



# Dairy Facts and Figures 2003

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Doorstep Purchases

Retail Purchases

Milk Development Council

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Published September 2004

# Dairy Facts and Figures 2003 edition

Compiled and published by the Milk Development Council

The Milk Development Council was established following the reorganisation of the dairy industry at the end of 1994, with the objective of advancing the competitive position and enhancing the technical strengths of Great Britain's Dairy Farmers.

MDC Datum is the market information service of the Milk Development Council. Its aim to provide transparency into the dairy markets and thus to assist farmers and those involved in the industry to make informed business decisions.



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# Foreword

## Foreword

The MDC is pleased to bring you the first edition of Dairy Facts and Figures to be published by the MDC. We have taken over from the Dairy Council in publishing this authoritative statistical yearbook on the dairy industry.

The book has changed slightly since the 2002 edition and will be totally reviewed for the 2004 edition which will be published in the spring of 2005. If you have any comments on information you would particularly like to see removed, added or included in the 2004 edition please feel free to contact us with your suggestions.

We would like to express our thanks to the many individuals and organisations who have made the time to provide statistics and specialist knowledge to help with the compilation of this year's edition – their continued input is once again greatly appreciated.

**MDC Datum Team**  
Milk Development Council

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# Notes

## Notes

- Sources:** Unless otherwise indicated, the source of information is MDC.
- Terminology:** Where information has been brought together from different sources problems can arise on the consistency of terminology. Users should therefore make use of any references given in the footnotes to tables.
- Dates:** Unless otherwise indicated, split years (e.g. 2002-03) refer to the milk year 1 April to 31 March and single years (e.g. 2002) refer to the calendar year.
- Leap Year:** Statistics on volumes will be affected by the extra day in leap years. The milk year 1999-00 comprised 366 days as did the year 2003-04.
- Revisions:** Much of the data in this book is the subject of an on-going process of revision and re-estimation. This edition presents the data as at June 2004 and includes any amendments to figures published in previous editions of "Dairy Facts and Figures".
- Rounding:** On many tables the figures shown have been rounded. However, many sub-totals and totals are derived from original (unrounded) data and, for this reason, figures may not always sum to the totals shown.

# Abbreviations

## Abbreviations

n.a	data not available
n.c	no change
...	greater than zero but less than half the smallest unit shown
-	nil or not applicable
ppl	pence per litre
(for abbreviations on units of measurement refer to Appendix 1)	
ADAS	Agricultural Development and Advisory Service
AI	Artificial Insemination
CAP	Common Agricultural Policy
CMO	Common Market Organisation
CI	Channel Islands
DIAL	Dairy Industry Association Limited
DARD	Department of Agriculture and Rural Development (NI)
DEFRA	Department for Environment and Rural Affairs
DHI	Dairy Hygiene Inspectorate
ECU	European Currency Unit
EU	European Union
EUROSTAT	Statistical Office of the European Community, Luxembourg
FAO	Food and Agriculture Organisation
FRCA	Farming and Rural Conservation Agency
FSA	Food Standards Agency
GATT	General Agreement on Tariffs and Trade
IDF	International Dairy Federation
IMPE	Intervention Milk Price Equivalent
MMB	Milk Marketing Board
NAWAD	National Assembly for Wales Agriculture Department
NDFAS	National Dairy Farm Assured Scheme
NES	National Expenditure Survey

## Dairy Facts and Figures 2003 Abbreviations

NFS	National Food Survey
NMR	National Milk Records
OECD	Organisation for Economic Co-operation and Development
OJ	Official Journal of the European Communities
ONS	Office for National Statistics
RPA	Rural Payments Agency
SEERAD	Scottish Executive Environment and Rural Affairs Department
SMP	Skimmed Milk Powder
SNF	Solids-not-fat
TBC	Total Bacterial Count
TNS	Taylor Nelson Sofres
UHT	Ultra Heat Treatment
UK	United Kingdom
WTO	World Trade Organisation

# Dairy Farming

## Dairy Farming

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Definitions of terminology and numbers of producers

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Cow numbers, herd size details, milk yields and aspects of herd health

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Producers' input costs: costs and returns of milk production

# Dairy Farming

## Milk Producers

All premises where milk is produced for human consumption and sold or supplied in the form of either liquid milk or milk based products must obtain the requisite authority and comply with the Dairy Products (Hygiene) Regulations which came into force in 1995. The Regulations implement the EU hygiene directive (Directive 92/46/EEC) ensuring that the same hygiene standards apply to dairy production across the EU. The Regulations replace most of the previous hygiene legislation applicable in the dairy sector.

## Production Holdings

All premises where milk is produced are referred to as '**Production Holdings**'. In England and Wales such premises need to be registered and, in Scotland and Northern Ireland they need to be licensed. The numbers of Production Holdings in the United Kingdom are given on [Table 1](#) and [Table 2](#).

This count of Production Holdings is not comparable with historic Registered Producer numbers, as classified by the England and Wales and Scottish Milk Marketing Boards and published in earlier editions of Dairy Facts and Figures, due to differences in definition and exclusions. The most fundamental difference is that the count of Production Holdings includes all individual units producing milk for sale (including holdings with sheep, goats and buffalo), whereas Registered Producer numbers purely represented the number of farmers (producing cows milk) registered with the Milk Marketing Boards. If a farmer sold milk from more than one farm he was counted only once for the purpose of that statistic. Unfortunately this anomaly has caused a break in the historic time series.

Dairy farms producing cows' milk that were registered/licensed under previous legislation were automatically regarded as being registered/licensed under the new regulations. In England and Wales, production holdings are registered and periodically inspected by the Dairy Hygiene Inspectorate (DHI) on behalf of the Food Standards Agency (FSA), whereas in Scotland Local Environmental Health departments are responsible for this task for Scottish Executive Environment and Rural Affairs Department (SEERAD) and the Department of Agriculture and Rural Development (DARD) perform this role in Northern Ireland.

The Dairy Products (Hygiene) Regulations set the standards of hygiene and conditions under which milk from cows, sheep, goats and buffaloes can be produced for human consumption. To ensure farmers are complying with the requirements of this legislation all production holdings, as previously mentioned, are subject to on-farm hygiene and animal husbandry inspection visits. These take place on average once every 18 months, although producers with poor standards of hygiene are checked more frequently. Conversely, farms with particularly high standards of hygiene are visited less frequently, every 2-3 years. The State Veterinary Service and Local Environmental Health departments also monitor farms and animals to ensure the Regulations are being complied with. Producers who fail to meet the statutory hygiene standards can ultimately be issued with a final notice cancelling their farm registration/licence to produce milk for human consumption.

## On Farm Processors

All premises where milk undergoes some form of heat treatment or processing, such as pasteurisation, product manufacture or packing (including bottling), are known as 'dairy establishments'. Such premises (which may be on farm) are subject to additional requirements to those applying to production holdings. In particular they need to be 'approved' (or inspected in the case of direct sellers of raw milk or milk products where approval is not required – see below). In essence the regulations prohibit the use of any holding as a dairy processing establishment unless they are approved by the relevant authority in each area. However, there are some exemptions.

In England and Wales (and in Northern Ireland) raw cows' drinking milk or raw milk-based products can be sold at the farm gate. Sales of raw drinking milk are banned in Scotland but direct sales of other raw milk-based products are permitted. These on farm processors are subject to regular microbiological testing (at least four times a year) but are exempt from certain requirements laid down in the Regulations, including the need for approval. However, their products must be processed on the premises from their own milk and they must sell their products exclusively (or virtually exclusively) to the ultimate consumer. The Regulations do not apply either to a production holding or dairy establishment where dairy products are produced exclusively for the consumption of the occupier or other members of the household.

## Registering with Milk Purchasers

Any farmer who produces milk or milk products to sell wholesale must have a contract and register his wholesale quota allocation with a milk purchaser who has been approved by the Rural Payments Agency (RPA). Since deregulation producers can decide which purchasers to use and, if their contract allows, sell to more than one purchaser. On farm processors who only hold direct sales quota are not required to have a contract with a milk purchaser but they must be registered with the Rural Payments Agency for quota purposes.

Details of the number of wholesale and direct quota holders held on the Rural Payments Agency register are given on [Tables 16–19](#).

March	England and Wales	Scotland	Northern Ireland	United Kingdom
1995	28,093	2,239	5,409	35,741
1996	27,092	2,135	5,343	34,570
1997	26,110	2,009	5,409	33,528
1998	24,681	1,951	5,121	31,753
1999	23,286	1,896	5,039	30,221
2000	21,772	1,795	4,855	28,422
2001	20,191	1,624	4,741	26,556
2002	18,686	1,639	4,596	24,921
2003	17,003	1,590	4,425	23,018

*Source: DHI, SEERAD, DARD*

## Dairy Farming Milk Producers

**Table 2a: Registered dairy production holdings \*  
England and Wales by county**

County and Region	Sept 2001	Sept 2002	Sept 2003
Cumbria	1,577	1,382	1,242
Durham	164	140	125
Tyne & Wear	10	9	
Northumberland	105	83	68
North Yorkshire	1,132	1,001	907
Humberside	133	116	106
South Yorkshire	140	117	111
Cleveland	50	41	34
<b>North</b>	<b>3,311</b>	<b>2,889</b>	<b>2,593</b>
Cheshire	1,124	1,007	939
Gr. Manchester	120	105	91
Lancashire	1,025	904	841
Merseyside	23	19	16
West Yorkshire	241	200	183
Derbyshire	674	620	558
Staffordshire	992	928	870
<b>North West</b>	<b>4,199</b>	<b>3,783</b>	<b>3,498</b>
Lincolnshire	101	93	85
Cambridgeshire	19	17	13
Norfolk	143	122	112
Suffolk	94	77	68
<b>East</b>	<b>357</b>	<b>309</b>	<b>278</b>
Bedfordshire	26	19	17
Leicestershire	313	285	269
Northamptonshire	88	82	74
Nottinghamshire	111	101	95
Warwickshire	191	169	143
West Midlands	31	29	23
Gloucestershire	390	339	309
Hereford & Worcs	420	384	336
Shropshire	871	766	699
<b>Midlands</b>	<b>2,441</b>	<b>2,174</b>	<b>1,965</b>
Berkshire	55	49	39
Buckinghamshire	126	110	97
Hampshire	205	179	161
Isle of Wight	45	41	35
Oxfordshire	125	114	92
<b>South</b>	<b>556</b>	<b>493</b>	<b>424</b>

\* Includes holdings with goats, sheep and buffalo

Source: DHI

**Table 2b: Registered dairy production holdings \*  
England and Wales by county**

County and Region	Sept 2001	Sept 2002	Sept 2003
Dorset	674	636	589
Somerset	1,020	946	886
Wiltshire	515	480	426
Avon	316	288	262
<b>Mid West</b>	<b>2,525</b>	<b>2,350</b>	<b>2,163</b>
Devon	1,720	1,583	1,459
Cornwall	950	883	841
Isle of Scilly	2	2	
<b>Far West</b>	<b>2,654</b>	<b>2,468</b>	<b>2,300</b>
Essex	80	64	58
Hertfordshire	46	37	31
Kent	125	108	96
Greater London	13	10	60
Surrey	72	60	
East Sussex	114	99	82
West Sussex	145	124	109
<b>South East</b>	<b>595</b>	<b>502</b>	<b>436</b>
<b>England</b>	<b>16,638</b>	<b>14,968</b>	<b>13,657</b>
Clwyd	598	565	545
Dyfed	1,904	1,743	1,631
Gwent	198	184	169
Gwynedd	264	250	238
Mid Glamorgan	36	33	29
Powys	297	270	222
South Glamorgan	54	48	45
West Glamorgan	38	35	30
<b>Wales</b>	<b>3,389</b>	<b>3,119</b>	<b>2,909</b>
<b>England &amp; Wales</b>	<b>20,027</b>	<b>18,087</b>	<b>16,566</b>

\* Includes holdings with goats, sheep and buffalo

Source: DHI

## The Dairy Herd

### 1. Cow Numbers

Data on the number of cows on farms are collected twice a year (1 June and 1 December) in the form of a census carried out by the various Agricultural Departments in the UK. As and from June 2000 a full census of all farms will be carried out every 10 years, meeting the requirements for EU statistics. In the intervening years both censuses are based on a representative sample of farms. A larger number of farms are surveyed at the June census than at December.

Small holdings meeting certain conditions are classified as Statistically Insignificant holdings (SI or minor holdings). Although they are not covered by the census itself, estimates for such holdings are often included in the results published by the Agricultural Departments. Up until 2001, wherever possible, figures for England and Wales generally exclude SI holdings. However this situation has now changed and from 2001 onwards DEFRA and NAWAD have decided to include minor holdings in all census statistics for England and Wales in line with data now issued for Scotland and Northern Ireland (see below). The number of dairy cows involved amounted to only a few thousand and made no material difference to population estimates but did lead to confusion about precise numbers. In addition, alterations to geographical boundaries within England have been implemented to bring the reported regions into line with areas issued by other government departments. Unfortunately in certain areas, where there are few dairy enterprises, some data has had to be withheld to prevent disclosure of individual holdings.

In 1997 changes were made to census coverage in Northern Ireland. The DARD census now covers all active farm businesses regardless of size or whether owned, leased or rented under the conacre system. Previously the statistical definition of a farm was based on land ownership on the census register and did not adequately cover businesses run by persons who did not own the land. Statistics for the years 1983 to 1996 have been revised to take account of these changes in coverage but data are provisional and may be amended after a few more years' information has been collected under the new system.

In 2000, SEERAD carried out a major reclassification of holdings in Scotland whereby some 5,000 holdings moved from the main census to SI status and a much smaller number went from SI to main. As it would be a major undertaking to isolate these holdings and re-run historical data to reflect the revised coverage, SEERAD have decided that from now on they will release census figures for Scotland which relate to all holdings. Historical data back to 1991 have accordingly been amended to include SI holdings and thereby aid comparability of the data.

It should also be noted that due to the Foot and Mouth crisis in 2001 the sample size of the censuses throughout the UK was reduced and so results for 2001 are subject to greater statistical uncertainty than in previous years.

In the census returns, distinction between beef and dairy cows is made not in terms of breed but in terms of purpose for which the cow is kept. A dairy cow is defined as one being kept *mainly for producing milk or rearing calves for the dairy herd while a beef cow is one kept mainly for producing beef or rearing*

*calves for the beef herd.* The use of these definition results in cows being included within the dairy cow population even though they do not form part of a herd, which is supplying milk for sale. To reduce the effect that the inclusion of such cows may have on the meaningfulness of the data presented, some of the tables have been prepared by excluding herds below a certain size.

## 2. Herd Health

### Foot and Mouth Disease

Foot and Mouth Disease (FMD) affect cattle, sheep, pigs and goats. It is an acute infectious viral disease causing fever, followed by the development of blisters, chiefly in the mouth and on the feet. It is probably more infectious than any other disease affecting animals and spreads rapidly if uncontrolled. Wild and domestic cloven-hoofed animals and elephants, hedgehogs and rats are also susceptible. Animals pick up the virus either by direct or indirect contact with an infected animal, or by contact with foodstuffs which have been contaminated. Indirect contact includes airborne carriage of the virus and under favourable climatic conditions the disease may be spread considerable distances by this route. Heat, sunlight and disinfectants destroy the virus, whereas cold and darkness tend to keep it alive. Under favourable conditions it can survive for long periods. The disease is rarely fatal, except in the case of very young animals. Affected animals lose condition and secondary bacterial infections may prolong recovery. In dairy cattle loss of milk yield, abortion, sterility, chronic mastitis and chronic lameness are commonplace.

Prior to 2001, the last major Foot and Mouth epidemic in the UK occurred in 1967-68. Since then there had been only one outbreak in the UK, on a farm in the Isle of Wight in 1981; quick action isolated and then eradicated the disease. The 2001 outbreak was first identified in February at an abattoir in Essex and the source of the disease traced back to a farm in Northumberland where it is speculated that infected meat imported into the country was fed in pig swill. Thereafter the disease spread via two routes. First, through the movement of diseased pigs to holdings in Essex and Kent. Second through windborne spread of FMD virus to sheep on neighbouring holding, followed by their subsequent sale via markets and dealers in Northern England. In the course of these movements other sheep, people and vehicle became contaminated spreading the disease widely throughout England, Wales and the southern counties of Scotland.

Information released by DEFRA includes the number of animals slaughtered broken down by species but beef and dairy breeds are not recorded separately. Therefore it is not possible to identify accurately how many dairy farms and dairy cows were affected. Statistics available reveal that in Great Britain 4,226,000 animals (from 10,472 premises) were culled in an attempt to eradicate the disease, of which 582,000 were cattle. The slaughtered cattle represented 6% of the total GB herd of cattle and calves as recorded at December 2000. 29,600 of the slaughtered cattle came from premises where presence of Foot and Mouth Disease had been confirmed. In total 2,030 premises in Great Britain were infected by FMD in this outbreak.

## Dairy Farming The Dairy Herd

The North of England was most seriously affected by the disease and Cumbria alone accounted for 36% of the slaughtered cattle.

The last FMD case reported in any species was on 30 September 2001. The UK was declared officially disease free as of midnight on 14 January 2002.

On 22 January 2002 the UK regained its previously recognised Foot and Mouth Disease Free Status without vaccination at an international meeting of vets in Paris. This cleared the way for the UK to resume export trade in animals and animal products internationally.

### **Mastitis**

Mastitis is a widespread condition in which all or part of the udder suffers from an infection caused by bacteria entering through the teat: infection may involve a number of different types of bacteria. Clinical mastitis gives rise to obvious symptoms (e.g. swelling, pain, hardness, milk clots or discoloured milk) but more often the animal exhibits no signs which can be detected during day to day management (sub-clinical mastitis). The reaction of the body of the cow to the entry of mastitic bacteria into the udder is to generate a migration of white blood cells into the affected area to combat the infection. The number of these cells which pass out in the milk gives a measure of the level of sub-clinical mastitis.

Milk testing laboratories perform a count of these somatic cells, based on a sample taken once a month from the producers' bulk tank. The results provide producers with a measure of the overall level of mastitis within their herd: this is important as mastitis depresses milk yield and quality. In addition to overall herd counts, individual cows can be monitored using samples of their milk, thus allowing infected animals to be identified.

Most, if not all, buyers of raw milk have brought cell counts within the scope of their centralised testing procedures and their milk quality payment schemes, [see Milk Output: Quality for more details](#).

### **Brucellosis**

Brucellosis in cattle is a contagious disease which may cause abortion and in some cases infertility, thus reducing milk yield and increasing production losses. It is the cause of undulant fever in humans who contract the disease by contact with infected material (e.g. assisting infected cows at calving or by drinking raw infected milk).

On 1 October 1985 all herds in the United Kingdom were designated Officially Brucellosis Free (OBF). On 1 October 1989, following four years of OBF status, the interval for routine blood tests in Great Britain was increased from one to two years, as provided for in European Community Directive 64/432. Further changes to the control policy were made in March 1997 following an independent review. All breeding animals over the age of 24 months are monitored by government Agricultural Departments, either by a blood test or by monthly testing of bulk milk samples. Any herd failing such tests are investigated further by the local Divisional Veterinary Manager who authorises investigation for brucellosis in certain circumstances. All cattle imported from Ireland (Republic of Ireland and Northern Ireland) are additionally tested for

brucellosis on arrival in Great Britain. Other imported cattle are similarly tested according to defined protocols.

A Compensation policy is in place for animals slaughtered because of infection with brucellosis or those exposed to brucella infection. The only case since 1993 was in Cornwall in March 2004.

### **Enzootic Bovine Leukosis**

Enzootic Bovine Leukosis (EBL) is a viral disease of cattle which causes changes in the blood and the development of tumours in various organs of the body. Clinical signs are rarely seen in cattle under 4 years old and the infection can exist undetected in a herd for several years. Surveys carried out by the Ministry of Agriculture in the 1970s indicated that some herds in Great Britain contained infected cattle. In order to prevent further spread of the disease, EBL was declared a notifiable disease (the Enzootic Bovine Leukosis Order of 1980). In January 1982 the Ministry introduced a voluntary scheme (the Cattle Health Scheme) to encourage the establishment of EBL-free herds. A national testing programme for EBL was started in autumn 1992. There have been no confirmed cases of EBL in Great Britain since 1996.

Following a European Commission Decision in July 1999 confirming that Great Britain and Northern Ireland had attained officially EBL-free status, the Cattle Health Scheme (CHS) was closed on 31 October 1999. The national EBL monitoring and control programme continues.

