	Armed forces and non-profit organizations	Butter concentrate	Sales to food processors	Other Measures 3)	Budgetary cost 4)	Market price 5)	Ratio budget cost/market price							
	(000 t)	(000 t)	(000 t)	(000 t)	(000 t)	(000 t)	(000 t)	Total (mio ECU)	ECU per t	ECU							
		Share of total domestic use	Share of subsidized consumption	Share of subsidized consumption	Share of subsidized consumption	Share of subsidized consumption	Share of subsidized consumption										
1980	1654	210	12.7%	6	2.9%	35	16.7%	5	2.4%	152	72.4%	12	5.7%	207.6	986.57	3166.5	0.31
1981	1658	170	10.3%	4	2.4%	27	15.9%	4	2.4%	135	79.4%	0	0.0%	211.8	1245.88	3415.5	0.36
1982	1656	282	17.0%	1	0.4%	36	12.8%	3	1.1%	144	51.1%	98	34.8%	414.1	1468.44	3689.6	0.40
1983	1556	242	15.6%	5	2.1%	40	16.5%	5	2.1%	170	70.2%	22	9.1%	468.4	2051.24	3633.4	0.54
1984	1631	358	21.9%	4	1.1%	42	11.7%	4	1.1%	183	51.1%	125	34.9%	450.1	1257.26	3649.4	0.34
1985	1660	369	22.2%	6	1.6%	44	11.9%	15	4.1%	228	61.8%	76	20.6%	403.0	1082.14	3541.8	0.31
1986	1647	357	21.7%	5	1.4%	45	12.6%	26	7.3%	267	74.8%	14	3.9%	201.7	564.99	3530.5	0.16
1987	1680	545	32.2%	25	4.6%	44	8.1%	34	6.2%	258	47.3%	184	33.8%	283.5	538.53	3529.8	0.15
1988	1753	633	36.1%	13	2.1%	59	9.3%	43	6.8%	328	51.8%	190	30.0%	252.5	398.89	3611.9	0.11
1989	1539	348	22.6%	16	4.6%	42	12.1%	16	4.6%	274	78.7%	0	0.0%	354.9	1019.83	3737.3	0.27
1990	1506	366	24.3%	19	5.2%	39	10.7%	16	4.4%	292	79.8%	0	0.0%	524.9	1434.15	3511.6	0.41
1991	1612	432	26.8%	22	5.1%	39	9.0%	19	4.4%	352	81.5%	0	0.0%	669.6	1550.00	3466.0	0.45
1992	1617	435	26.9%	16	3.7%	36	8.3%	19	4.1%	364	83.7%	0	0.0%	508.5	1168.97	3535.8	0.33
1993	1613	467	29.0%	15	3.2%	38	8.1%	22	4.7%	392	83.9%	0	0.0%	684.9	1466.60	3530.6	0.42
1994	1630	523	32.1%	13	2.5%	37	7.1%	22	4.2%	451	86.2%	0	0.0%	669.4	1279.92	3519.5	0.36
1995	1728	504	29.2%	15	3.0%	37	7.3%	23	4.8%	429	85.1%	0	0.0%	628.5	1247.02	3633.3	0.34
1996(p)	1716	494	28.8%	25	5.1%	37	7.5%	20	4.0%	412	83.4%	0	0.0%	635.5	1286.44	3418.1	0.38

Notes: 1) Based on EUROSTAT figures

2) Consumption at reduced prices or benefiting from special disposal measures

3) Consumption at reduced prices (christmas butter, etc.) 1980-1985; animal feed 1986-1988

4) Budget year, other items in the table per calendar year

5) Weighted average selling price (excl.VAT)

6) Figures for 1996 are provisional.