### **Bovine Spongiform Encephalopathy (BSE)**

BSE is a progressive and ultimately fatal neurological disorder of cattle first identified by DEFRA's Central Veterinary Laboratory in November 1986. It is similar to scrapie, a disease of sheep which has been recognised for many years. BSE has a long and variable incubation period, and most cattle are around five years of age or more when it appears. Typically clinical signs include nervous and unco-ordinated behaviour. The presence of the disease is confirmed by post-mortem examination of brain tissue. At present there is no test which can be used on live animals to detect the disease before the appearance of the clinical signs but DEFRA is keen to sponsor research on the development of such tests. The disease has been notifiable since June 1988. All cattle suspected of having BSE are slaughtered and their carcasses destroyed. Although milk from BSE infected cattle has never been shown to carry the disease, as an additional precaution, milk from BSE suspect cattle cannot be marketed.

Farmers receive compensation if an animal is slaughtered because it is a BSE suspect. The amount of compensation payable depends on whether BSE is confirmed or not. Compensation is also payable to farmers for cattle killed under the Offspring Cull. This requires the slaughter and disposal of offspring born on or after 1 August 1996 to confirmed BSE cases.

The origins of BSE remain the subject of continued discussion. The BSE Inquiry, chaired by Lord Phillips, and subsequently the independent assessment of the origins of BSE conducted by Professor Horn, both concluded that the epidemic resulted from the practice of recycling ruminant protein in feed for ruminants.

## Dairy Farming The Dairy Herd

The use of mammalian meat and bone meal in any livestock feed has been banned since August 1996. The incidence of BSE in the UK peaked during 1992 and has fallen markedly since then. The introduction of the testing programme for casualty animals, fallen stock and some slaughtered animals has revealed some additional cases but this has not seriously affected the decline in incidence in the UK.

There have been 179,083 cases of BSE in the UK up to 16 July 2004 confirmed by "passive surveillance" (i.e. reported by farmers on the basis of clinical symptoms). The number of new cases of BSE reported each week is now around 10, compared to 1,000 in 1992-93 at the peak of the disease.

A further 1,410 cases (out of a total of 1,042,029 tested), have been confirmed through "active surveillance" (testing of brain tissue when animals die on-farm, in transit or at the abattoir). There is also some evidence for maternal transmission but if this does occur, it is at a low level and is expected to have only very small effect on the duration of the epidemic.

Additional information on BSE is available on the DEFRA website which is located at [www.defra.gov.uk/animalh/bse/](http://www.defra.gov.uk/animalh/bse/)

### **Bovine Tuberculosis**

Bovine tuberculosis (bovine TB) in cattle is increasing in the United Kingdom, and action is being taken to try and prevent the further spread of the disease. It is an infection caused principally by the bacteria *Mycobacterium bovis* which causes small nodules (tubercles) to appear and spread in healthy tissue. The tissue ceases to function properly and the animal is weakened over a long period and may eventually die. Most frequently the disease attacks the lungs first but it may spread to other organs, including the udder. In the past, bovine TB has been a major source of disease in humans. The presence of bovine TB in cattle herds is not now a major risk to public health. Pasteurisation kills bacteria in milk and any infection that may be in meat following routine post-mortem inspection would be destroyed by normal cooking. However, there remains a potential risk for people working in close contact with cattle, thought to be primarily from airborne infection. Control and eradication of the disease is therefore still a high priority.

The testing of cattle for bovine TB is compulsory and minimum testing frequencies are laid down in EU legislation (Directive 64/432 as amended). In most parts of the United Kingdom where incidence of TB in cattle remains very low, herds are routinely tested once every four years. Tests are more frequent, either three-yearly, two-yearly or annually where TB incidence is higher. In addition, all herds selling untreated cows' milk for human consumption are tested annually. Divisional Veterinary Managers have discretion to apply more frequent testing.

Animals reacting positively to a skin test (reactors) are removed from the farm, compulsorily slaughtered and herd movement restrictions placed on the farm. The Officially Tuberculosis Free (OTF) status of the herd is suspended and any milk produced must be heat treated before consumption. Presence of the

disease is confirmed if tuberculous growths are found during post-mortem examination of the reactor or *M. bovis* is detected in laboratory culture of tissue samples. In order for the movement restrictions to be lifted, in the case where disease is confirmed on the farm, the whole herd must test TB-free at two successive tests a minimum of sixty days apart. When disease is not confirmed, only one sixty day test is required.

If tuberculosis is identified during routine carcass inspection at a slaughterhouse, the farm from which the affected animal was dispatched is treated as having animals with suspected TB and an immediate check test will normally be carried out. The procedures outlined above are implemented if test reveals reactors and/or if a suspected TB carcass gives a positive result.

Farmers are paid compensation for reactor animals and for other cattle compulsorily slaughtered because they have been in close contact with reactors and have been exposed to infection. Farmers in the United Kingdom receive compensation for all animals slaughtered.

Following the publication of a report prepared for the government by a group of independent scientists (the 'Kreb's report'), the government has initiated a five point strategy for tackling TB in cattle including: liaison with the Department of Health to minimise health risks; research to develop a vaccine for cattle; research to understand how the disease is transmitted; controls to minimise cattle to cattle spread of the disease; and a badger culling trial in specified areas of England.

### Other diseases

**Infectious Bovine Rhinotracheitis (IBR)** is a herpes virus infection which may result in respiratory or genital infections and serologically monitored negative herds benefit from enhanced trade potential with increased status and stock value. IBR may become increasingly important in terms of European trade as some EU countries have eradication control programmes. All bulls moving to AI centres approved for European trade must pass the blood test for IBR.

**Bovine Viral Diarrhoea (BVD)** is a viral disease in cattle and is highly contagious. It is able to suppress the immune system, allowing infections such as pneumonia to become established, causing severe production and financial losses. A wide range of reproductive disorders may ensue, caused by infection during pregnancy. BVD in addition to IBR will become increasingly important in terms of European trade as numerous EU countries have implemented eradication schemes. There is no evidence to suggest that the disease poses any risk to human health.

**Leptospira hardjo** infection can cause abortions, milk drop and can affect human health, especially if the person is exposed to urine from herds undergoing acute infection. Uterine discharges and abortion material are also sources of infection. Pasteurisation eliminates *L. hardjo* from milk.

**John's Disease** affects a wide variety of ruminants and is caused by a bacterium called *Mycobacterium avium* subspecies *paratuberculosis* (MAP), which in spite of its name is not a cause of tuberculosis in man or animals. This

pathogen has a long incubation period and is characterised clinically by diarrhoea and progressive wasting. MAP bacterium is one of several factors that have been suggested as a possible cause of Crohn's disease in humans, an inflammatory bowel disease, although this is not accepted by all gastroenterologists. As a purely precautionary measure, to eliminate any potential risk of transmission of the bacteria to humans through milk, dairy companies have increased the holding time for pasteurisation of milk. The Food Standards Agency has published a strategy for the control of MAP in milk.

There are three Cattle Health Schemes in existence in the UK which provide a framework for farmers to establish herds free of any of the above four diseases, together with appropriate disease free certification.

"Herdcare – The National Cattle Health Scheme" – Biobest

"The Premium Cattle Health Scheme" – Scottish Agricultural College

"Highlands and Islands Cattle Quality Guarantee Scheme" – Hi Health Ltd

These schemes are certified by and operate to comply with regulations laid down by a body called the Cattle Health Certification Standards (CHeCS). Other companies such as Promar and NMR, also offer monitoring and control services but they are not members of CHeCS.

### 3. Cattle Identification and Tracing

A comprehensive range of measures are in place to ensure that all cattle can be identified and their life history traced. The aim is to facilitate tracing of cattle if there is a disease outbreak, give greater assurance to buyers or inspectors of cattle about an animal's history and ultimately improve consumer confidence in the food chain. Essentially there are four elements to the system that farmers must adhere to, which have been implemented to comply with EU Regulations, the provisions of which are compulsory and enforceable by law:

#### Tagging

All cattle must have a unique lifetime identification number shown on a tag in each ear (this double tagging applies to cattle born after 1 January 1998, animals born or who were imported into Great Britain before this date may continue to be identified by a single ear tag). Dairy cattle must have their first ear tag applied within 36 hours of birth and the second tag within 20 days of birth. All cattle must be tagged before they leave the holding where they were born.

#### Farm Records

Farmers are required to keep a comprehensive up-to-date register which records details of cattle births, imports, movements of stock on to and off the holding and deaths.

#### Passports

All cattle must be issued with passports, recording where they have been throughout their lives. Births must be registered and passports applied for within 7 days (effective from 1 January 2000) from the date on which the second tag is

applied to the animal. Cattle passports have been compulsory in Great Britain since 1 July 1996. Older cattle have been issued with certificates of CTS registration. The carcasses of animals without properly completed passports are not permitted to enter the food chain.

### **The Cattle Tracing System**

From 28 September 1998 onwards all cattle in Great Britain receiving a passport are recorded on a computer database managed by a public sector organisation, the British Cattle Movement Service (BCMS) which is part of DEFRA.

The BCMS is responsible for maintaining a national register of births, deaths and imports of cattle, issuing cattle passports and processing of cattle movement information. This computerised Cattle Tracing System (CTS) tracks every calf, cow and bull in Great Britain from birth to death. Keepers of cattle are legally obliged to notify the BCMS about all movements of cattle.

Northern Ireland also enforces similar identification, registration and record keeping arrangements in compliance with EU regulations and has already benefited from operating a computerised tracing system called the Animal and Public Health Information System (APHIS), all of which are administered by DARD. The computerised system was installed in April 1988 to deal primarily with tuberculosis and brucellosis testing programmes and the associated cattle movement control. The computer has since been upgraded and updated and in addition to the functions already mentioned includes details of all cattle movements, BSE test history and Farm Quality Assurance Scheme (FQAS) identification. The data from meat inspection of cattle slaughtered in Northern Ireland is also held.

## **4. National Dairy Farm Assured Scheme**

The National Dairy Farm Assured Scheme (NDFAS) was launched in September 1999. It is an industry backed scheme providing a national benchmark for standards of production and animal health and welfare and was developed to address the concerns of all the interested parties in the milk supply chain to provide confidence about the production methods and the safety and quality of milk leaving the farm premises. The scheme is operated by first purchasers (processors and milk buying groups) who have signed up to the scheme. Farmers supplying milk to scheme members are expected to comply with the standards in full, which have been drawn up by representatives from the National Farmers Union, the Federation of Milk Groups (formerly known as the UK Federation of Milk Producer Organisations), The Dairy Industry Federation and the British Cattle Veterinary Association.

### **On Farm Processors**

All premises where milk undergoes some form of heat treatment or processing, such as pasteurisation, product manufacture or packing (including bottling), are known as 'dairy establishments'. Such premises (which may be on farm) are subject to additional requirements to those applying to production holdings. In particular they need to be 'approved' (or inspected in the case of direct sellers of

## Dairy Farming The Dairy Herd

raw milk or milk products where approval is not required – see below). In essence the regulations prohibit the use of any holding as a dairy processing establishment unless they are approved by the relevant authority in each area. However, there are some exemptions.

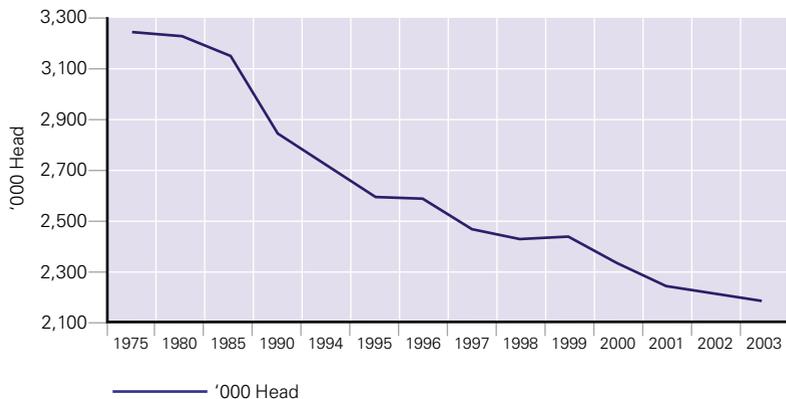
In England and Wales (and in Northern Ireland) raw cows' drinking milk or raw milk-based products can be sold at the farm gate. Sales of raw drinking milk are banned in Scotland but direct sales of other raw milk-based products are permitted. These on farm processors are subject to regular microbiological testing (at least four times a year) but are exempt from certain requirements laid down in the Regulations, including the need for approval. However, their products must be processed on the premises from their own milk and they must sell their products exclusively (or virtually exclusively) to the ultimate consumer. The Regulations do not apply either to a production holding or dairy establishment where dairy products are produced exclusively for the consumption of the occupier or other members of the household.

### Registering with Milk Purchasers

Any farmer who produces milk or milk products to sell wholesale must have a contract and register his wholesale quota allocation with a milk purchaser who has been approved by the Rural Payments Agency (RPA). Since deregulation producers can decide which purchasers to use and, if their contract allows, sell to more than one purchaser. On farm processors who only hold direct sales quota are not required to have a contract with a milk purchaser but they must be registered with the Rural Payments Agency for quota purposes.

Details of the number of wholesale and direct quota holders held on the Rural Payments Agency register are given on [Tables 16–19](#).

Chart 1: Dairy cow numbers, United Kingdom, 1975 to 2003



Source: DFRA



Table 4: Distribution of herds by herd size, United Kingdom by country

Size Group (number of dairy cows)	England <sup>a</sup>			Wales <sup>a</sup>			Scotland <sup>b</sup>			Northern Ireland <sup>c</sup>		
	1998	2000	2002	1998	2000	2002	1998	2000	2002	1998	2000	2002
	% of total herds											
1: <10	8.1	10.4	12.0	8.5	10.7	12.0	13.7	14.1	28.3	4.7	4.2	3.8
10: <30	11.1	9.3	8.7	19.0	15.8	16.1	4.3	5.2	6.9	26.9	25.1	21.2
30: <40	9.1	7.3	7.0	13.1	11.5	10.4	3.6	3.2	2.2	14.2	13.7	12.3
40: <50	9.8	8.4	8.3	12.0	11.2	9.8	6.5	4.7	2.4	13.3	13.2	12.7
50: <70	17.5	16.1	15.3	17.8	17.2	16.1	13.1	12.7	4.5	17.0	17.4	18.8
70: <100	20.3	19.5	18.3	15.9	15.7	14.8	24.2	23.0	9.6	14.0	14.7	15.4
100: <200	21.0	24.6	25.1	12.1	15.4	16.5	30.7	32.4	31.2	9.3	10.7	13.9
200: and over	3.1	4.3	5.3	1.6	2.5	4.3	3.8	4.7	15.0	0.7	1.0	1.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Total herds ('000)</b>	<b>22,316</b>	<b>19,917</b>	<b>16,897</b>	<b>4,807</b>	<b>4,307</b>	<b>4,004</b>	<b>2,546</b>	<b>2,362</b>	<b>2,840</b>	<b>5,627</b>	<b>5,275</b>	<b>4,933</b>

<sup>a</sup> DEFRA June census.

<sup>b</sup> SEERAD June census.

<sup>c</sup> DAIRD June census.

**Table 5: Distribution of cows by herd size, United Kingdom by country**

Size Group (number of dairy cows)	England <sup>a</sup>			Wales <sup>a</sup>			Scotland <sup>b</sup>			Northern Ireland <sup>c</sup>		
	1998	2000	2002	1998	2000	2002	1998	2000	2002	1998	2000	2002
	% of dairy cows											
1: <10	0.4	0.4	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.5	0.4	0.3
10: <30	3.1	2.4	2.6	6.7	5.2	4.8	1.0	1.1	1.2	10.4	9.2	7.0
30: <40	4.2	3.2	3.4	7.8	6.3	5.4	1.5	1.3	0.7	9.5	8.7	7.0
40: <50	5.9	4.7	4.8	9.3	8.0	6.5	3.4	2.4	1.0	11.5	10.7	9.3
50: <70	14.0	12.1	11.5	17.9	16.1	14.2	9.2	8.5	2.7	19.2	18.8	18.2
70: <100	22.9	20.5	18.9	22.7	20.8	18.3	24.2	22.3	8.0	22.4	22.4	21.1
100: <200	38.0	41.9	41.1	27.6	32.4	33.3	47.8	49.4	44.5	23.3	25.5	29.9
200: and over	11.5	14.9	17.2	7.4	10.6	17.1	12.5	14.7	41.2	3.3	4.3	7.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total cows ('000)	1,642,636	1,574,779	1,462,155	276,523	268,565	267,737	214,925	207,115	290,375	287,661	284,385	297,935

<sup>a</sup> DEFRA June census.

<sup>b</sup> SEERAD June census.

<sup>c</sup> DARD June census.

**Table 6: Average size of milk producing farms <sup>a</sup>  
United Kingdom by country**

Country	2000	2001	2002
	Total farmed hectares <sup>b</sup>		
England	74	79	77
Wales	69	n.a	73
Scotland	108	109	111
Northern Ireland	53	55	56

<sup>a</sup> Based on data collected from a sample of full-time farm businesses who provided information for the Farm Business Survey and the Scottish Farm Accounts Scheme

<sup>b</sup> Total farmed area excluding shared rough grazing.

Source: DHI, SEERAD, DARD

**Table 7: Average size of dairy herds <sup>a b</sup>,  
United Kingdom by agricultural department**

Agricultural Department	1996	1997	1998	1999	2000	2001	2002
Region							
North East	66	65	68	73	77	81	84
Yorkshire & Humberside	64	64	66	70	73	78	81
East Midlands	76	74	75	80	83	88	92
East	91	87	86	90	97	105	104
South East	104	102	102	109	114	121	125
South West	83	82	83	89	91	97	101
West Midlands	79	77	79	83	85	90	95
North West	76	75	77	82	86	90	97
England	79	78	80	85	88	93	98
Wales	61	60	62	66	69	74	76
England & Wales	76	75	77	82	85	90	94
Scotland	93	94	97	100	102	107	142
Northern Ireland	47	48	51	52	54	58	63
United Kingdom	72	72	74	78	80	85	92

<sup>a</sup> Estimates based on June Agricultural Census results.

<sup>b</sup> All figures for England and Wales and Scotland exclude herds of less than 10 cows.

Sources: DEFRA, SEERAD, DARD

**Table 8: Milk yield per cow, United Kingdom**

January to December	Litres per cow per annum
1989	4,998
1990	5,151
1991	5,134
1992 <sup>a</sup>	5,238
1993	5,260
1994	5,299
1995	5,397
1996 <sup>a</sup>	5,546
1997	5,788
1998	5,774
1999	5,964
2000 <sup>a</sup>	5,978
2001	6,347
2002	6,495

Figures are estimates made by MDC (The Dairy Council 1989-2001) based on average dairy cow numbers and gross milk production excluding any suckled milk, as estimated by DEFRA.

<sup>a</sup> Adjusted for leap years

**Chart 2: Cow's milk production and milk yields per cow, United Kingdom, 1989 to 2002**



Source: RPA, DFRA

# Dairy Farming

## Costs of Production

The costs of producing milk can be divided into variable and fixed costs. Fixed costs are those which are largely independent of the volume of milk produced while variable costs (mainly feed) are those which can change with the level of milk output per cow. Establishing costs can only be achieved at all accurately by means of detailed surveys of a structured sample of milk producers.

The Government's Agricultural Departments sponsor a range of studies which monitor the profitability of various farm enterprises. Data are collected and analysed by a number of Universities and Colleges but due to the expense of collecting such information the surveys are based on relatively small sample sizes.

The data in the following tables comes from the latest full study into the economics of milk production across England and Wales. This was carried out in 2002-03, and undertook costings on over 350 dairy farms. These costings are not whole farm costings but the costs of running the dairy enterprise, i.e. all non dairy income and costs are removed from the figures.

		Per Litre (pence)	Per Cow (£)	Per forage ha (£)
<b>Gross Output</b>	Milk	17.19	1,145	1,968
	Less Herd Replacement Cost (A)	1.21	81	138
	Calves	0.81	54	93
	Miscellaneous Out put	0.14	9	16
	<b>Total Gross Output (B)</b>	<b>16.93</b>	<b>1128</b>	<b>1939</b>
<b>Variable Costs</b>	Concentrates	3.62	241	415
	Bulk Feeds	0.30	20	34
	Bedding	0.25	17	28
	Vet and Medicines	0.57	38	65
	A.I and bull hire	0.34	23	39
	Recording & Consultancy Fees	0.18	12	21
	Consumables, Dairy Sundries	0.45	30	52
	Contract Work (Excluding Forage)	0.13	8	15
	Casual Labour	0.11	8	13
	Forage Variable Costs	1.32	88	151
	Milk Quota Leased In (net of quota leased out)	0.25	17	29
	<b>Total Variable Costs (C)</b>	<b>7.53</b>	<b>502</b>	<b>862</b>
<b>Gross Margin (B-C)=(D)</b>		<b>9.40</b>	<b>627</b>	<b>1,077</b>
<b>Fixed Costs</b>	Dairy Specific Labour	3.75	250	430
	Forage Labour	0.20	13	23
	Direct Machinery and Equipment	1.29	86	147
	Forage Machinery	0.34	23	39
	Dairy Specific Buildings	0.50	34	58
	Annualised charge for purchased quota	0.55	37	63
	Net Field rent	1.33	89	153
	<b>Total Fixed Costs (before Overheads) (E)</b>	<b>7.97</b>	<b>531</b>	<b>913</b>
<b>Overhead Costs</b>	Labour	0.49	32	56
	Machinery	0.17	11	19
	Buildings	0.08	5	9
	General Overheads	0.88	59	101
	<b>Total Overhead Costs (F)</b>	<b>1.62</b>	<b>108</b>	<b>186</b>
<b>Total Costs (A+C+E+F)=G</b>		<b>18.33</b>	<b>1,221</b>	<b>2,099</b>
<b>Net Margin (before Environm.Payments (D-E-F)=(H)</b>		<b>-0.19</b>	<b>-13</b>	<b>-22</b>
Environmental Scheme Payments (I)		0.07	5	8
<b>Net Margin (incl. Environmental Payments) (H+I)=(J)</b>		<b>-0.12</b>	<b>-8</b>	<b>-13</b>
Value of Farmer and Spouse Labour (K)		2.79	186	319
<b>Net Margin plus Farmer and Spouse Labour (J+K)</b>		<b>2.67</b>	<b>178</b>	<b>306</b>

Source: Colman, Farrar, Zhuang

## Dairy Farming Costs of Production

**Table 10: Comparisons of costs per litre in 2002-03 and 1996-97, Lowland herds by size**

		Herd Size				
		10:<40	40:<70	70:<100	100:<150	>=150
Variable cost (ppl)	2002-03	10.70	8.73	8.70	8.93	8.88
	1996-97	10.30	9.26	9.32	9.40	8.83
Fixed and overhead cost (ppl)	2002-03	18.18	11.60	9.26	8.65	7.80
	1996-97	14.32	11.70	9.45	8.54	8.10
<b>Total cost (ppl)</b>	<b>2002-03</b>	<b>28.88</b>	<b>20.33</b>	<b>17.97</b>	<b>17.58</b>	<b>16.68</b>
	<b>1996-97</b>	<b>24.62</b>	<b>20.96</b>	<b>18.77</b>	<b>17.94</b>	<b>16.93</b>
Total labour cost (ppl)	2002-03	11.26	6.37	4.60	3.70	3.10
	1996-97	8.90	6.39	4.64	4.03	3.55
Direct labour cost per cow	2002-03	62.90	41.10	35.00	27.30	24.70
	1996-97	62.20	45.30	35.20	31.90	27.20
Direct labour hours per 1,000 litres	2002-03	12.24	6.73	4.86	3.98	3.29
	1996-97	11.52	8.24	5.93	5.21	4.31

*Source: Colman, Farrar, Zhuang*

**Table 11: Net dairy farm income <sup>a</sup>, United Kingdom by country**

Farm Size		England	Wales	Scotland	Northern Ireland
£ Thousand per Farm					
Small	1999-00	-1.2	n.a	n.a	-1.4
	2000-01	2.5	n.a	n.a	1.9
	2001-02	5.6	n.a	n.a	4.4
Medium	1999-00	7.6	14.6	n.a	12.0
	2000-01	8.9	15.2	3.5	18.5
	2001-02	19.7	29.9	19.8	21.8
Large	1999-00	22.4	27.5	12.0	n.a
	2000-01	28.6	27.5	28.2	n.a
	2001-02	57.1	50.3	53.0	n.a
All sizes	1999-00	19.1	23.2	13.6	8.1
	2000-01	10.8	15.4	13.9	14.8
	2001-02	22.8	29.6	33.1	17.6

<sup>a</sup> Farm Business Survey and Scottish Farm Accounts Scheme data. Accounting years ending on average in February. In Northern Ireland the Farm Business Survey does not include large holdings, i.e. over 100 ESU. Figures are not shown separately where the sample contains fewer than 20 farms.

*Source: DEFRA*

**Table 12: Average net dairy farm income indices <sup>a</sup>, United Kingdom by country**

Accounting Year <sup>b</sup>	England	Wales	Scotland	Northern Ireland	United Kingdom	
					At current prices	In real terms <sup>c</sup>
	Index 1994-95 = 100					
1994-95	100	100	100	100	100	100
1995-96	119	162	115	127	125	120
1996-97	100	146	103	79	103	97
1997-98	65	105	48	57	67	61
1998-99	39	60	15	41	39	35
1999-00	31	65	7	36	33	29
2000-01	46	56	47	76	51	43
2001-02	101	136	113	91	103	86
2002-03 <sup>d</sup>	60	85	17	34	55	45

<sup>a</sup> Farm Business Survey and Scottish Farm Accounts Scheme data.  
<sup>b</sup> Accounting years ending on average in February.  
<sup>c</sup> Deflated by the RPI.  
<sup>d</sup> Provisional.

Source: DEFRA

**Table 13: Agricultural price indices, United Kingdom**

Item	1999	2000	2001	2002	2003
	Index (2000 = 100)				
Cattle	101.8	100.0	100.8	103.9	106.8
Cows and Bulls	100.0	100.0	100.0	100.0	100.0
Calves	117.9	100.3	<sup>a</sup>	<sup>a</sup>	149.4
Feed Wheat	110.6	99.9	110.7	97.3	106.2
Feed Barley	110.8	99.7	102.2	88.4	103.1
Maize Gluten Feed	100.6	100.0	110.5	103.2	122.9
All Straights	98.9	100.4	109.8	101.4	108.5
Cattle & calf compounds	99.8	99.8	106.4	105.9	102.3
Fertilisers	93.3	100.0	115.8	110.3	119.0
Energy and lubricants	81.2	99.9	96.7	92.0	100.5
Machinery	99.2	100.0	97.4	95.7	95.1

<sup>a</sup> Information not available due to Foot and Mouth

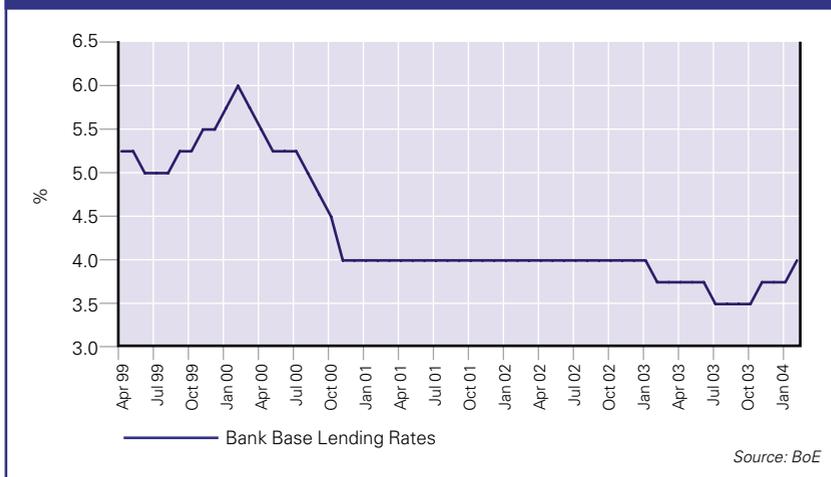
Source: DEFRA

Table 14: Loan interest rates, 1999 to 2003

London Clearing Banks Base Rate		Agricultural Mortgage Corporation New Variable Rate Loans	
rate from date shown			
8 Apr 1999	5.25	8 Apr 1999	7.15
10 Jun	5.00	18 May	7.61
8 Sep	5.25	1 Jun	7.15
4 Nov	5.50	10 Jun	6.90
13 Jan 2000	5.75	8 Sep	7.15
10 Feb	6.00	4 Nov	7.40
8 Feb 2001	5.75	13 Jan 2000	7.65
5 Apr	5.50	10 Feb	7.90
10 May	5.25	2 May	8.00
2 Aug	5.00	8 Feb 2001	7.75
18 Sep	4.75	5 Apr	7.50
4 Oct	4.50	14 May	7.25
8 Nov	4.00	2 Aug	7.00
6 Feb 2003	3.75	18 Sep	6.75
10 Jul	3.50	4 Oct	6.50
6 Nov	3.75	8 Nov	6.00
5 Feb 2004	4.00	6 Feb 2003	5.75
Average 2000-1	6.00	10 Jul	5.50
Average 2001-2	4.70	6 Nov	5.75
Average 2002-3	4.30	5 Feb 2004	6.00

*Sources: BoE, AMC*

Chart 3: Loan interest rates, monthly averages, 1999 to 2003



# Milk Output

## Milk Output

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Details of the quota system which has operated in the milk sector since 1984

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<b>Production</b>	<b>46</b>
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Statistics on milk production

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Details of Milk Recording Schemes and results from recorded cows

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# Milk Output

## Quotas

The **Rural Payments Agency (RPA)** is responsible for administering milk quotas throughout the United Kingdom. They should be contacted for comprehensive guidance on the detailed rules and regulations of the quota system currently in operation in the UK. It must be stressed that what follows only provides a brief overview of the milk quota system.

### 1. Basics

Full details of the initial legislation and the subsequent changes to the arrangements have been given in previous editions of **“Dairy Facts and Figures”**. In this edition, only a summary of the system is presented together with details of any recent changes. It should be noted that the application of the quota system differs in detail between the various countries of the Community and that the description given here relates only to the United Kingdom.

Quota on milk supply was introduced by the EU in 1984 as a measure to correct the imbalance between consumption and production. Over supply of milk within the EU and the over production of dairy products resulted in the increased use of intervention for butter and skim milk powder and as a result EU expenditure on intervention increased significantly in the years prior to the introduction of quota.

When quota was introduced each Member State was allocated a definitive amount of quota. The UK allocation of quota was initially based on milk production in 1981. There have been a number of reviews since that decision and the UK now has a total quota of 14,609,747 tonnes. If production for the quota year (running from 1 April – 31 March) exceeds quota this results in a charge/supplementary levy (superlevy).

In the Mid Term Review (MTR) 2003 the EU decided to extend the existence of the quota regime to 2014-15. It was also decided to increase the allocation of quota to the various countries. The UK's quota will increase by 0.5% per year in 2006, 2007 and 2008 (approximately 71 million litres per year in the UK). At the time of writing, consultation was taking place on the basis for allocation of this additional quota.

### 2. Quota System

The quota system covers all milk or milk products that leave a producer's holding whether they are sold or given away free. There are two categories of quota: dairy (wholesale) quota corresponding to deliveries to dairies and direct sales quota corresponding to direct sales of milk and milk products by farmers to consumers.

Both wholesale quota and direct sales quota are independently liable for superlevy. In other words a wholesale levy will be payable only when total deliveries for the UK as a whole exceed the national wholesale quota. Similarly, a direct sales levy will be payable only when total direct sales for the UK as whole exceed the national direct sales quota.

If a producer's deliveries exceed the held amount of quota at the end of the quota year (in a leap year 1/60th of February and March's production is taken

away), his purchaser group exceeds its registered quota and the UK goes above its quota at a national level, the producer will be liable to pay a superlevy.

There may be some producers who have surplus quota in a purchaser group which can be temporarily allocated to those within the group who need extra quota. This will help offset their excess milk production. Any quota that is still unused within the purchaser group is allocated to other purchasers who need surplus quota to distribute to producers within their group.

For direct sales quota if a producer has produced over his quota and cannot offset it against other direct sales quota then the individual will be liable to pay a superlevy.

### 3. Quota Trading

In the UK unlike many other European countries a free market trading system is operated for quota. This means that quota can be transferred in or out to match production, with prices technically being set by demand and supply of quota.

There are three primary ways of trading quota:

1. Permanent Transfers (Sales/Purchases): Milk quota is in principle attached to land but permanent transfers of quota without land are now permitted.
2. Temporary transfers (leasing): Leased quota can be transferred to set against production within the quota year that it is traded, however it reverts to the lessor at the end of the quota year. As a result of only being valid for a given year leased quota tends to be significantly cheaper than permanent transfer quota. Quota cannot be leased out if it has already been used to set against production within that quota year.
3. Used quota: Used quota is quota that has been used to set against production in a given quota year so therefore cannot be used again in that quota year, however it can be used in the proceeding quota year and thereafter.

### 4. Butterfat

Since 1987-88, all wholesale quota has had a butterfat reference figure (base) associated with it. Each wholesale producer therefore has not only his volume quota but also his butterfat base. Whenever quota moves from one producer to another, it takes with it the butterfat base of the producer giving up the quota; the base of the recipient is recalculated as a weighted average of the additional quota and his existing quota base. The Milk Quota register does in fact show three butterfat bases for each wholesale producer: the permanent, the ongoing and the future butterfat base. The permanent base is the one for permanently held quota; it is attached to any wholesale quota that is leased out. The ongoing butterfat base is the base for a particular year – it is the permanent base adjusted to take account of temporary changes such as leased-in quota with a different butterfat base, or temporary conversions (see below) of direct sales quota to wholesale (when direct sales quota is transferred either temporarily or permanently to wholesale quota it does so with a fixed butterfat rate of 3.8%).

## Milk Output Quotas

The future butterfat base is the base that will apply to the following year's permanent quota taking account of permanent transfers or conversions of direct sales quota to wholesale.

At the year-end, the weighted average butterfat content of each producer's "deliveries" for the year is calculated. The producer's "deliveries" are then adjusted up (or down) by 0.18% for every 0.01 percentage point that this average differs from his ongoing base, to give his butterfat-adjusted deliveries. It is this figure which is then used in all levy-assessment calculations. The adjustment is made on each individual producer "deliveries". Prior to 2004-05 quota year, deliveries were only butterfat-adjusted if the UK exceeded the average butterfat base of all wholesale producers (as weighted by their quota). Council Regulation 1788/2003 now requires that, where the sum of butterfat-adjusted deliveries is less than the volume deliveries, any levy is calculated on the latter. However it also requires that in this case downward adjustments of individual delivery figures must be proportionately reduced to bring the sum of butterfat-adjusted deliveries into line with deliveries actually made. At time of writing, consultation was taking place on how this new requirement is to be implemented.

Direct Sales "deliveries" are not butterfat adjusted at the end of the quota year. The levy assessment is entirely based on whether supply exceeds quota at the quota year end.

## 5. Temporary and Permanent Conversions

Quota can also be transferred from wholesale quota into direct sales quota or vice-versa to reflect their actual production. This may be necessary where a producer changes his or her milk marketing requirements (such as increasing direct sales of milk) or wishes to offset an excess in their deliveries to a purchaser or their direct sales to the public. Conversions can be either permanent or temporary. Producers may not convert quota they have already leased out or produced against, and in the case of permanent quota conversion, quota that has been leased in. Although there are different dates and stipulations regarding transfers of quota between wholesale and direct (and vice versa), the price set is still set by the market for both permanent and temporary conversions. All quota that is transferred from direct to wholesale, does so at a fixed 3.8%, this is because levels of butterfat are not used to calculate superlevy for direct sales.

### Permanent Conversion

A producer can convert part or their total amount of unused permanent quota at the operative date of conversion. When a producer permanently converts quota from one type to another he or she must not transfer or lease out any quota of the type to which they have converted from the date of conversion until the start of the next quota year. However, where a permanent conversion occurs and then, due to exceptional circumstances, there is a significant fall in milk production or when a temporary conversion of the same type was approved in the previous year, this restriction may be lifted. All applications for a permanent

conversion of milk quota must be received at the RPA Exeter by 31 December of the quota year in question.

### Temporary Conversions

As with temporary transfers of quota, a temporary conversion is valid for a single quota year only. The maximum amount of quota that a producer can temporarily convert is the amount he or she needs to offset their excess deliveries or direct sales. Producers tend to prefer a temporary conversion from one quota to another as there are transfer restrictions involved when different types of quota are converted permanently. All applications for a temporary conversion of milk quota must be received at the RPA Exeter by 14 May following the end of the quota year to which the temporary conversion of quota relates.

## 6. Levy

The Mid Term Review (MTR) in 2003 changed the way that superlevy was to be calculated. Previously superlevy was set by 115% of the Target Price prevailing on the 31 March of that quota year and this was the rate levied against purchasers on all their net excess litres. However, under the agreement set by the MTR superlevy will be set per 100kg of milk, at 33.27 euros for 2004-05 quota year, 30.91 euros for 2005-06, 28.54 euros for 2006-07 and 27.83 euros for the period 2007-08 until 2014-15.

## 7. Non-Active Quota Holders

As of 31 March 2004 all non active quota holders had to relinquish their quota, re-start production or have it confiscated to a national reserve. Non producer quota holders were predominantly producers who had ceased milk production but had retained their quota. This quota has been commonly leased out and provided a significant pool of quota for the leasing market. Quota prior to 1 April had been attached to the holding rather than the producer.

Non producing quota holders were estimated to make up 19% of all quota holders and 7% of quota. However following the ruling of the Thomsen case in February 2003 which stated all non producer quota holders were informed that they must sell their quota or re-start production by the 31 March 2004 otherwise their quota would be confiscated. However, there is a provision for a non producing quota holder to restart production within the 2 years following confiscation and retrieve the quota from national reserve if confiscated. In accordance with the regulations set down under the Mid Term Review all producers who cease production in a given quota year must have sold their quota or re-started production by the following quota year or else their quota will be confiscated by the national reserve.

## 8. Temporary re-allocation following herd movement restrictions

A producer who has had formal notice restricting herd movement under the Animal Health Act 1981, the Diseases of Animals (Northern Ireland) Order 1981 or the Food and Environment Protection Act 1985 can continue to sell milk and

## Milk Output Quotas

milk products but can only move stock off the farm if they are going directly for slaughter, he cannot move or sell on any livestock, including heifers in calf. As a result of these restrictions affected producers are likely to exceed their quota. In these circumstances a producer can apply for priority treatment when unused quota is being allocated at the end of the quota year. The amount of reallocation is based on the number of newly calving heifers above the average replacement rate of 20% kept on the holding due to movement restrictions. The maximum quota that can be re-allocated per eligible animal is 16 litres for each day that the restriction applies.

**Table 15: Comparisons against quota and levies  
United Kingdom, 1998-99 to 2002-03**

	1998-99	1999-00	2000-01	2001-02 <sup>a</sup>	2002-03
<b>Wholesale</b>					
Butterfat points over base	0.09	0.05	0.40	0.02	0.00
Final excess volume <sup>b</sup>	35.00	59.70	0.00	0.00	0.00
% over quota	0.30	0.40	-	-	-
Levy rate (pence per litre)	24.36	22.05	-	-	-
Levy paid (£ million)	8.50	13.20	-	-	-
<b>Direct sales</b>					
Final excess volume <sup>c</sup>	0.00	5.90	0.00	0.00	0.00
% over quota	-	2.90	-	-	-
Levy rate (pence per litre)	-	12.11	-	-	-
Levy paid (£ million)	-	1.30	-	-	-

<sup>a</sup> Data prior to verification by the Rural Payments Agency.  
<sup>b</sup> Million litres: after adjustment for butterfat content and all conversions, transfers and re-allocations.  
<sup>c</sup> Million litres: after all conversions, transfers and re-allocations.