		Domestic use 1) for animal feed and casein production 1)				Total subsidized use 2)				Animal feed - Calves				Animal feed - Other than calves				Casein production			
		Total 1) (000 t)	Share of total domestic use	Quantity (000 t)	Budgetary cost 3) ECU	Total (mio ECU)	Share of total domestic use	Quantity (000 t)	Budgetary cost 3) ECU	Total (mio ECU)	Share of total cost	Quantity (000 t)	Budgetary cost 3) ECU	Total (mio ECU)	Share of total cost	Quantity (000 t)	Budgetary cost 3) ECU	Total (mio ECU)	Share of total cost		
Liquid skimmed milk																					
1980	39253	23.7%	8686	551.7	63.7	1832	21.1%	104.8	57.2	19.0%	2884	33.0%	216.7	75.7	39.3%	3970	45.8%	230.2	56.0	41.7%	
1981	37556	22.0%	7471	460.3	61.6	1713	22.9%	98.3	57.4	21.4%	2437	27.6%	191.7	78.7	41.6%	3321	44.5%	170.3	51.3	37.0%	
1982	39037	22.8%	8112	556.2	66.6	1760	21.7%	116.9	66.4	21.0%	2241	32.6%	195.9	87.4	35.2%	4111	50.7%	243.4	59.2	43.6%	
1983	44322	23.9%	9595	737.8	76.9	1847	19.2%	119.8	64.9	16.2%	3077	32.1%	315.1	102.4	42.7%	4871	48.7%	302.9	64.8	41.1%	
1984	45955	23.4%	10186	813.8	88.7	1846	18.1%	125.4	67.9	13.7%	3733	36.0%	414.6	111.1	45.4%	4807	45.2%	373.8	81.1	40.9%	
1985	42287	23.8%	9874	903.0	93.3	1608	16.0%	120.5	75.0	13.3%	2621	27.1%	282.0	111.4	32.3%	5447	56.3%	490.5	90.0	54.3%	
1986	41277	23.3%	9491	848.4	99.9	1516	16.0%	123.5	81.5	13.0%	2358	24.8%	277.0	117.5	29.2%	5617	59.2%	547.9	97.5	57.8%	
1987	40503	23.9%	9830	1014.5	102.2	1418	14.3%	122.5	86.4	12.1%	1910	19.2%	229.9	120.4	22.7%	6802	66.5%	662.1	100.3	65.3%	
1988	37754	22.0%	8471	784.6	93.8	1653	19.5%	109.5	66.2	13.8%	0	0.0%	53.9	6.8%	6.8%	6818	80.5%	631.2	92.6	79.4%	
1989	34484	19.2%	6510	528.5	81.2	909	14.0%	55.7	61.3	10.5%	0	0.0%	7.1	1.3%	1.3%	5861	86.0%	465.7	83.1	88.1%	
1990	34505	14.4%	4338	335.9	77.4	672	15.5%	40.7	60.6	12.1%	0	0.0%	-0.2	-0.1%	-0.1%	3866	84.5%	285.4	80.6	87.9%	
1991	39538	15.1%	4914	392.5	79.9	848	17.3%	49.9	58.8	12.7%	222	4.5%	9.6	43.2	2.4%	3944	78.2%	333.0	86.6	84.8%	
1992	38389	16.7%	5818	468.2	83.0	581	10.3%	37.2	64.0	8.0%	0	0.0%	1.1	0.2%	0.2%	5037	89.7%	427.9	85.0	91.8%	
1993	39870	14.6%	4381	361.5	82.9	430	9.9%	25.3	58.8	7.0%	0	0.0%	0.0	0.0%	0.0%	3631	90.1%	336.2	85.5	93.0%	