Source: RPA

**Table 16: Number of holders of permanent quota  
United Kingdom by agricultural department,  
2000-01 to 2002-03**

Agricultural department and type of quota	2000-01	2001-02	2002-03
	number of holders		
<b>England</b>			
Wholesale quota	20,315	19,347	18,021
Direct sales quota	921	863	801
Holders of either	20,363	19,396	18,822
<b>Wales</b>			
Wholesale quota	4,377	4,148	3,860
Direct sales quota	120	112	95
Holders of either	4,385	4,158	3,955
<b>Scotland</b>			
Wholesale quota	2,088	1,986	1,914
Direct sales quota	76	65	58
Holders of either	2,104	1,996	1,972
<b>Northern Ireland</b>			
Wholesale quota	6,242	6,046	5,730
Direct sales quota	57	55	51
Holders of either	6,243	6,048	5,781
<b>United Kingdom</b>			
Wholesale quota	33,022	31,527	29,525
Direct sales quota	1,174	1,095	1,005
Holders of either	33,095	31,598	30,530

Source: RPA

## Milk Output Quotas

**Table 17: Wholesale and direct sales quota <sup>a</sup>  
United Kingdom by agricultural department,  
2000-01 to 2002-03**

Agricultural department and type of quota	2000-01	2001-02	2002-03
	million litres		
<b>England</b>			
Wholesale quota	9,824.6	9,795.2	9,743.7
Direct sales quota	146.6	139.2	134.2
<b>Total</b>	<b>9,971.3</b>	<b>9,934.4</b>	<b>9,877.9</b>
<b>Wales</b>			
Wholesale quota	1,421.6	1,421.6	1,433.8
Direct sales quota	4.7	4.6	4.0
<b>Total</b>	<b>1,426.3</b>	<b>1,425.8</b>	<b>1,437.8</b>
<b>Scotland</b>			
Wholesale quota	1,131.0	1,143.9	1,167.3
Direct sales quota	19.4	17.0	13.2
<b>Total</b>	<b>1,150.4</b>	<b>1,160.9</b>	<b>1,180.5</b>
<b>Northern Ireland</b>			
Wholesale quota	1,616.3	1,646.5	1,665.5
Direct sales quota	5.3	5.2	4.7
<b>Total</b>	<b>1,621.5</b>	<b>1,651.7</b>	<b>1,670.2</b>
<b>United Kingdom</b>			
Wholesale quota	13,993.6	14,006.8	14,010.3
Direct sales quota	176.0	165.9	156.1
<b>Total</b>	<b>14,169.6</b>	<b>14,172.8</b>	<b>14,166.4</b>

<sup>a</sup> Permanent quota.

Source: RPA

**Table 18: Wholesale and direct sales quota, 2002-03  
England and Wales by county**

2002-03	Wholesale and Direct Sales Quota <sup>a</sup>		2002-03	Wholesale and Direct Sales Quota <sup>a</sup>	
	No. of holders	Amount (million litres)		No. of holders	Amount (million litres)
Avon	399	210.8	Northamptonshire	83	66.3
Bedfordshire	31	21.5	Northumberland	84	44.6
Berkshire	68	55.1	Nottinghamshire	112	77.0
Buckinghamshire	110	71.3	Oxfordshire	145	106.6
Cambridgeshire	27	15.5	Shropshire	1,044	581.8
Cheshire	1,247	782.4	Somerset	1,104	672.5
Cleveland	109	44.3	South Yorkshire	195	72.6
Cornwall <sup>b</sup>	1,026	511.1	Staffordshire	954	466.2
Cumbria	1,700	822.7	Suffolk	86	61.9
Derbyshire	804	359.0	Surrey	74	55.9
Devon	1,870	945.1	Tyne and Wear	39	22.9
Dorset	656	515.5	Warwickshire	195	107.8
Durham	196	68.8	West Midlands	121	55.5
East Sussex	103	75.7	West Sussex	138	105.5
Essex	63	53.1	West Yorkshire	367	136.7
Gloucestershire	417	258.8	Wiltshire	521	355.1
Greater London	12	8.1	<b>England</b>	<b>18,055</b>	<b>9,877.9</b>
Gr. Manchester	127	43.7			
Hampshire	211	186.8	Clwyd	599	244.7
Hereford & Worcs	407	209.7	Dyfed	2,159	814.6
Hertfordshire	48	29.1	Gwent	234	106.6
Humberside	88	38.3	Gwynedd	352	86.0
Isle of Wight	46	21.7	Mid Glamorgan	45	15.1
Kent	124	87.0	Powys	349	129.8
Lancashire	1,206	553.3	South Glamorgan	62	25.9
Leicestershire	325	209.0	West Glamorgan	65	15.2
Lincolnshire	103	65.6	<b>Wales</b>	<b>3,865</b>	<b>1,437.8</b>
Merseyside	34	22.1			
Norfolk	133	96.9			
North Yorkshire	1,102	507.7	<b>England &amp; Wales</b>	<b>21,920</b>	<b>11,315.7</b>

<sup>a</sup> Permanent quota  
<sup>b</sup> Includes Scilly Isles

Source:RPA

## Milk Output Quotas

**Table 19: Wholesale and direct sales quota, 2002-03  
Scotland and Northern Ireland by county**

2002-03	Wholesale and Direct Sales Quota <sup>a</sup>		2002-03	Wholesale and Direct Sales Quota <sup>a</sup>	
	No. of holders	Amount (million litres)		No. of holders	Amount (million litres)
Borders	24	26.6	Borders	24	26.6
Central	56	35.3	Antrim	1,347	428.4
Dumfries & Galloway	595	421.8	Armagh	535	160.0
Fife	55	32.4	Down	1,045	388.7
Grampian	134	94.2	Fermanagh	695	111.5
Highland	27	16.2	Londonderry	563	174.8
Lothian	52	26.5	Tyrone	1,546	406.8
Orkney	27	16.6	<b>Northern Ireland</b>	<b>5,731</b>	<b>1,670.2</b>
Shetland	<i>c</i>	<i>c</i>			
Strathclyde	903	478.1			
Tayside	43	29.0			
Western Isles	<i>c</i>	<i>c</i>			
<b>Scotland</b>	<b>1,924</b>	<b>1,180.5</b>	<b>United Kingdom</b>	<b>29,575</b>	<b>14,166.4</b>

*a* Permanent quota  
*c* Confidential

*Source: RPA*

Table 20: Distribution of permanent wholesale quota, 2002-03, United Kingdom by agricultural department

Size Band ('000 litres)	England		Wales		Scotland		Northern Ireland		United Kingdom	
	Holders % number	Wholesale Quota % litres								
Less than 100	9.6%	1.0%	15.9%	2.5%	4.6%	0.4%	24.1%	4.6%	12.9%	1.6%
100: < 199	16.1%	4.5%	22.8%	9.3%	11.2%	2.8%	24.1%	12.3%	18.2%	5.8%
200: < 499	34.9%	21.6%	36.9%	31.7%	33.1%	19.1%	35.8%	38.7%	35.2%	24.4%
500: < 749	16.7%	18.8%	12.9%	21.0%	22.5%	22.6%	9.3%	19.4%	15.1%	19.4%
750: < 999	9.5%	15.2%	5.9%	13.7%	12.9%	18.2%	3.5%	10.3%	8.1%	14.7%
1,000: < 1,249	5.4%	11.0%	2.8%	8.6%	7.7%	14.0%	1.8%	6.7%	4.5%	10.5%
1,250: < 1,499	2.9%	7.3%	1.3%	4.6%	3.7%	8.3%	0.6%	2.7%	2.3%	6.5%
1,500: < 1,749	1.9%	5.6%	0.5%	2.2%	1.7%	4.5%	0.2%	1.4%	1.4%	4.7%
1,750: < 2,249	1.5%	5.6%	0.4%	2.3%	1.4%	4.3%	0.3%	2.3%	1.2%	4.7%
2,250: < 2,999	1.0%	4.7%	0.3%	2.2%	0.6%	2.7%	0.1%	1.0%	0.7%	3.8%
3,000: and over	0.5%	4.6%	0.2%	2.0%	0.5%	3.1%	0.1%	0.6%	0.4%	3.8%
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Actual	18,021 <sup>a</sup>	9,743,671 <sup>b</sup>	3,860 <sup>a</sup>	1,433,837 <sup>b</sup>	1,914 <sup>a</sup>	1,167,274 <sup>b</sup>	5,730 <sup>a</sup>	1,665,479 <sup>b</sup>	29,525 <sup>a</sup>	14,010,262 <sup>b</sup>
Average Wholesale Quota	540,684 litres		371,461 litres		609,861 litres		290,660 litres		474,522 litres	

<sup>a</sup> Number of holders<sup>b</sup> '000 litres

Source: RPA

Table 21: Distribution of permanent direct sales quota, 2002-03, United Kingdom by agricultural department

Size Band ('000 litres)	England		Wales		Scotland		Northern Ireland		United Kingdom	
	Holders % number	Wholesale Quota % litres								
Less than 100	66.0%	10.0%	85.3%	33.8%	44.8%	3.2%	72.5%	22.1%	67.0%	10.4%
100: < 199	14.6%	12.1%	8.4%	27.8%	19.0%	12.7%	19.6%	30.4%	14.5%	13.1%
200: < 499	12.6%	23.3%	6.3%	38.4%	24.1%	31.0%	3.9%	16.2%	12.2%	24.1%
500: < 749	2.6%	9.6%	-	-	5.2%	12.5%	2.0%	12.8%	2.5%	9.7%
750: < 999	1.6%	8.7%	-	-	1.7%	5.7%	2.0%	18.5%	1.5%	8.5%
1,000: < 1,249	0.9%	5.9%	-	-	1.7%	8.6%	-	-	0.8%	5.8%
1,250: < 1,749	0.5%	4.2%	-	-	1.7%	12.8%	-	-	0.5%	4.7%
1,750: < 2,999	0.5%	6.3%	-	-	1.7%	13.4%	-	-	0.5%	6.6%
3,000 and over	0.6%	19.9%	-	-	-	-	-	-	0.5%	17.1%
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Actual	801 <sup>a</sup>	134,233 <sup>b</sup>	95 <sup>a</sup>	3,988 <sup>b</sup>	58 <sup>a</sup>	13,196 <sup>b</sup>	51 <sup>a</sup>	4,706 <sup>b</sup>	1,005 <sup>a</sup>	156,123 <sup>b</sup>
Average Direct Sales Quota	167,582 litres		41,983 litres		227,516 litres		92,270 litres		155,347 litres	

Source: RPA

<sup>a</sup> Number of holders.  
<sup>b</sup> '000 litres.

Table 22: Distribution of net wholesale quota, 2002-03<sup>a</sup>, United Kingdom by agricultural department

Size Band ('000 litres)	England		Wales		Scotland		Northern Ireland		United Kingdom	
	Holders % number	Wholesale Quota % litres								
Less than 100	7.2%	0.4%	9.6%	0.8%	5.5%	0.3%	18.3%	2.6%	9.7%	0.7%
100: < 199	9.5%	2.2%	14.2%	4.4%	6.2%	1.4%	20.6%	8.9%	12.1%	3.2%
200: < 499	32.0%	16.7%	39.3%	26.5%	27.5%	13.9%	39.6%	36.8%	34.2%	20.0%
500: < 749	19.3%	17.9%	17.2%	21.3%	24.1%	21.1%	11.3%	19.8%	17.7%	18.8%
750: < 999	12.2%	15.8%	8.9%	15.5%	15.4%	18.8%	5.4%	13.4%	10.6%	15.8%
1,000: < 1,249	7.9%	13.2%	5.3%	11.9%	9.8%	15.4%	2.6%	8.3%	6.6%	12.6%
1,250: < 1,449	4.4%	9.1%	2.2%	5.9%	5.2%	10.1%	1.0%	3.9%	3.5%	8.2%
1,500: < 1,749	2.6%	6.4%	1.6%	5.3%	2.6%	5.9%	0.5%	2.2%	2.1%	5.7%
1,750: < 2,249	2.7%	7.9%	0.8%	3.0%	2.3%	6.2%	0.5%	2.9%	2.0%	6.6%
2,250: < 2,999	1.4%	5.3%	0.5%	2.4%	0.8%	2.8%	0.1%	0.7%	1.0%	4.2%
3,000 and over	0.8%	5.1%	0.4%	2.9%	0.8%	4.1%	0.1%	0.5%	0.6%	4.2%
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Actual	14,446 <sup>b</sup>	9,603,911 <sup>c</sup>	2,957 <sup>b</sup>	1,468,137 <sup>c</sup>	1,712 <sup>b</sup>	1,204,463 <sup>c</sup>	4,994 <sup>b</sup>	1,733,751 <sup>c</sup>	24,109 <sup>b</sup>	14,010,262 <sup>c</sup>
Average Wholesale Quota	664,815 litres		496,496 litres		703,541 litres		347,167 litres		581,122 litres	

<sup>a</sup> Net wholesale quota distribution after all transfers and leases.<sup>b</sup> Number of holders.<sup>c</sup> '000 litres

Source: RPA

Table 23: Distribution of net direct sales quota, 2002-03 <sup>a</sup>, United Kingdom by agricultural department

Size Band ('000 litres)	England		Wales		Scotland		Northern Ireland		United Kingdom	
	Holders	Wholesale Quota	Holders	Wholesale Quota	Holders	Wholesale Quota	Holders	Wholesale Quota	Holders	Wholesale Quota
	% number	% litres	% number	% litres	% number	% litres	% number	% litres	% number	% litres
Less than 100	64.3%	9.2%	85.3%	35.2%	52.8%	3.5%	65.5%	18.1%	65.8%	9.7%
100: < 199	15.1%	12.0%	9.5%	31.1%	13.2%	9.8%	20.7%	27.4%	14.8%	12.9%
200: < 499	13.6%	24.0%	5.3%	33.6%	20.8%	26.3%	10.3%	29.6%	13.0%	24.6%
500: < 749	2.8%	10.0%	0.0%	0.0%	3.8%	9.3%	1.7%	10.2%	2.6%	9.7%
750: < 999	1.3%	6.6%	0.0%	0.0%	1.9%	6.9%	1.7%	14.8%	1.2%	6.7%
1,000: < 1,249	0.6%	4.2%	0.0%	0.0%	3.8%	18.1%	0.0%	0.0%	0.7%	5.1%
1,250: < 1,749	1.0%	8.2%	0.0%	0.0%	3.8%	26.2%	0.0%	0.0%	1.0%	9.1%
1,750: < 2,999	0.5%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	5.1%
3,000 and over	0.6%	19.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	17.1%
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Actual	769 <sup>b</sup>	105,470 <sup>c</sup>	95 <sup>b</sup>	3,946 <sup>c</sup>	51 <sup>b</sup>	9,126 <sup>c</sup>	58 <sup>b</sup>	5,889 <sup>c</sup>	972 <sup>b</sup>	124,430 <sup>c</sup>
Average Direct Sales Quota	173,034 litres		41,534 litres		233,257 litres		101,530 litres		159,310 litres	

<sup>a</sup> Net direct sales quota distribution after all transfers and leases.

<sup>b</sup> Number of holders

<sup>c</sup> '000 litres

Source: RPA

**Table 24: Superlevy liability  
United Kingdom 1998-99 to 2002-03**

April to March	1998-99	1999-00	2000-01	2001-02	2002-03 <sup>a</sup>
	million litres				
<b>Wholesale</b>					
Quota (WSQ)	13,949	13,969	13,989	14,010	14,019
Sales	13,746	13,894 <sup>b</sup>	13,933	13,838	13,986
Adjusted Sales <sup>c</sup>	13,974	14,027	13,660	13,898	13,871
Adjusted Sales less Quota	+25	+58	-329	-112	-148
<b>Direct <sup>d</sup></b>					
Quota (DSQ)	209	189	176	166	155
Sales	227	205 <sup>b</sup>	224	205	193
Sales less Quota	+18	+16	+48	+39	+38
<b>Net Conversion (DSQ to WSQ)</b>	-18	-10	-71	-45	-42
<b>Post-Conversion Sales less Quota:</b>					
Wholesale	+43	+68	-263	-59	-106
Direct <sup>e</sup>	0	+6	-23	-6	-4
<b>Re-allocation (unused WSQ) <sup>f</sup></b>	+8	+9	+333	+131	+77
<b>Final Wholesale Excess</b>	+35	+59	-	-	-
<b>Wholesale Levy Paid (£million)</b>	9	13	-	-	-

<sup>a</sup> Data prior to verification by the Rural Payments Agency.

<sup>b</sup> After leap year adjustment.

<sup>c</sup> After adjustment for butterfat content.

<sup>d</sup> Based on Quota Returns received within the deadline.

<sup>e</sup> Direct sales exceeded quota for the UK as a whole in the years 1995-96 to 1997-98 and 1999-00 resulting in a levy on every UK producer who, after temporary conversion, had exceeded his direct sales quota. Post verification dilute rate levies applied to all excess litres were 1995-96: 20.54ppl, 1996-97: 4.44ppl, 1997-98: 16.12ppl, 1999-00: 12.11ppl. UK Direct sales did not exceed quota in 1998-99 or 2002-03 resulting in no levy for UK direct sellers in these years.

<sup>f</sup> Re-allocation includes quota held in national reserve.

Source: RPA

## Milk Output Quotas

**Table 25: Temporary quota transfers: leases, United Kingdom, 2000-01 to 2002-03**

<b>April to March</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>
<b>Wholesale Quota</b>			
Total confirmed transactions	17,278	23,535	20,369
Quantity of milk involved (million litres)	1,425.4	2,094.7	2,019.3
% of wholesale quota	10.2	15.0	14.4
Number of producers leasing out quota	8,739	10,554	9,879
Number of producers leasing in quota	9,343	13,514	10,801
<b>Direct Sales Quota</b>			
Total confirmed transactions	128	134	108
Quantity of milk involved (million litres)	12.9	13.4	12.1
Percent of direct sales quota	7.3	8.1	7.8
Number of producers leasing out quota	99	97	88
Number of producers leasing in quota	113	123	87
<b>All Leases:</b>			
Number of transactions	17,406	23,669	20,477
Quantity of milk (ml)	1,438.3	2,108.1	2,031.4

Source: RPA

<b>April to March</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>
<b>Wholesale Quota</b>			
<b>Permanent transfer with land</b>			
Total confirmed transactions	6,998	5,572	3,715
Quantity of milk involved (million litres)	578.9	534.5	479.7
% of wholesale quota	4.1	3.8	3.4
<b>Permanent transfer without land</b>			
Total confirmed transactions	116	95	3813
Quantity of milk involved (million litres)	12.3	10.8	403.7
% of wholesale quota	0.1	0.1	2.9
<b>All permanent transfers of wholesale quota</b>			
Total confirmed transactions	7,114	5,667	7,528
Quantity of milk involved (million litres)	591.2	545.3	883.4
% of wholesale quota	4.2	3.9	6.3
Number of producers transferring quota out	3,380	3,137	3,761
Number of producers transferring quota in	4,367	3,496	4,502
<b>Direct Sales Quota</b>			
<b>Permanent transfer with land</b>			
Total confirmed transactions	78	70	36
Quantity of milk involved (million litres)	7.1	8.2	2.9
% of wholesale quota	4.0	4.9	1.9
<b>Permanent transfer without land</b>			
Total confirmed transactions	5	1	57
Quantity of milk involved (million litres)	0.1	-	7.0
% of wholesale quota	0.1	-	4.5
<b>All permanent transfers of wholesale quota</b>			
Total confirmed transactions	83	71	93
Quantity of milk involved (million litres)	7.2	8.2	9.8
% of wholesale quota	4.1	4.9	6.3
Number of producers transferring quota out	78	60	70
Number of producers transferring quota in	62	61	69
<b>All Permanent Transfers</b>			
Number of confirmed transactions	7,197	5,738	7,621
Quantity of milk involved (million litres)	598.4	553.5	893.2

*Source: RPA*

## Milk Output Quotas

**Table 27: Permanent and temporary quota transfers  
United Kingdom by country, 2002-03**

2002-03	England	Wales	Scotland	Northern Ireland	United Kingdom
<b>Permanent Transfers</b>					
<b>Wholesale quota</b>					
No. of producers transferring in	4,970	860	523	947	7,300
Volume (million litres)	638	93	68	73	871.9
No of producers transferring out	5,493	724	347	736	7,300
Volume (million litres)	-691.4	-78.9	-49.3	-52.3	-871.9
Net volume transferred	-53.8	14.4	19.1	20.3	-
<b>Direct sales quota</b>					
No. of producers transferring in	72	5	10	3	90
Volume (million litres)	7.7	0.2	1.5	-	9.5
No. of producers transferring out	77	7	4	2	90
Volume (million litres)	-7.9	-0.2	-1	-0.4	-9.5
Net volume transferred	-0.2	0.1	0.5	-0.4	-
<b>Temporary Transfers</b>					
<b>Wholesale quota</b>					
No of producers transferring in	12,984	2,642	1,388	3,355	20,369
Volume (million litres)	1371.9	241.5	166.1	239.9	2019.3
No. of producers transferring out	14,296	2,314	1,068	2,691	20,369
Volume (million litres)	-1517.2	-204.8	-125.4	-171.9	-2019.3
Net volume transferred	-145.3	36.7	40.6	68.0	0.0
<b>Direct sales quota</b>					
No. of producers transferring in	82	6	10	10	108
Volume (million litres)	9.1	0.3	1.5	1.2	12.1
No. of producers transferring out	95	3	8	2	108
Volume (million litres)	-10.2	-0.2	-1.7	-0.1	-12.1
Net volume transferred	-1.1	0.2	-0.2	1.1	0.0

Source: RPA

**Table 28: Movement of transferred quota, 2002-03 <sup>a</sup>**  
**United Kingdom by county**

County	Net gain /loss (million litres)	County	Net gain /loss (million litres)	County	Net gain /loss (million litres)
Avon	-43.6	Northants.	1.0	Borders	2.0
Bedfordshire	-9.4	Northumberland	-4.8	Central	0.0
Berkshire	-4.8	Notts.	-8.3	Dumfries & Galloway	37.8
Bucks.	-0.1	Oxfordshire	-21.7	Fife	3.3
Cambridgeshire	-2.8	Shropshire	28.0	Grampian	4.2
Cheshire	17.8	Somerset	-3.2	Highland	-2.3
Cleveland	-4.8	South Yorkshire	-4.4	Lothian	-2.7
Cornwall <sup>b</sup>	28.0	Staffordshire	17.7	Orkney	0.0
Cumbria	-23.9	Suffolk	-5.7	Shetland	0.0
Derbyshire	-13.6	Surrey	-12.5	Strathclyde	17.3
Devon	51.8	Tyne and Wear	0.5	Tayside	0.4
Dorset	1.6	Warwickshire	-8.7	Western Isles	-0.1
Durham	-12.1	West Midlands	-12.8	<b>Scotland</b>	<b>60.0</b>
East Sussex	-5.1	West Sussex	-8.0		
Essex	-5.9	West Yorkshire	-7.0	Antrim	19.0
Gloucestershire	-15.8	Wiltshire	-29.6	Armagh	7.9
Greater London	-3.9			Down	17.7
Gr. Manchester	-2.0	<b>England</b>	<b>-200.4</b>	Fermanagh	1.3
Hampshire	-18.3			Londonderry	13.2
Hereford & Worcs	-2.7	Clwyd	13.8	Tyrone	30.0
Hertfordshire	-12.9	Dyfed	46.2	<b>Northern Ireland</b>	<b>89.1</b>
Humberside	-4.7	Gwent	-5.0		
Isle of Wight	-3.7	Gwynedd	7.1		
Kent	-12.6	Mid Glamorgan	-5.8		
Lancashire	10.7	Powys	-1.1		
Leicestershire	-2.7	S. Glamorgan	-3.0		
Lincolnshire	-1.7	W. Glamorgan	-0.9		
Merseyside	1.4	<b>Wales</b>	<b>51.2</b>		
Norfolk	-15.0				
N. Yorkshire	-10.5	<b>England &amp; Wales</b>	<b>-149.2</b>		

<sup>a</sup> Net gains/losses through permanent and temporary transfers of wholesale and direct sales quota.