1994	36090	14.5%	4083	302.0	74.0	352	8.6%	24.2	68.8	8.0%	0	0.0%	-1.0	-0.3%	-0.3%	3731	91.4%	278.8	74.7	92.3%	
1995	41158	14.0%	5173	364.1	70.4	340	6.6%	20.8	61.2	5.7%	0	0.0%	0.0	0.0%	0.0%	4833	93.4%	343.3	71.0	94.3%	
1996(p)	40916	13.5%	4884	337.7	69.4	219	4.5%	26.5	120.8	7.8%	0	0.0%	0.0	0.0%	0.0%	4845	95.5%	311.2	67.0	92.2%	
Skimmed milk powder																					
1980	1616	86.3%	1276	730.0	572.1	1276	100.0%	725.1	568.3	99.3%	0	0.0%	4.9	0.7%	0.7%	---	---	---	---	---	
1981	1480	81.8%	1301	687.2	535.9	1301	100.0%	696.3	535.2	99.9%	0	0.0%	0.9	0.1%	0.1%	---	---	---	---	---	
1982	1477	86.0%	1336	754.7	564.9	1284	94.6%	753.0	593.7	99.9%	72	5.4%	1.7	23.6	0.2%	---	---	---	---	---	
1983	1860	87.1%	1784	893.0	500.0	1288	72.2%	831.6	645.7	93.1%	486	27.8%	61.4	123.8	6.9%	---	---	---	---	---	
1984	1895	85.0%	1818	927.5	510.2	1239	68.2%	890.9	719.0	96.1%	579	31.8%	38.6	63.2	3.8%	---	---	---	---	---	
1985	1693	81.5%	1383	824.1	668.2	1125	81.3%	922.7	820.2	99.6%	258	18.7%	1.4	5.4	0.2%	---	---	---	---	---	
1986	1535	81.8%	1409	1001.9	711.1	1137	80.7%	1001.8	881.1	100.0%	272	19.3%	0.1	0.4	0.0%	---	---	---	---	---	
1987	1452	79.8%	1116	882.8	889.6	1108	99.1%	982.8	897.6	100.0%	10	0.9%	0.0	0.0	0.0%	---	---	---	---	---	
1988	1228	79.1%	984	879.5	893.8	984	100.0%	879.5	893.8	100.0%	0	0.0%	0.0	0.0	0.0%	---	---	---	---	---	
1989	1009	71.2%	753	552.0	733.1	753	100.0%	552.0	733.1	100.0%	0	0.0%	0.0	0.0	0.0%	---	---	---	---	---	
1990	1087	74.3%	786	508.0	663.2	786	100.0%	508.0	663.2	100.0%	0	0.0%	0.0	0.0	0.0%	---	---	---	---	---	
1991	1188	76.6%	843	680.3	783.3	843	100.0%	652.2	773.7	98.8%	0	0.0%	8.1	1.2%	1.2%	---	---	---	---	---	
1992	1143	75.6%	864	620.3	775.4	800	100.0%	617.3	771.6	99.9%	0	0.0%	3.0	0.5%	0.5%	---	---	---	---	---	
1993	1038	75.4%	876	495.4	732.8	876	100.0%	495.4	732.8	100.0%	0	0.0%	0.0	0.0	0.0%	---	---	---	---	---	
1994	1029	73.4%	849	477.2	735.3	849	100.0%	477.2	735.3	100.0%	0	0.0%	0.0	0.0	0.0%	---	---	---	---	---	
1995	1084	73.6%	849	477.2	719.2	849	100.0%	477.2	719.2	100.0%	0	0.0%	0.0	0.0	0.0%	---	---	---	---	---	
1996(p)	1028	67.5%	694	411.0	756.0	543	78.6%	411.0	756.0	100.0%	0	0.0%	0.0	0.0	0.0%	---	---	---	---	---	