<sup>b</sup> Including Isles of Scilly.

Source: RPA

**Table 29: Inferred number of non-active quota holders <sup>a</sup>, United Kingdom, 2000-01 to 2002-03**

Item	2000-01				2001-02				2002-03			
	% of a quota holder's permanent quota leased out											
	100%	91% or more	50% or more	100%	91% or more	50% or more	100%	91% or more	50% or more	100%	91% or more	50% or more
Number of quota holders	5,865	6,584	7,417	6,050	6,936	8,100	6,297	6,948	7,706			
As a % of all quota holders	17.7	19.9	22.4	19.1	22.0	25.6	21.3	23.5	26.1			
% change on previous year	-4.1	-0.3	+0.1	+3.2	+5.3	+9.2	4.1	-	-4.9			
Volume of quota (million litres)	947.7	1,091.1	1,269.8	1,090.1	1,348.1	1,723.9	1,243.0	1,420.0	1,752.9			
As a % of all quota	6.7	7.7	9.0	7.7	9.5	12.2	8.8	10.0	12.4			

<sup>a</sup> Based on the Rural Payments Agency records of leasing transactions.

Source: RPA

Table 30: Average milk quota leasing and selling prices <sup>a</sup>, United Kingdom, 2001-02 to 2003-04

Month	Temporary quota transfer: Leasing price			Permanent quota transfer: Selling price								
	2001-02		2002-03		2003-04		Un-used quota			Used quota		
	2001-02	2002-03	2003-04	2001-02	2002-03	2003-04	2001-02	2001-02	2001-02	2002-03	2003-04	
	pence per litre											
April	1.12	2.74	3.67	13.71	17.80	10.45	-	-	-	-	6.79	
May	1.08	3.33	2.98	13.70	19.36	10.08	-	-	-	-	7.06	
June	0.83	3.13	2.73	13.42	18.85	10.12	-	-	-	-	7.16	
July	0.78	2.65	4.17	14.95	17.11	12.91	-	-	-	-	8.40	
August	0.88	2.50	3.60	15.88	17.09	13.61	16.36	-	-	-	9.82	
September	0.72	2.67	3.94	15.50	17.02	15.02	-	-	-	-	11.96	
October	0.56	2.45	5.47	17.60	16.71	18.61	17.85	14.63	-	-	13.61	
November	0.72	1.31	5.63	18.81	14.66	18.47	19.34	13.76	-	-	13.23	
December	1.14	1.19	8.59	22.04	11.59	23.02	23.30	11.84	-	-	14.53	
January	1.24 <sup>b</sup>	0.97	12.46	21.69	10.99	29.57	21.02	-	-	-	16.88	
February	0.74 <sup>b</sup>	0.46	10.45	18.83	11.98	24.60	18.82	-	-	-	14.77	
March	0.35 <sup>b</sup>	0.64	10.32	-	11.28	22.91	21.04	-	-	-	n.a	
Average for year	0.92	2.00	6.17	16.92	15.37	17.45	19.68	13.41	-	-	11.29	

<sup>a</sup> Weighted average prices standardised to 4% butterfat. Data collated from trade with over 60 quota agents.

<sup>b</sup> Forward leasing for 2002-3 quota year.

Source: CEAS

## Production

The meaning of the terms “milk supplies” or “milk production” differs according to the context in which they are used. This causes confusion which can only be avoided if users have some understanding of the complexities of the situation.

Careful attention should be paid to the definitions detailed below to avoid misleading interpretation of the data.

### 1. Total Milk Production

The term *Gross or Total Milk Production* covers all milk produced by the dairy herd in the UK. It includes any whole milk which has been consumed by farmers or farm workers and any which has been fed to calves or other livestock but excludes suckled milk. DEFRA makes estimates of these items in order to construct an overall milk balance for the dairy herd in the United Kingdom. This is shown on [Table 31](#). Data on total milk production in European Union countries are given in [Table 131](#).

### 2. Deliveries to Dairies and Direct Sales

In the context of the European Community, milk sales are classified as either *Deliveries to Dairies* or *Direct Sales*. Deliveries to Dairies (also known as wholesale sales or cows milk collected) comprise all sales of bulk milk collected from the farm and delivered to processors, while Direct Sales include all milk sold off the farm, in any form (with the exception of yogurt and ice-cream) direct to consumers or retailers. However, under the detailed rules for collecting Community statistics, sales by “large-scale” direct sellers had to be counted as Deliveries to Dairies. In practice it was difficult to identify enterprises which fell within this definition and some estimation was commonly needed.

Statistics on *UK Deliveries to Dairies* are shown on [Table 32](#) and by European Union country on [Table 132](#). Up until 1993 these were based on UK annual statistical returns to the Community as defined above and may differ slightly from those published by Eurostat which were based on preliminary monthly returns.

To add further to the confusion, the same terminology (*Deliveries and Direct Sales*) has been used within the system of quotas operative in the Community since 1984. However, in this case there is no provision for sales direct to consumers by large-scale enterprises to be classified as *Deliveries*: all such sales are counted as *Direct Sales* for quota purposes. Ice-cream and yogurt have been included as *Direct Sales* for quota purposes as from 1991-92. Figures given in [Tables 32-34](#) from 1994 onwards are based on these definitions.

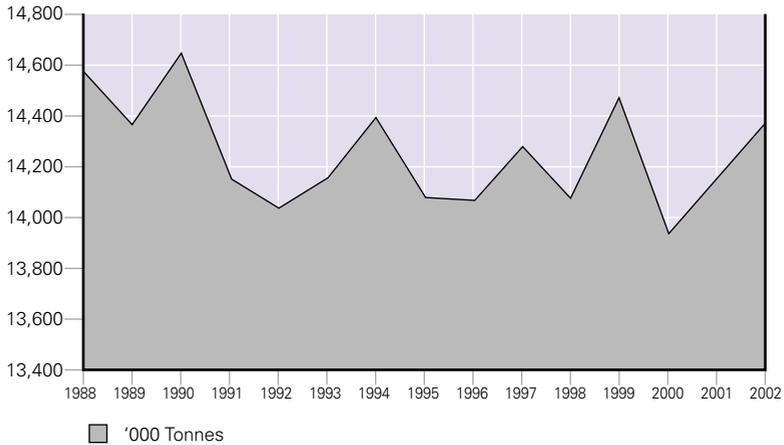
It is information collected for quota purposes, by the Rural Payments Agency since 1 April 1994 that now provides us with **all** the basic data on national milk production. The statistics cover all sales of milk or the whole milk equivalent of milk products from farms.

Milk purchasers are required to send the Rural Payments Agency monthly returns detailing the aggregate milk sales of their producers. However, the Rural Payments Agency do not collect sales data from individual producers (apart from

*Direct Sellers*), only registered purchasers and as these milk purchasers can buy milk from disparate and overlapping areas it is currently not possible to produce a true regional or county breakdown of milk sales based on farm location. In addition monthly figures received by the Rural Payments Agency are not wholly accurate as they represent provisional figures from purchasers which are not adjusted to equate to the definitive annual totals submitted and used in the quota superlevy calculations at the end of the quota year. Although the discrepancy is usually fairly insignificant it can lead to confusion about precise numbers, hence the differences between annual totals given on [Tables 33 and 34](#).

<b>Table 31: Production by the United Kingdom dairy herd <sup>a</sup> Summary</b>				
<b>Calendar Year</b>	<b>1999</b>	<b>2000 <sup>b</sup></b>	<b>2001</b>	<b>2002</b>
<b>Average dairy cow numbers ('000)</b>	2,445	2,354	2,251	2,224
<b>Average yield per cow (litres)</b>	5,963	5,977	6,345	6,493
	million litres			
<b>Gross Production</b>	<b>14,580</b>	<b>14,071</b>	<b>14,283</b>	<b>14,440</b>
Fed to stock and waste on farm	285	277	282	269
<b>Available for human consumption</b>	<b>14,295</b>	<b>13,794</b>	<b>14,001</b>	<b>14,171</b>
<b>Consumed Liquid:</b>				
Wholesale sales	6,720	6,629	6,628	6,630
Direct sales	132	139	132	127
On farms	46	44	44	30
<b>Total <sup>c</sup></b>	<b>6,898</b>	<b>6,812</b>	<b>6,804</b>	<b>6,787</b>
<b>Milk used for manufacture:</b>				
Wholesale sales	6,909	6,470	6,664	6,896
Direct sales	79	80	77	69
<b>Total <sup>c</sup></b>	<b>6,986</b>	<b>6,551</b>	<b>6,742</b>	<b>6,966</b>
<b>Used for manufacture of:</b>				
Butter	290	270	259	279
Cheese	3,297	3,032	3,568	3,449
Cream	271	266	286	286
Condensed milk <sup>d</sup>	603	522	536	491
Whole milk powder	853	932	781	825
Skimmed milk powder	1,123	889	663	973
Other	549	640	649	663
<p><sup>a</sup> Provisional. Excludes any suckled milk.  <sup>b</sup> 366 days.  <sup>c</sup> The sum of liquid plus manufactured milk will be less than the amount available for human consumption due to wastage in dairies and the import/export balance of raw milk.  <sup>d</sup> Includes condensed milk used in the production of chocolate crumb plus production of machine skimmed milk.  Source: DEFRA</p>				

Chart 4: Deliveries to dairies, United Kingdom, 1988 to 2002



Source: DEFRA

Table 32: Deliveries to dairies United Kingdom by country

Calendar Year	England and Wales	Scotland	Northern Ireland	United Kingdom <sup>a</sup>
	thousand tonnes			
1988	12,038	1,226	1,290	14,554
1989	11,789	1,231	1,329	14,349
1990	12,059	1,230	1,345	14,634
1991	11,596	1,235	1,311	14,142
1992	11,529	1,190	1,309	14,028
1993	11,528	1,183	1,439	14,151
1994	n.a	n.a	n.a	14,378
1995	n.a	n.a	n.a	14,075
1996	n.a	n.a	n.a	14,058
1997	n.a	n.a	n.a	14,261
1998	n.a	n.a	n.a	14,063
1999	n.a	n.a	n.a	14,456
2000	n.a	n.a	n.a	13,932
2001	n.a	n.a	n.a	14,156
2002	n.a	n.a	n.a	14,359

<sup>a</sup> Figures may not agree with those published in Eurostat.

Source: DEFRA

**Table 33: Monthly wholesale deliveries to dairies <sup>a</sup>  
United Kingdom**

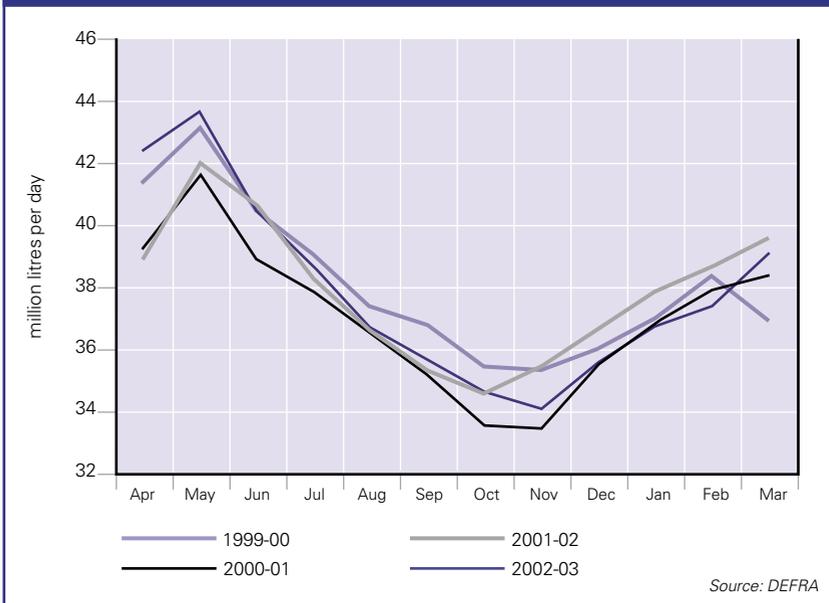
April to March	1999-00 <sup>b</sup>	2000-01	2001-02	2002-03
	million litres			
April	1,242	1,177	1,168	1,273
May	1,339	1,292	1,305	1,354
June	1,215	1,169	1,220	1,216
July	1,212	1,174	1,188	1,199
August	1,161	1,133	1,136	1,139
September	1,105	1,058	1,061	1,071
October	1,102	1,043	1,075	1,076
November	1,062	1,006	1,065	1,025
December	1,119	1,103	1,138	1,105
January	1,149	1,142	1,175	1,141
February	1,076	1,062	1,085	1,049
March	1,146	1,191	1,229	1,214
Year	13,929	13,550	13,844	13,862

<sup>a</sup> Provisional. Based on purchasers monthly returns to the Rural Payments Agency.

<sup>b</sup> 366 days.

Source: RPA

**Chart 5: Monthly wholesale deliveries to dairies,  
United Kingdom, 1999-00 to 2002-03**



Source: DEFRA

## Milk Output Production

**Table 34: Sales of milk off farms <sup>a</sup>  
United Kingdom**

April to March	Wholesale <sup>a</sup>	Direct <sup>b</sup>	Total Sales
	million litres		
1995-96 <sup>c</sup>	13,829	289	14,118
1996-97	13,689	260	13,949
1997-98	13,830	222	14,052
1998-99	13,746	227	13,973
1999-00 <sup>c d</sup>	13,894	205	14,099
2000-01	13,553	224	13,777
2001-02 <sup>d</sup>	13,839	205	14,044
2002-03	13,864	193	14,057

<sup>a</sup> Based on wholesale purchasers annual quota returns to the Rural Payments Agency.

<sup>b</sup> Based on direct sellers annual quota returns to the Rural Payments Agency. Includes whole milk equivalent of dairy products.

<sup>c</sup> After leap year adjustment.

<sup>d</sup> Provisional, prior to verification by the Rural Payments Agency.

Source: RPA

## Quality

### 1 Introduction

The production and sale of milk has long been subject to legislation designed to protect public health. In response to this, the Milk Marketing Boards and dairy industry organisations established procedures to ensure that milk reaching the consumer satisfied all legal requirements. They also sought to anticipate future requirements by encouraging producers to raise the quality of their milk through the use of price incentives. Consequently the hygienic quality of milk produced in the UK is very high. In addition to health-related quality aspects, they also provided financial incentives for producers to raise the level of solids in their milk (its compositional quality). Details of various quality criteria and price incentives operated by the Boards are given in previous editions of Dairy Facts and Figures. Since deregulation, new milk purchasers have devised their own methods of rewarding or penalising their producers but many have based their pricing systems on those developed by the Boards.

Not only have legislative requirements become progressively more stringent over the years, but they have increasingly been dealt with in the context of the EU as a whole. The aim has been to establish common standards to facilitate trade between EU countries and avoid national differences acting as a barrier to free trade.

### 2. European Union Standards

Common standards covering milk intended for intra-EU trade were first set out in a 1985 Directive (85/397/EEC), commonly referred to as the Health and Hygiene Directive. Those standards which relate to the supply of milk and milk products to the consumer are discussed in the section on Marketing. Set out below are those which relate to raw milk supplied to factories.

A new Directive (92/46/EEC), issued in the summer of 1992, replaced 85/397 as from 1 January 1994. The standards it specified for raw milk and the dates by which the standards had to be met are given in Table 35 and apply to individual farm supplies. The provisions of the Directive do not apply at the retail stage. Item A is the microbiological standard and refers to the geometric mean of the TBC results obtained over two consecutive months with at least two results from each month (see item 3 of this text for the definition of TBC). The geometric mean is calculated by first multiplying all the individual TBC results together: thus if there are four results (the minimum required), then calculate "**Value**" = *Result 1* x *Result 2* x *Result 3* x *Result 4*.

The geometric mean (also referred to as the geometric average) is the fourth root of this "value". Stated generally, if **N** is the number of results, the geometric mean will be the **N**th root of the "value" obtained. Item B on Table 35 refers to the geometric mean of the somatic cell count results obtained over a three month period with at least one result per month.

Milk must not contain any added water and checks on the freezing point of milk are therefore required (item C). Limits for antibiotic residues in milk, laid down in Annex I and III to EC Regulation 2377/90 (as amended), and limits for pesticides and other residues also apply (item D).

## Milk Output Quality

In addition, the regulation specifies that raw cows' milk, which is to be sold directly to consumers as untreated drinking milk, must conform to more rigorous microbiological parameters, including a total bacterial count of no more than 20,000 per millilitre and the number of coliform bacteria per millilitre must be less than 100.

The provisions of this Directive were enacted into legislation in England and Wales through The Dairy Products (Hygiene) Regulations 1995 with effect from 9 May 1995. Parallel legislation applies in Scotland and Northern Ireland. The Regulations provide, for the first time, harmonised rules in the raw milk and milk products sector and cover not just cows' milk but also goats', sheep and buffaloes' milk. They reflected much of what was in previous UK milk hygiene legislation relating to cows' milk.

It should be noted that the Regulation lays down the minimum hygienic standards which must be attained.

It is the responsibility of first-hand purchasers for checking milk standards for raw milk collected from farms. Up until 1 July 1997, milk could be sampled when it arrived at the treatment or processing establishment. Since this date representative samples of raw milk must be collected randomly from each production holding for testing. In England and Wales, the Dairy Hygiene Inspectorate (DHI) is responsible for enforcing domestic standards regarding raw drinking milk sold at the farm gate. ADAS take and test milk samples from these farms at least four times a year on behalf of the DHI, which is part of the Food Standards Agency.

### 3. Hygienic quality

Measurement of the bacterial content of raw milk provides an assessment of its hygienic quality. Producers have long been encouraged to produce milk with low total bacterial counts (TBCs) through price incentives. Test results are used to determine price deductions or additions according to criteria and scales which differ between milk purchasers. Several techniques have been developed to perform this quantitative analysis. The TBC limits specified in the hygiene legislation are based on the standard plate count method. In this instance a sample of milk is incubated for 72 hours at 30°C and then the number of colony forming bacterial units are counted, the results being expressed as TBC per millilitre of milk. An alternative means of measuring the bacterial content of milk, which can be used for payment purposes, is provided by the Bactoscan method (almost all ex-farm milk in the UK is tested in this way). This procedure measures single bacteria, rather than colonies and therefore gives higher bacterial counts, the results being expressed as number of organisms per millilitre of milk. Average TBC levels for GB are given in [Table 38](#).