Notes: 1) Based on EUROSTAT figures
2) Domestic use at reduced prices or benefiting from special disposal measures (Source: DG VI-D1)
3) Budget year, other items in the table per calendar year (Source: DG VI-G1)
4) Figures for 1996 are provisional.

Skimmed milk and SMP - Disposal measures

	Domestic use 1)		Total subsidized use 2)		Animal feed - Calves		Animal feed - Other than calves		Casein production											
	Total 1) (000 t)	Share of total domestic use	Quantity (000 t)	Total (mio ECU)	Budgetary cost 3) ECU per t	Quantity	Share of subsidized consumption	Total (mio ECU)	Budgetary cost 3) ECU per t	Quantity	Share of subsidized consumption	Total (mio ECU)	Budgetary cost 3) ECU per t							
														Share of total domestic use	Share of total cost	Share of total consumption	Share of total cost			
in skimmed milk equivalent 4)																				
1980	56867	43.7%	22574	1281.7	56.8	15740	69.7%	829.9	52.7	64.7%	2884	12.7%	221.6	77.4	17.3%	3970	17.6%	230.2	58.0	18.0%
1981	53614	39.0%	21587	1157.5	53.6	15928	73.3%	794.6	50.2	68.6%	2437	11.3%	192.6	79.0	16.6%	3321	15.4%	170.3	51.3	14.7%
1982	55284	41.0%	22608	1310.9	57.5	15664	68.7%	869.9	55.5	66.4%	3033	13.3%	197.6	65.2	15.1%	4111	18.0%	243.4	59.2	18.0%
1983	84670	43.1%	28112	1630.8	56.0	15838	54.7%	851.4	58.7	58.3%	8503	29.2%	378.5	44.3	23.1%	4871	16.0%	302.9	64.8	18.0%
1984	67701	43.2%	30002	1841.3	61.4	15351	51.2%	1016.3	68.2	55.2%	10044	33.5%	451.2	44.9	24.5%	4607	15.4%	373.8	81.1	20.3%
1985	60554	41.2%	24597	1421.1	74.3	13745	55.9%	1043.2	75.9	57.1%	5405	22.0%	293.4	54.3	16.1%	5447	22.1%	490.5	90.0	26.8%
1986	57982	40.2%	24807	1950.3	78.6	13875	55.0%	1125.3	81.1	57.7%	5315	21.4%	277.1	52.1	14.2%	5617	22.6%	547.9	97.5	28.1%
1987	56141	38.7%	21949	2007.3	91.5	13330	60.7%	1115.3	83.7	55.6%	2018	9.2%	229.9	113.9	11.5%	6802	30.1%	682.1	100.3	33.0%
1988	51203	37.0%	19285	1874.1	86.9	12447	64.6%	989.0	78.5	59.1%	0	0.0%	53.9	--	3.2%	6818	35.4%	631.2	92.6	37.7%
1989	48321	31.7%	14349	1090.5	73.9	9011	61.7%	607.7	67.4	65.0%	0	0.0%	7.1	--	0.7%	5601	38.3%	465.7	83.1	43.1%
1990	48287	31.7%	12565	843.9	67.2	8899	70.8%	548.7	61.7	65.0%	0	0.0%	-0.2	--	0.0%	3668	29.2%	295.4	80.6	35.0%
1991	51418	30.5%	14052	1052.8	74.9	8888	71.1%	702.1	70.3	66.7%	222	1.6%	17.7	79.7	1.7%	3844	27.4%	333.0	86.6	31.0%
1992	50791	31.7%	14288	1088.5	78.0	9261	64.8%	654.5	70.7	60.2%	0	0.0%	4.1	--	0.4%	5037	35.2%	427.9	85.0	39.4%