### 4. Cell Counts

In cows affected by mastitis, some of the body (somatic) cells of the cow are passed into the milk. For many years, this feature has been used to monitor both herds and individual cows for sub-clinical mastitis by measuring the level of

these somatic cells in the milk by means of a cell count (see [Mastitis](#)). Cell counts are expressed as thousands of cells per millilitre of milk. Average TBC levels for GB are given in [Table 38](#).

## 5. Antibiotic residues

Antibiotics are used in the treatment of cows for bacterial infections. The intramammary route is the method of choice for the treatment of mastitis. Where the treated cow is lactating, residues may be partially excreted in the milk in significant quantities for periods up to five days (occasionally longer) after treatment, depending upon the type of treatment and preparation used. When the cow is given antibiotic treatment at drying off ("dry cow therapy"), significant amounts of residues may be present for several days after calving if the interval between the last treatment and calving is less than that specified by the manufacturer. All milk from treated cows must not be marketed until the recommended withholding period has elapsed.

## 6. Staphylococcus aureus

*Staphylococcus aureus* is a micro-organism (bacteria) whose presence in milk is an indicator of poor hygiene; it also produces a toxin that can poison in certain circumstances. Where raw cows' milk is to be used for the manufacture of raw milk-based products, whose manufacture does not involve any heat treatment, then this milk must be tested and meet the same total bacterial count and somatic cell count as for raw milk that is to be used for heat treated drinking milk and in addition a standard for *Staphylococcus aureus*. Five samples are required for testing. The desired microbial count is less than 500 per millilitre of milk. Of the five samples, a maximum of two may have a microbial count of between 500 and 2,000. None may exceed 2,000.

## 7. Compositional quality

The basic measure of milk composition is in terms of milk solids, usually referred to as Total Solids. Within this, two fractions can be distinguished: butterfat and the remainder or solids-not-fat (SNF). The SNF in turn comprises protein and lactose as its major components. All measurements are expressed in terms of their percentage by weight. Monthly averages of butterfat and protein, weighted by producers' volumes, are shown on [Tables 36 and 37](#) for the UK, with results for European Union countries on [Tables 133 and 134](#).

Table 35: EU milk quality standards, individual farm supplies

Parameter	Raw cows' milk intended for the production of:		
	Heat-treated drinking milk & cream as from 1 January 1994	Other milk-based products between 1994 and 1998	All milk-based products as from 1 January 1998
A Plate count 30°C (per ml)	not more than 100,000	must not exceed 400,000	not more than 100,000
B Cell Count (per ml)	not more than 400,000	must not exceed 500,000	not more than 400,000
C Freezing Point (°C)	not more than - 0.520		
D Antibiotics (per ml)			
penicillin	less than 0.004µg (less than 0.007IU)		
other	undetectable		

*Source: OJ*

Table 36: Average butterfat content of milk <sup>a</sup> United Kingdom

Month	1999	2000	2001	2002	2003
	% by weight				
January	4.08	4.08	4.06	4.07	4.02
February	4.07	4.04	4.02	4.03	4.02
March	4.06	4.03	4.06	4.05	3.99
April	4.06	4.06	4.05	3.99	3.89
May	3.92	3.91	3.85	3.89	3.82
June	3.90	3.90	3.84	3.89	3.79
July	3.88	3.86	3.86	3.84	3.84
August	3.94	3.92	3.90	3.86	3.87
September	4.02	4.04	4.01	3.95	4.02
October	4.15	4.15	4.11	4.08	4.14
November	4.17	4.16	4.12	4.12	4.18
December	4.14	4.08	4.11	4.08	4.12
Annual Average	4.03	4.01	3.99	3.98	3.98

<sup>a</sup> Average butterfat content of deliveries to purchasers. Provisional.

*Source: RPA*

**Table 37: Average protein content of milk <sup>a</sup>  
United Kingdom**

Month	1999	2000	2001	2002	2003
	% by weight				
January	3.22	3.24	3.24	3.28	3.25
February	3.21	3.21	3.21	3.22	3.26
March	3.21	3.20	3.20	3.23	3.22
April	3.22	3.22	3.22	3.26	3.27
May	3.31	3.30	3.27	3.32	3.35
June	3.31	3.29	3.28	3.28	3.31
July	3.30	3.29	3.26	3.28	3.27
August	3.32	3.31	3.29	3.29	3.26
September	3.40	3.39	3.42	3.38	3.39
October	3.43	3.37	3.39	3.41	3.44
November	3.37	3.33	3.38	3.35	3.36
December	3.31	3.28	3.35	3.30	3.28
<b>Annual Average</b>	<b>3.30</b>	<b>3.28</b>	<b>3.29</b>	<b>3.30</b>	<b>3.31</b>

<sup>a</sup> Average protein content of deliveries to purchasers. Provisional.

Source: DEFRA

**Table 38: Average milk quality <sup>a</sup>  
Great Britain**

2003	Bactoscan	Cell Count
	'000 per ml	
January	35	177
February	34	177
March	34	180
April	33	183
May	31	187
June	29	190
July	29	198
August	29	206
September	28	206
October	29	191
November	32	178
December	35	171
<b>Annual Average</b>	<b>32</b>	<b>187</b>

<sup>a</sup> The average milk quality is based on deliveries to purchasers and accounts for between 79%-83% of all deliveries to purchasers.

Source: MDC



# Prices

## Prices

<b>Community Framework</b>	<b>58</b>
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The various ways in which the Community affects the price a producer receives for his milk

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<b>Producer Prices</b>	<b>68</b>
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Statistics on average wholesale producers' prices

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## Community Framework

In June 2003 the EU agreed a reform package to the Common Agricultural Policy (CAP) known as the Mid-Term Review (MTR)/CAP Reform, under which significant changes were made to the dairy regime. The primary reason for a reform of CAP was to bring the EU market prices more in line with world prices. The reduction in support prices is to be partly compensated by direct payments.

The agreement follows on from the proposals in 1999 on the Agenda 2000 which was to strengthen EU policies and to give a new a new financial framework up to 2006 with a view to enlargement. A review of the financial framework was decided for 2002, which later also encompassed the dairy sector. In July 2002 proposals for reform of the dairy regime were put forward by the EU Commission and which was eventually decided in June 2003.

**Currently the EU regulates the dairy market within the EU through a series of measures that are aimed at stabilising milk prices. The EU uses six principal mechanisms to do this:**

- A 'floor' to the market is provided through an intervention system that enables butter and SMP to be taken off the market by buying it into stock at fixed intervention prices.
- Import tariffs are used to ensure that imported dairy products are more expensive than they are on the world market. This means imports do not undercut domestic market prices.
- Export subsidies are paid to enable EU manufacturers to sell product into international markets where prices are lower than in the EU.
- Subsidies are paid on some milk and milk products to boost consumption within the EU, e.g. use of butter in food manufacture.
- Private storage aid is available to subsidise the cost of storing dairy products until markets improve.
- Milk quotas for farmers are imposed to limit the volumes of milk they produce and to penalize them for over-production.

The principal changes made to the EU regulations, as set out above, by the Mid-Term Review were:

- Intervention prices are to be cut by the equivalent of 4ppl over a four year period starting from, reducing support prices.
- Direct payments to farmers are to be introduced over a three year period.
- Extension of quotas until 2014-15.
- Removal of the Target Price.

The reduction in support levels is expected to put the EU in a stronger negotiating position in World Trade Organisation (WTO) negotiations about liberalising world trade.

## Intervention

Intervention is available for SMP from 1 March to 31 August each year, subject to an upper limit of 109,000 tonnes, agreed at MTR, being accepted into store. Outside of this period, the EU takes the view that support is not needed because market demand and available supply are in better balance. Intervention is a costly option for the EU because of financing and storage costs, and because returns from product sold out of intervention are uncertain (and over the next few years, are likely to decline year on year). As a result intervention is made less attractive to processors by, for example, delaying payment for several months. The intervention price for SMP will be cut, in accordance with the reform of CAP, progressively by 5% in 2004, 2005 and 2006 giving a total cut of 15% in support prices. The first of the intervention price cuts was implemented on 1 July 2004.

Intervention has hitherto been available for butter at any time of the year when market prices for butter fell below a threshold price set at 92% of the intervention price. Intervention Agencies would then buy at 90% of the intervention price, with no limits on the volume purchased. For the dairy year 2004-05, there will be an upper limit of 70,000 tonnes on the amount of butter that Intervention Agencies will buy at the 90% rate, this will fall to 30,000 tonnes by 2008. Intervention price cuts, in accordance with the reform of CAP, on butter will be cut progressively by 7% in 2004, 2005 and 2006 and a further 4% from 2007, giving a total cut of 25% in butter support prices. From 1 July 2004, the intervention price for butter fell by 7%. If sales to intervention are set to exceed 70,000 tonnes, a tender system will be introduced by the Intervention Agencies. For the first time in 2004, intervention for butter will only be available until 31 August, and it will then not re-open until 2005.

## Private Storage Aid

A system of Private Storage Aid (PSA) is available to manufacturers of butter and certain long-life cheeses with the intention of encouraging manufacturers to take product off the market at times of plenty, to bring them back onto the market when supplies of product are at their low points during the year. PSA pays a subsidy to private companies to store these products in their own stores as an alternative to intervention. PSA therefore has the effect of stabilizing product prices. With the fall in the value of intervention prices for butter from 1 July 2004, the Commission has recognized in principle that the PSA scheme will require an element of compensation in 2004 to recognise the reduced value of PSA stocks that will occur: an additional subsidy of €147.6 per tonne will be paid on the first 120,000 tonnes of butter going into PSA before 1 July 2004.

## Direct Farm Payments

Farmers will receive compensation for lower intervention prices in the form of direct payments called the Single Farm Payment (SFP), although these will probably only represent 60% of the cut in support prices.

## Prices Community Framework

- Farmers will receive direct payments (known as the dairy premium) at a rate of €11.81/tonne (worth 0.81ppl based on an exchange rate of £0.663) in 2004 linked directly (i.e. coupled) to production and it will be based on quota held on 31 March 2004.
- From 2005, the payment will be incorporated into the new SFP, on the basis of quota held on 31/3/2005. The SFP is a decoupled payment which means that farmers will receive the payment in the future, whether or not they produce milk from 2005.
- The SFP will be implemented on a different basis in England, Wales and Scotland. In Wales and Scotland the SFP will be based on an historic basis, meaning that farmers will be paid on what subsidy they received during 2000-2002 and how much quota they hold on the 31/3/2005. In England the SFP will be paid on a predominantly historic basis initially, but will be increasingly based on the amount of land farmed in 2005, until the payments are entirely based on land rather than historic receipts.

Dairy Premiums Payments				
Gross (ppl)	Payment	Payment £0.62=€	Payment £0.70=€	Payment £0.75=€
2004	€11.81/tonne	0.75	0.85	0.91
2005	€23.65/tonne	1.51	1.70	1.83
2006 onwards	€35.5/tonne	2.27	2.56	2.74

*Source: EU, MDC*

The direct payments will be reduced to pay for several schemes and initiatives of the EU. Total deductions from payments are not yet known but could be between 10 and 25%. These deductions include modulation to fund the EU and national rural development policy and schemes. The EU has also retained flexibility to reduce further direct payments for all of the reforms in the event that the cost exceeds the budget. This is known as Financial Discipline/Digression and can operate from 2007. The payments will have a national reserve amount deducted from them to pay for hardship cases, this can be up to 3% of the overall payment for each region. The option of a national envelope which can deduct up to 10% of the overall payment has not been taken up by the UK.

The EU will only make direct payments to farmers who comply with existing EU statutory standards covering the environment, animal welfare, food safety, and animal and plant health. In addition, England, Scotland, Wales and Northern Ireland will have further regional requirements related to keeping the land in good agricultural and environmental condition.

## Export subsidies

Export subsidies are paid to enable EU manufacturers to compete in international markets where prices are lower than in the EU. Effectively export refunds make up the difference between the EU price (normally driven by intervention) and the world price.

This is one of the schemes available to the Commission to balance the EU domestic market. By varying the level of subsidy, the Commission can influence the level of sales by EU manufacturers onto world markets and in some circumstances, these subsidies can also influence the level of world prices. In deciding the level of export subsidy for a particular commodity, the main factors that the Commission take into account are world prices (i.e. the balance of supply and demand on the world market), and the competitive position of EU manufacturers (with particular attention paid to euro/US \$ currency rates – world trade is conducted in US dollars). There are WTO limits to the level of exports of specific products by the EU and there are consequently arrangements in place to ensure these limits are not exceeded.

## Subsidies on Milk and Milk Products

Subsidies are paid on some milk and milk products to boost consumption within the EU. Subsidies are provided on butterfat used in the manufacture of pastry products, ice cream and other foodstuffs. Consumer subsidies are available to non-profit making institutions and organisations. The consumption of concentrated cooking butter is subsidised to increase butter's competitive position against margarine. SMP subsidies are available, principally to promote the use of SMP in animal feed, but also in the manufacture of casein and caseinates.

## Milk Quotas

Milk quotas for farmers are imposed to limit the volumes of milk they produce and to penalize them for over-production. The EU has operated a quota system, since 1984, at an individual farmer level with the intention of limiting the volume of milk produced within individual countries within the EU, through imposing stringent penalties for over-production.

At the MTR it was decided that quotas will be retained until 2014-15 and there will be quota increases of 0.5% in the EU in 2006, 2007 and 2008. The UK will receive increases of 0.5% pa in its national quota in each of 2006-07, 2007-08 and 2008-09. These increases represent about 71m litres each year so that milk quotas in total will grow by just over 210m litres over the three years. A further evaluation of the need for additional quota beyond 2008 will be made nearer the time.

## Import Tariffs

Import tariffs add a substantial cost to the importing of dairy products into the world market. Import tariffs effectively raise the price of imported dairy products above the EU market price, consequentially making it very difficult to import

dairy products to the EU. If the tariffs did not exist, the EU prices that are kept high by intervention would lead to the swamping of the EU market with cheap imports. There are special concessions as part of the WTO rules that allow a limited amount of dairy imports into the EU at much reduced tariff rates. Some of this quota is allocated to specific countries and specific products, i.e. countries we have had historic trade links with in the past – New Zealand, Australia, Canada.

### EU Enlargement

On the 1 May 2004, 10 new member states acceded to the EU. The 10 countries were; Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia. As a result there will be an overall increase in milk quota of around 18.5 million tonnes to bring the EU total to around 138 million tonnes. Access to the EU's direct payments for farmers is to be phased in over a 10 year period, with new countries due to get 25% of direct aid in 2004, 30% in 2005 and 35% in 2006. However these may change depending on the use of national and rural development aid.

### World Trade Organisation (WTO)

WTO came into being in 1995 following the last round of the General Agreement on Tariffs and Trade (GATT), known as the 1986-94 Uruguay Round. At present there are 147 members of WTO. Agriculture only came on the agenda in 2000, and in 2001 was incorporated into the Doha Development Agenda (DDA). The primary aim of the WTO for agriculture is to facilitate a more liberalised market/market orientated trading system through a programme of fundamental reform for its member to trade in. This it hopes to accomplish by lowering trade barriers. The three primary areas of contention for the reduction of trade barriers at the Doha agreement were subsidised exports, import access and domestic support.

Following a breakdown in negotiations in September 2003 in Cancun, a draft proposal has been accepted by all members on the 31 July 2004. The principal decisions for dairy were:

- Higher levels of permitted – trade distorting domestic support will be subject to deeper cuts in order to harmonise the reductions made by developing countries.
- Export subsidies will be eliminated by an end date to be agreed, this will include export refunds, export credits, credit guarantees or insurance programmes, state trading enterprises, food aid that has not conformed to operationally effective disciplines.
- Substantial tariff reductions especially for high tariff goods, although there is flexibility for sensitive products. Also increased market accessibility for all products.

The elimination of export subsidies will mean an end to export refunds which will bring EU dairy products exported on to the world market in line with world prices. This is likely to put pressure on the existing intervention system if there is a substantial differentiation in price between the intervention and world price. However any agreement to the start of any negotiations on the elimination of export refunds is still a year or two off and any final agreement is likely to be still several years away.

The direct payments agreed at the MTR as compensation for the decrease in the intervention price of butter and skim milk powder will not be affected by the decision made by the WTO on the 31 July 2004. Payments that are decoupled and therefore not directly linked to production have not been affected by the latest agreement.

A certain amount of EU dairy products could come under the title of “sensitive products”, this could therefore reduce the impact of reductions in import tariffs may have on dairy products.

**Table 39: Indicative euro exchange rates, 2000 to 2003  
annual, monthly and quarterly averages**

Period	Effective exchange rate of the euro <sup>a b</sup>		Euro exchange rates	
	Nominal	Real		
	index: 1999 quarter 1=100		1 euro equals	
2000	85.7	86.3	0.609	£ sterling
2001	87.3	88.6	0.622	£ sterling
2002	90.0	92.5	0.629	£ sterling
2003	99.9	103.6	0.692	£ sterling
2002 Q1	87.1	89.4	0.615	£ sterling
Q2	88.8	91.4	0.629	£ sterling
Q3	91.3	93.9	0.635	£ sterling
Q4	92.5	95.4	0.636	£ sterling
2003 Q1	96.9	100.1	0.670	£ sterling
Q2	101.3	104.9	0.702	£ sterling
Q3	100.5	104.2	0.699	£ sterling
Q4	101.8	105.9	0.698	£ sterling
2003				
January	95.8	98.8	0.657	£ sterling
February	97.1	100.2	0.670	£ sterling
March	97.9	101.2	0.683	£ sterling
April	98.6	102.1	0.689	£ sterling
May	102.5	105.8	0.713	£ sterling
June	102.4	106.3	0.702	£ sterling
July	101.1	104.9	0.700	£ sterling
August	99.9	103.6	0.699	£ sterling
September	99.5	103.3	0.697	£ sterling
October	101.0	104.8	0.698	£ sterling
November	100.9	104.9	0.693	£ sterling
December	103.7	108.1	0.702	£ sterling

*a* Calculated by the European Central Bank, based on weighted averages of bilateral euro exchange rates against 13 major trading partners of the euro area. Weights are based on 1995-97 manufacturing goods trade and capture third market effects. Real rates are calculated using national Cost Price Indices (Harmonised Indices of Consumer Prices for the euro area and the other EU Member States).

*b* Data relates to Euro area enlargement as from January 2001.

Source: European Central Bank

Effective from	Intervention Prices		Target Price
	Butter (82%)	Skimmed Milk Powder	
	ECU/100 kg		
1 Jul 1994	274.55	170.20	25.79
1 Aug 1994	271.80	170.20	25.66
1 Feb 1995	328.20	205.52	30.98
	euro/100 kg		
1 Jan 1999	328.20	205.52	30.98
1 July 2004	305.23	195.24	n.a
1 July 2005	282.44	184.97	n.a
1 July 2006	259.52	174.69	n.a
1 July 2007	246.39	174.69	n.a

*Source: OJ*

		Base <sup>a</sup>	1995-96	2000-01 <sup>c</sup>
<b>Butter &amp; butter oil</b>	Quantity ('000 tonnes)	505.5	487.8	399.3
	Expenditure (million euros) <sup>b</sup>	1,481.0	1,392.1	947.8
<b>Skimmed milk powder</b>	Quantity ('000 tonnes)	344.9	335.0	272.5
	Expenditure (million euros) <sup>b</sup>	430.9	406.2	275.8
<b>Cheese</b>	Quantity ('000 tonnes)	406.7	426.5	321.3
	Expenditure (million euros) <sup>b</sup>	533.9	594.1	341.7
<b>Other milk products</b>	Quantity ('000 tonnes)	1,212.8	1,185.4	958.1
	Expenditure (million euros) <sup>b</sup>	1,090.1	1,024.7	697.7
<b>Incorporated products</b>	Expenditure (million euros) <sup>b</sup>	648.4	717.4	415.0

<sup>a</sup> 1986-90 for butter and skimmed milk powder. 1991-92 for cheese and other dairy products.  
<sup>b</sup> Formerly million ECU's.  
<sup>c</sup> 2000-1 and subsequent years.

*Source: European Commission*

**Table 42: EU Dairy market access**  
**Import commitments: 'current access' quotas <sup>a</sup>**

Product	Country of origin	Quota	Tariff <sup>b</sup>
		tonnes	euros per 100 kg <sup>c</sup>
Cheddar	New Zealand	7,000	17.06
	Australia	3,250	17.06
Mature cheddar	Canada	4,000	13.75
Cheese for processing	New Zealand	4,000	17.06
	Australia	500	17.06
Butter	New Zealand	76,667	86.88

<sup>a</sup> Per calendar year, with effect from 1 January 1996.

<sup>b</sup> Reduced, in-quota tariff.

<sup>c</sup> Formerly ECU's per 100kg.

Source: OJ

**Table 43: EU Dairy market access**  
**Import commitments: 'minimum access' quotas <sup>a</sup>**

Product	Initial quota <sup>b</sup>	Final quota <sup>c</sup>	Tariff <sup>d</sup>
	tonnes		euros per 100 kg <sup>f</sup>
Cheese and curd of which:	15,273	83,400	
Emmental <sup>e</sup>	2,934	18,400	71.9 or 85.8
Gruyere, Sbrinz <sup>e</sup>	734	5,200	71.9 or 85.8
Cheddar	3,000	15,000	21.0
Cheese for processing	4,000	20,000	83.5
Frozen cheese (pizza)	1,111	5,300	13.0
Other cheese	3,494	19,500	69.00 to 106.4
Skimmed milk powder	40,401	68,000	47.5
Butter	0	10,000	94.8

<sup>a</sup> Not specified by country of origin.

<sup>b</sup> GATT/WTO year beginning 1 July 1995.

<sup>c</sup> By the year ending 30 June 2001 and subsequent years beginning 1 July.

<sup>d</sup> Reduced, in-quota tariff.

<sup>e</sup> Including processed.

<sup>f</sup> Formerly ECUs per 100kg.

Source: OJ

**Table 44: Direct aid for dairy farmers <sup>a</sup>  
additional global amounts by member state**

member state	2004	2005	2006	2007
	million euros			
Belgium	26.98	78.29	117.93	118.33
Denmark	36.31	105.37	158.71	159.25
Germany	227.10	659.01	992.61	996.02
Greece	6.69	18.01	27.03	27.03
Spain	49.85	140.63	211.09	211.09
France	197.52	573.18	863.34	866.31
Ireland	43.98	126.50	189.90	189.90
Italy	85.82	244.64	367.21	367.21
Luxembourg	2.19	6.36	9.58	9.61
Netherlands	90.26	261.92	394.51	395.86
Austria	22.41	65.02	97.94	98.28
Portugal	15.24	45.06	67.88	68.11
Finland	19.62	56.92	85.73	86.03
Sweden	26.92	78.11	117.66	118.07
United Kingdom	119.07	345.37	520.22	522.01
<b>EU Fifteen</b>	<b>969.96</b>	<b>2,804.39</b>	<b>4,221.35</b>	<b>4,233.13</b>

*a As set out on 29th September 2003 in the Council Regulations 1782/2003 and 1788/2003.*

*Source: European Commission*

## Producer Prices

### Wholesale Producers

Deregulation has made comparison of producer prices on a common basis very difficult. All purchasers operate their own systems of payment which vary in complexity and in a competitive market many are reluctant to make their prices public.

Consequently the Agricultural Departments have been empowered to collect from purchases, by means of monthly surveys, details of the volume of milk purchased and payments made in respect of that milk to producers. Purchases in England and Wales and Scotland are required by law to submit this information each month so that the national average producer prices can be calculated and published. In Northern Ireland participation in the survey is voluntary.

DEFRA issue 'farm gate' prices for the UK as a whole (see Tables 45 and 46). It is not possible to accurately produce prices for areas within Great Britain using the data currently collected; purchasers are only required to submit aggregate figures for their organisations. As there are no geographical boundaries regarding where a purchaser may source his milk, for example, a purchaser in Scotland may also be buying milk from farms in the North of England or vice-versa, precise results relating to farms situated in England and Wales or Scotland cannot, therefore, be calculated. Results for Northern Ireland are given on Table 47.

The figures on Tables 45 to 47 exclude superlevy payments.

**Table 45: Farm gate prices excluding bonus payments  
United Kingdom**

Month	1999	2000	2001	2002	2003
	pence per litre				
January	19.22	16.76	18.31	18.77	17.67
February	18.95	16.59	18.17	18.31	17.64
March	18.90	16.61	17.88	18.00	17.37
April	17.52	15.25	18.21	15.98	16.83
May	16.38	14.61	17.66	14.85	15.99
June	17.19	15.34	18.47	15.31	16.51
July	19.75	17.62	20.43	16.39	18.20
August	19.79	17.92	20.63	16.72	18.94
September	19.14	17.50	20.46	17.04	19.23
October	18.08	18.79	20.21	18.13	19.58
November	17.65	18.59	20.04	18.08	19.81
December	17.33	18.24	19.59	17.73	19.14
<b>Year</b>	<b>18.30</b>	<b>16.91</b>	<b>19.14</b>	<b>17.04</b>	<b>18.01</b>

*Farm gate prices are average prices received for milk by producers, net of delivery charges. The prices exclude all retrospective bonus payments made by purchasers. No deduction has been made for quota superlevy.*

*Source: DEFRA*

**Table 46: Farm gate prices including bonus payments  
United Kingdom**

Month	1999	2000	2001	2002	2003
	pence per litre				
January	19.31	16.79	18.32	18.79	17.69
February	19.03	16.62	18.18	18.31	17.66
March	18.98	16.64	17.88	18.00	17.39
April	17.56	15.27	18.45	15.98	16.85
May	16.42	14.63	17.90	14.87	16.00
June	17.23	15.35	18.70	15.37	16.52
July	19.79	17.64	20.45	16.58	18.22
August	19.83	17.93	20.86	17.00	18.95
September	19.17	17.52	20.70	17.13	19.25
October	18.12	18.81	20.46	18.15	19.60
November	17.69	18.60	20.05	18.11	19.83
December	17.36	18.26	19.60	17.75	19.16
<b>Year</b>	<b>18.35</b>	<b>16.93</b>	<b>19.26</b>	<b>17.09</b>	<b>18.02</b>

*Farm gate prices are average prices received for milk by producers, net of delivery charges. The prices include all retrospective bonus payments made by purchasers. No deduction has been made for quota superlevy.*  
Source: DEFRA

**Table 47: Farm gate prices excluding bonus payments  
Northern Ireland**

Month	1999	2000	2001	2002	2003
	pence per litre				
January	20.35	17.79	20.27	16.56	17.92
February	19.68	17.31	19.46	16.25	17.74
March	19.08	17.04	17.03	15.51	17.13
April	17.67	16.44	16.64	15.14	16.57
May	17.19	15.87	16.89	14.32	15.74
June	17.24	16.53	17.72	14.20	16.03
July	17.54	17.31	18.82	14.40	16.91
August	18.20	18.20	19.73	15.41	18.42
September	19.45	20.00	20.31	16.96	19.87
October	19.93	20.85	19.84	18.32	21.19
November	19.44	20.70	18.43	18.44	21.08
December	19.06	20.36	17.14	18.31	20.59

*Farm gate prices are average prices received for milk by producers, net of delivery charges. The prices include all retrospective bonus payments made by purchasers. No deduction has been made for quota superlevy.*  
Source: DARD



# Marketing

## Marketing

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## General

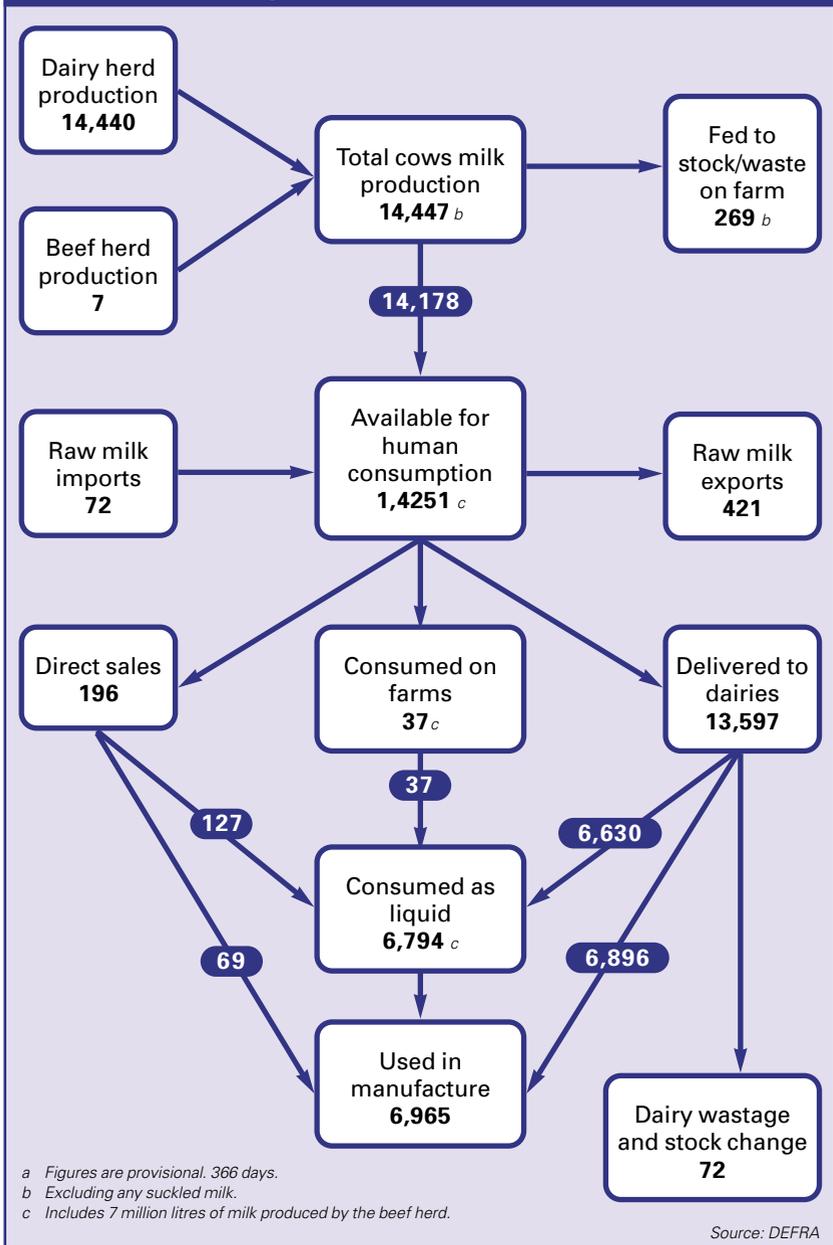
Please read these notes before using data from this section.

Almost half of the milk sold to first-hand buyers under wholesale contract is used to supply the liquid market, the remainder being processed into a widening range of milk products. Much of this manufactured product is sold as such to consumers (e.g. as cream, butter or cheese) but large amounts are used by food manufacturers as ingredients in the production of a vast range of foods.

At one time much of the by-product (such as skim and whey) was of minimal value and was fed to livestock, particularly at times of seasonal surplus. However, such end-uses have diminished as the industry has sought to extract the maximum value from each litre of milk produced and as quotas have sharply reduced milk output. As a result, the vast majority of milk solids leaving the farm are now destined for human consumption. This flow of milk from farm to consumer in the United Kingdom is summarised in the diagram given on [Table 48](#).

In the sections on **Structure of Milk Processors** and **Use of Wholesale Milk by Processors**, results are based on companies who have responded to the Government Agricultural Departments' surveys of the utilisation of milk by dairies and to DEFRA's survey on the production and stocks of condensed milk and milk powders. Data given for January 1995 onwards represents all milk received and processed by these manufacturers, including imported raw milk and milk fractions (skim and cream). In addition they trace the amount of milk or milk fractions actually used to make each product. In contrast data up to October 1994 (February 1995 for Northern Ireland), published in earlier edition of Dairy Facts and Figures, are confined to milk sold to the Milk Marketing Boards under wholesale contract and then sold on by them to their customers. The data from the Boards measured only the amount of whole milk sold for each product. See previous editions of Dairy Facts for further details. The fundamental differences in the two recording methodologies have inevitably caused problems with comparability and consequently a break in the time series.

Table 48: Milk flow diagram: 2002 <sup>a b</sup>,  
United Kingdom: million litres



## Structure of Milk Processors

Information on the number and size of enterprises buying ex-farm milk and those producing dairy products in either England and Wales or the United Kingdom are given in this section. The analyses are sourced from various Government surveys and records, details of which are described below.

Figures on the size distribution of ex-farm milk buyers in the United Kingdom on Table 49 are based on Intervention Board records and relate to purchasers who have been approved by the Intervention Board to hold and administer milk quota for their producers. Non-quota holding ex-farm milk buyers are therefore excluded from this analysis.

Data given in Tables 50 to 53 are confined to those processors in England and Wales who have responded to DEFRA's monthly surveys of wholesale milk utilisation by dairies. Some smaller companies do not participate in these surveys and therefore it must be stressed that these tables give an indication of the size distribution of dairy companies in England and Wales but they underestimate the number and contribution of smaller manufacturers and therefore do not present a complete picture of the milk processing sector.

Information on companies manufacturing condensed milk and milk powders (Tables 54 and 55) are sourced from another DEFRA survey which collects data on production and stocks of condensed milk and milk powder in the United Kingdom.

**Table 49: Size distribution of ex-farm milk buyers <sup>a</sup>  
United Kingdom, 2002–03**

Size Band (litres per year)	Ex-farm buyers		Annual Volume	
	number	% of total	million litres	% of total
Under 100,000	20	13.6	0.6	...
100,001 - 250,000	6	4.1	0.9	...
250,001 - 500,000	6	4.1	2.0	...
500,001 - 1,000,000	12	8.2	8.6	0.1
1,000,001 - 5,000,000	32	21.7	69.4	0.5
5,000,001 - 10,000,000	9	6.1	71.2	0.5
10,000,001 - 100,000,000	40	27.2	1,549.0	11.2
100,000,001 and over	22	15.0	12,162.4	87.7
<b>All ex-farm buyers</b>	<b>147</b>	<b>100.0</b>	<b>13,864.1</b>	<b>100.0</b>

<sup>a</sup> Based on ex-farm milk buyers who have been approved by the Rural Payments Agency to hold and administer quota for their producers. Non-quota holding ex-farm milk buyers are not included within this analysis. The data are based on volumes declared for 2002-3 quota purposes.

Source: RPA

**Table 50: Size distribution of dairy companies <sup>a</sup> by annual milk intake, England and Wales: 2002**

Size Band (million litres per year)	Companies processing milk		Volume of annual intake	
	number	% of total	million litres	% of total
1 and under	12	12.1	4.3	0.0
over 1 - 10	32	32.3	112.7	1.0
over 10 - 30	16	16.2	285.2	2.6
over 30 - 100	20	20.2	1,211.3	11.2
over 100	19	19.2	9,185.0	85.1
<b>Total</b>	<b>99</b>	<b>100.0</b>	<b>10,798.5</b>	<b>100.0</b>

<sup>a</sup> Total intake by dairies of whole milk, skim milk and cream. Based on dairy processing companies responding to DEFRA's survey of the utilisation of milk by dairies in England and Wales. Some smaller companies are not participating in the survey; numbers in the smaller size bands will therefore not equate to ALL producers.

Source: DEFRA

**Table 51: Size distribution of dairy companies <sup>a</sup> by annual output of liquid milk, England and Wales: 2002**

Size Band (tonnes per year)	Companies producing liquid milk		Volume of annual output	
	number	% of total	'000 tonnes	% of total
1,000 and under	8	17.8	4.3	0.1
1,001 - 10,000	17	37.8	79.3	1.5
10,001 - 30,000	4	8.9	65.6	1.2
30,001 - 100,000	8	17.8	474.8	8.7
over 100,000	8	17.8	4,834.0	88.6
<b>Total</b>	<b>45</b>	<b>100.0</b>	<b>5,458.0</b>	<b>100.0</b>

<sup>a</sup> Based on dairy processing companies responding to DEFRA's survey of the utilisation of milk by dairies in England and Wales. Some smaller companies are not participating in the survey; numbers in the smaller size bands will therefore not equate to ALL producers.

Source: DEFRA

**Table 52: Size distribution of dairy companies <sup>a</sup> by annual output of cheese, England and Wales: 2002**

Size Band (tonnes per year)	Companies producing cheese		Volume of annual output	
	number	% of total	'000 tonnes	% of total
100 and under	8	14.3	0.3	0.1
101 - 1,000	21	37.5	8.2	3.0
1,001 - 4,000	12	21.4	21.7	8.0
4,001 - 10,000	7	12.5	41.5	15.4
over 10,000	8	14.3	198.6	73.5
<b>Total</b>	<b>56</b>	<b>100.0</b>	<b>270.3</b>	<b>100.0</b>

<sup>a</sup> Based on dairy processing companies responding to DEFRA's survey of the utilisation of milk by dairies in England and Wales. Some smaller companies are not participating in the survey; numbers in the smaller size bands will therefore not equate to ALL producers.

Source: DEFRA

**Table 53: Size distribution of dairy companies <sup>a</sup> by annual output of butter, England and Wales: 2002**

Size Band (tonnes per year)	Companies producing butter		Volume of annual output	
	number	% of total	'000 tonnes	% of total
7,000 and under	7	63.6	9.6	9.3
over 7,000	4	36.4	93.8	90.7
<b>Total</b>	<b>11</b>	<b>100.0</b>	<b>103.4</b>	<b>100.0</b>

<sup>a</sup> Based on dairy processing companies responding to DEFRA's survey of the utilisation of milk by dairies in England and Wales. Some smaller companies are not participating in the survey; numbers in the smaller size bands will therefore not equate to ALL producers.

Source: DEFRA

**Table 54: Size distribution of dairy companies <sup>a</sup> by annual output of milk powders, United Kingdom: 2002**

Size Band (tonnes per year)	Companies producing milk powders		Volume of annual output	
	number	% of total	'000 tonnes	% of total
20,000 and under	7	63.6	67.5	35.4
over 20,000	4	36.4	123.3	64.6
<b>Total</b>	<b>11</b>	<b>100.0</b>	<b>190.8</b>	<b>100.0</b>

<sup>a</sup> Based on dairy processing companies responding to DEFRA's survey of the production and stocks of condensed milk and milk powders in the United Kingdom.

Source: DEFRA

**Table 55: Size distribution of dairy companies <sup>a</sup> by annual output of condensed milk, United Kingdom: 2002**

Size Band (tonnes per year)	Companies producing condensed milk		Volume of annual output	
	number	% of total	'000 tonnes	% of total
10,000 and under	3	50.0	7.7	5.3
over 10,000	3	50.0	138.7	94.7
<b>Total</b>	<b>6</b>	<b>100.0</b>	<b>146.4</b>	<b>100.0</b>

*a* Based on dairy processing companies responding to DEFRA's survey of the production and stocks of condensed milk and milk powders in the United Kingdom.

Source: DEFRA

**Table 56: Average annual output of dairy companies <sup>a</sup> by product: 2002**

Product	Companies producing	Average annual output
	number	tonnes
Liquid milk <sup>b</sup>	45	121,289
Butter <sup>b c</sup>	11	9,400
Cheese <sup>b</sup>	56	4,827
Milk Powders <sup>d</sup>	11	18,073
Condensed milk <sup>d</sup>	6	24,400

*a* Based on dairy processing companies responding to DEFRA surveys.

*b* England and Wales.

*c* Includes the butter equivalent of butteroil and other yellow fat dairy products.

*d* United Kingdom.

Source: DEFRA

## Use of Wholesale Milk by Processors

Milk is processed into a very wide range of products and tables in this section show this usage as grouped into the main product categories. All data in this section relate to usage of wholesale milk by dairies. Statistics are sourced from a survey of processors instigated following the change in milk marketing arrangements and conducted by the Government Agricultural Departments. A full description of the differences between historic statistics and the current series were given in the 1996 edition of Dairy Facts and Figures.

### 1. The Utilisation Surveys

Voluntary surveys of dairy companies were introduced in England and Wales and Northern Ireland along with a statutory survey in Scotland, to replace the utilisation data previously available from the Milk Marketing Boards. Each month the Government Agricultural Departments (DEFRA, DARD and SEERAD) collect statistical information on the intake and utilisation of milk by processors in their areas.

Because of the voluntary nature of the surveys in England and Wales and Northern Ireland coverage does vary and falls slightly short of the total amount of milk available to dairies but DEFRA estimate that the results, as presented in this book on Tables 58-65 for England and Wales, covers between 87 and 96 per cent of the milk available. It is thought that most of the milk unaccounted for by the survey is used for liquid milk or cheese production with small amounts being used for cream, yogurt, other products and stock change and wastage.

Response to the survey in Northern Ireland is thought to account for about 98% of the milk available. However, DARD publishes figures which are grossed up to the estimated national level, and that is what is shown on Tables 69-75.