1993	47680	28.9%	11648	856.9	73.6	7717	66.3%	520.7	67.5	60.8%	0	0.0%	0.0	--	0.0%	3931	33.7%	336.2	85.5	39.2%
1994	47183	28.3%	11079	779.2	70.3	7348	66.3%	501.4	68.2	64.3%	0	0.0%	-1.0	--	-0.1%	3731	33.7%	278.8	74.7	35.8%
1995	52865	25.9%	11588	791.3	68.3	6755	58.3%	448.0	68.3	58.6%	0	0.0%	0.0	--	0.0%	4833	41.7%	343.3	71.0	43.4%
1996(p)	51988	25.0%	10714	748.7	69.9	6070	56.0%	437.5	72.1	58.4%	0	0.0%	0.0	--	0.0%	4845	43.4%	311.2	67.0	41.6%
in SMP equivalent 4)																				
1980	5217	43.7%	2071	1281.7	618.9	1444	69.7%	829.9	574.7	64.7%	263	12.7%	221.6	843.4	17.3%	364	17.6%	230.2	632.0	18.0%
1981	4941	39.0%	1960	1157.5	581.8	1459	73.3%	794.6	544.7	68.6%	225	11.3%	192.6	857.5	16.6%	308	15.4%	170.3	556.4	14.7%
1982	5026	41.0%	2073	1310.9	632.2	1424	68.7%	869.9	610.9	66.4%	276	13.3%	197.6	716.7	15.1%	374	18.0%	243.4	651.3	18.0%
1983	5911	43.1%	2661	1630.8	612.8	1457	54.7%	851.4	653.1	66.3%	777	29.2%	378.5	484.4	23.1%	427	16.0%	302.9	709.4	18.0%
1984	6211	43.2%	2752	1841.3	669.0	1408	51.2%	1016.3	721.6	55.2%	921	33.5%	451.2	489.6	24.5%	423	15.4%	373.8	884.4	20.3%
1985	5612	41.2%	2280	1827.1	801.5	1274	55.9%	1043.2	818.9	57.1%	501	22.0%	293.4	585.7	16.1%	505	22.1%	490.5	971.6	26.8%
1986	5332	40.2%	2282	1950.3	854.6	1278	55.9%	1125.3	881.6	57.7%	489	21.4%	277.1	588.8	14.2%	517	22.6%	547.9	1080.3	28.1%
1987	5213	38.7%	2038	2007.3	984.9	1238	60.7%	1115.3	907.1	55.6%	187	9.2%	229.9	--	11.5%	613	30.1%	682.1	1080.1	33.0%
1988	4688	37.0%	1756	1874.1	953.3	1135	64.6%	989.0	871.6	59.1%	0	0.0%	53.9	--	3.2%	622	35.4%	631.2	1015.6	37.7%
1989	4212	31.7%	1358	1090.5	795.6	837	61.7%	607.7	725.6	56.2%	0	0.0%	7.1	--	0.7%	521	38.3%	465.7	894.6	43.1%
1990	4310	29.6%	1170	843.9	721.3	829	70.8%	548.7	622.2	65.0%	0	0.0%	-0.2	--	0.0%	341	29.2%	295.4	865.4	35.0%
1991	4743	30.5%	1286	1052.8	812.1	921	71.1%	702.1	762.1	66.7%	20	1.6%	17.7	--	1.7%	355	27.4%	333.0	939.1	31.0%
1992	4681	28.9%	1318	1088.5	824.5	854	64.8%	654.5	766.8	60.2%	0	0.0%	4.1	--	0.4%	484	35.2%	427.9	921.7	39.4%
1993	4440	28.9%	1081	856.9	793.0	716	66.3%	520.7	727.3	60.8%	0	0.0%	0.0	--	0.0%	365	33.7%	336.2	922.0	39.2%
1994	4377	28.3%	1028	779.2	758.2	682	66.3%	501.4	735.6	64.3%	0	0.0%	-1.0	--	-0.1%	346	33.7%	278.8	805.5	35.8%
1995	4865	25.9%	1073	791.3	737.5	625	58.3%	448.0	716.2	56.6%	0	0.0%	0.0	--	0.0%	448	41.7%	343.3	767.2	43.4%
1996(p)	4827	25.0%	995	748.7	752.6	564	56.0%	437.5	776.3	58.4%	0	0.0%	0.0	--	0.0%	431	43.4%	311.2	721.6	41.6%

Notes: 1) Based on EUROSTAT figures
2) Domestic use at reduced prices or benefiting from special disposal measures (Source: DG VI-D1)
3) Budget year; other items in the table per calendar year (Source: DG VI-G1)
4) Conversion in skimmed milk equivalent and SMP equivalent with coefficients used in DG VI-A2 medium term exercise
5) Figures for 1996 are provisional.

Skimmed milk and SMP - Disposal measures

	Domestic use 1)			Total subsidized use 2)				Market price 5)	Ratio budget cost/market price
	Total 1)	for animal feed and casein production 1)		Quantity		Budgetary cost 3)			
	(000 t)	(000 t)	Share of total domestic use	(000 t)	Share of total domestic use	Total (mio ECU)	ECU per t	ECU per t	
in skimmed milk equivalent 4)									
1980	56867	24863	43.7%	22574	39.7%	1281.7	56.8	113.81	0.50
1981	53614	21392	39.9%	21587	40.3%	1157.5	53.6	123.82	0.43
1982	55284	22862	41.4%	22808	41.3%	1310.9	57.5	131.97	0.44
1983	64670	27870	43.1%	29112	45.0%	1630.8	56.0	138.97	0.40
1984	67701	29217	43.2%	30002	44.3%	1841.3	61.4	155.30	0.40
1985	60554	24964	41.2%	24597	40.6%	1827.1	74.3	165.95	0.45
1986	57962	23274	40.2%	24807	42.8%	1950.3	78.6	168.36	0.47
1987	56141	21739	38.7%	21949	39.1%	2007.3	91.5	179.49	0.51
1988	51203	18963	37.0%	19265	37.6%	1674.1	86.9	202.10	0.43
1989	45321	14349	31.7%	14612	32.2%	1080.5	73.9	208.21	0.36
1990	46287	13711	29.6%	12565	27.1%	843.9	67.2	174.62	0.38
1991	51416	15681	30.5%	14052	27.3%	1052.8	74.9	180.02	0.42
1992	50791	15783	31.1%	14298	28.2%	1086.5	76.0	196.85	0.39
1993	47860	13801	28.8%	11648	24.3%	856.9	73.6	198.43	0.37
1994	47183	13356	28.3%	11079	23.5%	779.2	70.3	195.93	0.36
1995	52865	13699	25.9%	11588	21.9%	791.3	68.3	207.01	0.33
1996(p)	51988	12982	25.0%	10714	20.6%	748.7	69.9	192.87	0.36
in equivalent of SMP 4)									
1980	5217	2281	43.7%	2071	39.7%	1281.7	618.9	1240.56	0.50
1981	4941	1972	39.9%	1990	40.3%	1157.5	581.8	1343.48	0.43
1982	5026	2078	41.4%	2073	41.3%	1310.9	632.2	1451.68	0.44
1983	5911	2548	43.1%	2661	45.0%	1630.8	612.8	1520.31	0.40
1984	6211	2680	43.2%	2752	44.3%	1841.3	669.0	1692.73	0.40
1985	5612	2314	41.2%	2280	40.6%	1827.1	801.5	1790.62	0.45
1986	5332	2141	40.2%	2282	42.8%	1950.3	854.6	1830.06	0.47
1987	5213	2018	38.7%	2038	39.1%	2007.3	984.9	1933.07	0.51
1988	4668	1729	37.0%	1756	37.6%	1674.1	953.3	2217.05	0.43
1989	4212	1334	31.7%	1358	32.2%	1080.5	795.6	2240.31	0.36
1990	4310	1277	29.6%	1170	27.1%	843.9	721.3	1875.45	0.38
1991	4743	1447	30.5%	1296	27.3%	1052.8	812.1	1951.42	0.42
1992	4681	1455	31.1%	1318	28.2%	1086.5	824.5	2135.77	0.39
1993	4440	1280	28.8%	1081	24.3%	856.9	793.0	2139.09	0.37
1994	4377	1239	28.3%	1028	23.5%	779.2	758.2	2112.09	0.36
1995	4895	1268	25.9%	1073	21.9%	791.3	737.5	2235.75	0.33
1996(p)	4827	1205	25.0%	995	20.6%	748.7	752.6	2077.20	0.36

Notes: 1) Based on EUROSTAT figures

2) Domestic use at reduced prices or benefiting from special disposal measures (Source: DG VI-D1)

3) Budget year; other items in the table per calendar year (Source: DG VI-G1)

4) Conversion in skimmed milk equivalent and SMP equivalent with coefficients used in DG VI-A2 medium term exercise

5) Weighted average selling price for SMP (excl. VAT); for skimmed milk: converted SMP selling price

6) Figures for 1996 are provisional.