Statistics from the Scottish survey are collected on a similar basis to the other agricultural departments, although results are presented in a quarterly rather than monthly format (see Tables 66-68). As with Northern Ireland the data include estimates for the small number of companies that have not responded to the survey.

In all areas data are collected on the amount of whole milk or milk fractions (skim and cream) actually used to make each product, thereby giving more accurate information on how milk is being utilised by processors. For example, any residual cream from the production of low fat milks is recorded against other products for which it is used, such as butter or cream.

### 2. Confidentiality

Due to the need to preserve confidentiality for individual premises it is not possible to show certain utilisation figures. Careful attention should be paid to the footnotes on each table to ascertain what has or has not been included under each product category.

Table 57: Availability of milk in dairies <sup>a</sup>, United Kingdom by country

Availability	2001				2002			
	England & Wales <sup>b</sup>	Scotland	Northern Ireland	United Kingdom	England & Wales <sup>b</sup>	Scotland	Northern Ireland	United Kingdom
<b>Raw milk intake by dairies</b>								
Whole milk (million litres)	10,620.0	1,202.0	1,829.0	13,651.0	10,564.0	1,249.4	1,797.7	13,611.1
Skim milk (million skim litres)	132.3	4.6	0.2	137.0	164.6	2.3	30.4	197.3
Cream (million cream litres)	89.8	18.3	0.9	109.0	69.5	19.7	7.7	96.9
<b>Whole milk separation within dairy</b>								
Whole milk separated (million litres)	-4,297.8	-427.1	-598.4	-5,323.3	-4,430.6	-426.6	-519.8	-5,377.0
Obtained from separation								
Skim milk (million skim litres)	3,870.8	391.9	539.0	4,801.7	3,986.3	391.8	466.9	4,845.0
Cream (million cream litres)	427.0	35.2	59.3	521.5	444.8	34.8	52.9	532.5
<b>Total milk available in dairies for processing</b>								
Whole milk (million litres)	6,322.2	774.9	1,230.7	8,327.7	6,133.7	822.8	1,277.9	8,234.4
Skim milk (million skim litres)	4,003.1	396.5	539.2	4,938.7	4,150.9	394.1	497.3	5,042.3
Cream (million cream litres)	516.9	53.5	60.2	630.5	513.9	54.5	60.6	629.0

<sup>a</sup> Results are from surveys of dairy companies conducted by the Government Agricultural Departments.

<sup>b</sup> The DEFRA survey is estimated to have accounted for 95% of the total amount of milk available to dairies in England and Wales in 2001, 93% in 2002.

Source: DEFRA, SEERAD, DARD

Table 58: Monthly utilisation of whole milk by dairies, 2002 <sup>a</sup>, England and Wales

2002	Liquid milk	Cheese	Condensed milk <sup>b</sup>	Milk powders & yogurt	Other products	Sub sales to other organisations	Stock change & wastage	Total disposals of whole milk
	million litres							
January	240.7	209.4	25.4	11.0	4.3	43.4	-0.5	533.8
February <sup>c</sup>	226.1	183.8	24.2	11.2	3.8	37.7	-3.1	483.7
March	245.3	207.1	26.4	12.1	4.1	45.0	1.0	541.0
April	234.1	200.9	25.4	12.5	4.0	46.1	-0.9	522.2
May	252.0	214.4	24.9	14.6	3.1	56.8	0.8	566.6
June	234.6	189.5	20.7	13.6	4.3	45.4	3.1	511.1
July	233.7	187.4	23.5	14.6	4.9	45.2	4.4	513.8
August	238.7	191.9	24.0	<sup>c</sup>	15.3	43.7	0.7	514.4
September	236.3	175.8	25.1	<sup>c</sup>	14.2	47.0	3.5	501.8
October	241.4	155.9	26.6	<sup>c</sup>	14.8	41.3	2.4	482.3
November	233.1	138.2	<sup>cd</sup>	<sup>cd</sup>	41.0 <sup>e</sup>	45.5	3.7	461.5
December	235.9	166.1	<sup>cd</sup>	<sup>cd</sup>	38.5 <sup>e</sup>	72.0	-10.4	502.1
Jan - Dec 2002 <sup>a</sup>	2,851.8	2,220.4	<sup>c</sup>	<sup>c</sup>	72.8	569.1	4.8	6,134.2
Apr 2001-Mar 2002 <sup>a</sup>	2,904.6	2,421.8	294.5	140.6	56.3	508.1	13.0	6,388.7

<sup>a</sup> Figures are provisional. Results are from a survey conducted by DEFRA of dairy companies.

<sup>b</sup> In 2001 the survey is estimated to have accounted for 90% of the milk available to dairies.

<sup>c</sup> Includes milk for chocolate crumb.

<sup>d</sup> Data are confidential and cannot be divulged.

<sup>e</sup> Included with other products.

<sup>f</sup> Includes milk for condensed milk, chocolate crumb, milk powders and yogurt plus other products.

Source: DEFRA

Table 59: Monthly utilisation of whole milk by dairies, 2003 <sup>a</sup>, England and Wales

2002	Liquid milk		Cheese	Condensed milk <sup>b</sup>	Milk powders & yogurt	Other products	Sub sales to other organisations	Stock change & wastage	Total disposals of whole milk
	million litres								
January	242.1	175.7	c	c	c	39.0	53.6	-1.9	508.5
February	220.7	160.0	c	c	c	37.2	47.5	-1.7	463.7
March	241.2	188.0	c	c	c	38.5	48.4	1.0	517.1
April	230.7	199.1	c	c	c	36.3	48.1	3.2	517.3
May	232.1	209.9	c	c	c	39.0	37.0	2.1	520.1
June	237.0	199.4	c	c	c	36.4	34.7	2.9	510.3
July	241.6	189.6	c	c	c	40.9	31.7	1.9	505.7
August	242.5	182.6	c	c	c	40.2	28.7	1.7	495.8
September	213.6	167.7	c	c	c	38.0	47.2	4.2	470.8
October	225.4	166.1	c	c	c	36.0	41.1	2.1	470.7
November	214.6	148.4	c	c	c	39.7	39.5	6.4	448.6
December	216.3	164.6	c	c	c	36.5	58.0	-0.3	475.2
Jan - Dec 2003 <sup>a</sup>	2,757.8	2,151.2	c	c	c	457.8	515.5	21.6	5,903.9
Apr 02- Mar 03	2,843.6	2,143.9	170.2	55.4	255.0	592.5	4.7	6,065.2	

<sup>a</sup> Figures are provisional. Results are from a survey conducted by DEFRA of dairy companies.

<sup>b</sup> In 2001 the survey is estimated to have accounted for 90% of the milk available to dairies.

<sup>c</sup> Includes milk for chocolate crumb.

<sup>d</sup> Data are confidential and cannot be divulged.

Source: DEFRA

Table 60: Monthly utilisation of skim milk by dairies, 2002 <sup>a</sup>, England and Wales

2002	Liquid milk	Cheese <sup>b</sup>	Condensed milk <sup>c</sup>	Milk powders	Yogurt	Other products <sup>d</sup>	Sub sales to other organisations	Stock change & wastage	Total disposals of skim milk <sup>e</sup>
	million skim litres								
January	213.4	18.2	22.6	46.7	19.0	15.7	5.4	4.4	345.4
February	196.7	14.7	14.5	44.9	22.0	15.3	5.5	2.9	316.5
March	217.9	16.9	12.4	57.5	24.6	18.1	4.5	4.1	356.1
April	207.6	18.1	14.2	79.4	23.3	20.8	2.5	3.6	369.5
May	227.0	16.9	13.0	79.9	23.3	21.3	1.5	3.0	385.7
June	201.4	15.7	9.5	66.3	22.2	21.4	1.3	0.1	338.0
July	201.2	15.6	5.8	63.6	23.6	22.1	2.1	0.2	334.3
August	197.2	13.9	6.1	75.3	22.2	16.7	3.1	0.0	334.4
September	189.2	15.5	5.8	53.5	22.6	15.3	3.2	1.0	306.1
October	205.9	15.4	<sup>c</sup>	83.1	23.5	12.6	4.5	6.7	351.7
November	205.3	12.2	5.6	81.0	19.9	10.7	3.5	6.3	344.4
December	186.2	13.1	5.5	98.7	18.0	14.6	4.8	6.0	346.9
Jan - Dec 2002 <sup>a</sup>	2,448.9	186.2	115.0	829.9	264.1	204.6	42.0	38.3	4,129.0
Apr 2001 - Mar 2002 <sup>a</sup>	2,535.4	200.2	175.0	538.4	245.5	203.2	47.9	35.4	3,981.0

<sup>a</sup> Figures are provisional. Results are from a survey conducted by DEFRA of dairy companies.

<sup>b</sup> In 2001 the survey is estimated to have accounted for 95% of the milk available to dairies.

<sup>c</sup> Excludes skimmed milk used in the production of certain cheeses.

<sup>d</sup> Includes milk for chocolate crumb.

<sup>e</sup> Excludes skim milk used in the production of butter.

<sup>e</sup> Includes skim milk used in the production of butter, cream and all cheeses.

These figures cannot be shown separately. This is to preserve the confidentiality of individual processors.

Source: DEFRA

Table 61: Monthly utilisation of skim milk by dairies, 2003 <sup>a</sup>, England and Wales

2003	Liquid milk	Cheese <sup>b</sup>	Condensed milk <sup>f</sup>	Milk powders	Yogurt	Other products <sup>d</sup>	Sub sales to other organisations	Stock change & wastage	Total disposals of skim milk <sup>e</sup>
	million skim litres								
January	183.0	14.4	<sup>c</sup>	98.6	23.2	16.3	5.2	3.2	343.9
February	179.0	12.0	<sup>c</sup>	88.9	19.6	16.5	5.0	1.9	322.9
March	198.5	12.8	<sup>c</sup>	120.0	20.9	17.2	5.0	1.2	375.5
April	197.9	10.1	<sup>c</sup>	152.6	15.7	19.3	3.7	1.3	400.6
May	191.9	10.8	3.1	157.2	16.6	23.1	3.9	0.1	406.7
June	183.3	10.0	2.7	147.5	15.4	21.3	3.7	3.3	387.1
July	191.0	10.9	1.3	109.1	16.3	21.9	3.9	8.3	362.7
August	176.8	10.0	1.7	97.8	16.4	21.0	3.7	5.3	332.7
September	181.8	9.7	1.1	68.4	16.3	22.3	5.5	6.1	311.2
October	203.7	10.9	1.0	68.4	<sup>c</sup>	24.0	11.6	4.3	323.9
November	193.1	10.0	<sup>c</sup>	71.2	<sup>c</sup>	20.2	6.4	7.8	308.6
December	174.0	11.5	<sup>c</sup>	83.0	11.1	21.9	6.6	7.6	315.6
Jan - Dec 2003	2,254.1	133.0	10.9	1,262.5	171.4	245.0	64.2	50.4	4,191.5
Apr 2002 - Mar 2003	2,381.5	175.6	65.6	988.2	262.1	205.5	41.7	33.2	4,153.4

<sup>a</sup> Figures are provisional. Results are from a survey conducted by DEFRA of dairy companies.

<sup>b</sup> In 2002 the survey is estimated to have accounted for 90% of the milk available to dairies.

<sup>c</sup> Excludes skimmed milk used in the production of certain cheeses.

<sup>d</sup> Data are confidential and cannot be divulged.

<sup>e</sup> Excludes skim milk used in the production of butter.

<sup>f</sup> Includes skim milk used in the production of butter, cream and all cheeses. These figures cannot be shown separately.

This is to preserve the confidentiality of individual processors.

Includes milk for chocolate crumb.

Source: DEFRA



Table 63: Monthly utilisation of cream by dairies, 2003 <sup>a</sup>, England and Wales

2003	Butter <sup>b</sup>	Cheese	Cream	Condensed milk <sup>d</sup>	Milk powders	Yogurt	Other products	Sub sales to other organisations	Stock change & wastage	Total disposals of cream <sup>b</sup>
	million cream litres									
January	18.8	0.3	14.3	c	0.0	c	1.3	6.1	2.5	43.1
February	17.3	0.2	13.4	c	0.0	c	1.2	6.7	2.1	40.8
March	19.7	0.2	15.1	c	0.0	c	1.4	9.7	3.0	49.1
April	20.7	0.2	13.9	c	0.0	c	0.9	10.3	5.0	51.1
May	21.3	0.2	13.8	c	0.0	c	0.9	7.0	4.9	48.1
June	26.0	0.2	13.5	c	0.0	c	0.8	7.7	2.3	50.5
July	20.5	0.1	14.6	c	0.0	c	0.9	6.2	2.8	45.1
August	19.9	0.2	13.8	c	0.0	c	0.7	4.2	5.4	44.2
September	18.3	0.2	16.5	c	0.0	c	0.7	4.0	2.2	41.8
October	17.7	0.1	17.7	c	0.0	c	0.7	5.3	4.0	45.6
November	21.7	0.1	18.1	c	0.0	c	0.7	4.5	1.0	46.2
December	23.0	0.1	19.2	c	0.0	c	0.8	4.9	2.1	50.1
Jan - Dec 2003 <sup>a</sup>	244.8	2.1	183.8	c	0.0	c	11.0	76.5	37.4	493.4
Apr 2002 - Mar 2003 <sup>a</sup>	216.9	4.0	177.9	c	0.0	c	14.7	77.1	9.8	500.4

<sup>a</sup> Figures are provisional. Results are from a survey conducted by DEFRA of dairy companies. In 2002 the survey is estimated to have accounted for 90% of the milk available to dairies.

<sup>b</sup> Cream utilisation for butter includes the volume of skim milk used in the production of butter. This volume is not included in the figures for total disposals of cream.

<sup>c</sup> Data are confidential and cannot be divulged.

<sup>d</sup> Includes cream for chocolate crumb.

Source: DEFRA

**Table 64: Utilisation of cream <sup>a b</sup> for cream manufacture in England and Wales**

Fat content of manufactured cream	2001	2002	2003
	million cream litres <sup>b</sup>		
48% fat and over	36.8	41.5	28.1
29% to 48% fat	134.0	121.7	137.5
23% to 29% fat	2.3	<sup>c</sup>	<sup>c</sup>
under 23% fat	16.4	20.8	18.2
<b>All types of cream</b>	<b>189.5</b>	<b>183.9<sup>d</sup></b>	<b>183.8<sup>d</sup></b>

*a Results are from a survey conducted by DEFRA of dairy companies. In 2000 the survey is estimated to have accounted for 98% of the total amount of milk available to dairies, in 2001: 95%, in 2002: 90%.*

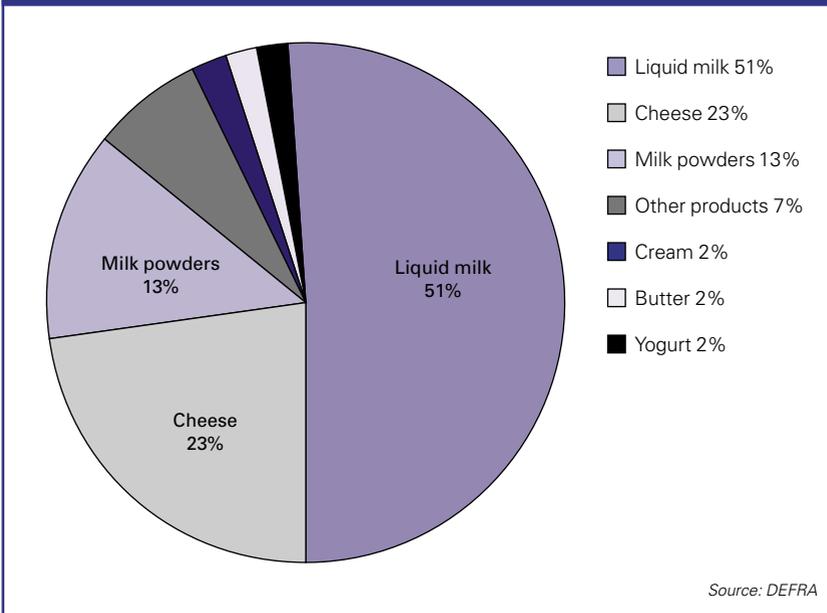
*b Some skim milk was also used for the manufacture of cream but in order to preserve the confidentiality of individual processors this data is not made available.*

*c Data are confidential and cannot be divulged.*

*d Excludes cream used for the manufacture of cream with a fat content of 23% - 29%.*

Source: DEFRA

**Chart 6: Utilisation of milk by dairies, England and Wales, 2003**



Source: DEFRA

Table 65: Utilisation of milk for cheese manufacture <sup>a</sup>, England and Wales

Variety of cheese	2001			2002			2003		
	Whole milk million litres	Skim milk million skim litres	Cream million cream litres	Whole milk million litres	Skim milk million skim litres	Cream million cream litres	Whole milk million litres	Skim milk million skim litres	Cream million cream litres
Cheddar	1,684.5	11.3	-	1,532.9	9.5	-	1,469.8	21.4	-
Other long life territorials	218.4	c	-	215.7	c	-	201.2	c	-
Cheshire	68.5	c	-	63.3	c	-	36.6	c	-
Other short life territorials	62.1	c	-	62.6	c	-	67.5	c	-
Blue vein	100.0	c	-	90.7	c	-	96.5	c	-
Fromage Frais and Cottage Cheese	b	105.8	b	b	92.9	b	b	27.1	b
Other cheeses	238.5	86.5	4.4	255.3	83.8	4.6	279.6	84.4	2.1
<b>All varieties of cheese</b>	<b>2,372.0</b>	<b>203.6</b>	<b>4.4</b>	<b>2,220.4</b>	<b>186.2</b>	<b>4.6</b>	<b>2,151.2</b>	<b>133.0</b>	<b>2.1</b>

<sup>a</sup> Results are from a survey conducted by DEFRA of dairy companies. In 2001 the survey is estimated to have accounted for 95% of the milk available to dairies, in 2002: 93%, in 2003: 90%.

<sup>b</sup> Included in "Other cheeses".

<sup>c</sup> Data are confidential and cannot be divulged.

Source: DEFRA

Table 66: Quarterly utilisation of whole milk by dairies, 2001 to 2003, Scotland

Period	Liquid milk		Cheese			Other products	Transfers to other organisations	Other incl. stock change and wastage	Total disposals of whole milk <sup>a</sup>
	Cheddar	Other cheeses	Total cheese		million litres				
Jan - Mar 2001	62.55	94.46	0.70	95.23	21.35	5.31	3.39	187.72	
Apr - Jun	61.30	138.80	1.38	140.18	20.78	8.06	2.45	232.77	
Jul - Sep	60.90	93.00	1.07	94.07	17.57	10.01	1.63	184.18	
Oct - Dec	62.39	73.14	1.43	74.57	20.38	9.96	2.92	170.21	
Jan - Mar 2002	60.77	120.69	1.27	121.96	21.78	9.22	3.29	217.01	
Apr - Jun	59.93	139.75	2.38	142.13	20.85	11.54	-0.04	234.41	
Jul - Sept	58.37	108.58	1.62	110.20	16.70	13.16	1.72	200.15	
Oct-Dec	58.58	81.04	1.85	82.89	16.20	11.70	1.78	171.14	
Jan-Mar 2003	57.55	114.09	1.98	116.07	15.68	12.79	2.14	204.23	
Apr-Jun	58.13	137.73	2.41	140.14	12.83	2.74	1.02	214.85	
Jul-Sep	55.22	124.72	1.96	126.68	11.71	3.73	3.04	200.38	
Jan - Dec 2001 <sup>b</sup>	247.14	399.40	4.58	404.05	80.08	33.34	10.39	774.88	
Jan - Dec 2002	237.65	450.06	7.12	457.18	75.53	45.62	6.75	822.71	
Apr 2001 - Mar 2002	245.36	425.63	5.15	430.78	80.51	37.25	10.29	804.17	
Apr 2002 - Mar 2003	234.43	443.46	7.83	451.29	69.43	49.19	5.60	809.93	

<sup>a</sup> Provisional. Results are from a survey conducted by SEERAD of dairy companies. They include estimates for a small number of firms that did not respond to the survey of the milk available to dairies.

<sup>b</sup> February 2000 = 29 days.

Source: SEERAD

Table 67: Quarterly utilisation of skim milk by dairies, 2001 to 2003 <sup>a</sup>, Scotland

Period	Liquid milk		Cheese		Other products		Transfers to other organisations	Other incl. stock change and wastage	Total disposals of whole milk <sup>a</sup>
	Cheddar	Other cheeses	Total cheese		Other products	Total cheese			
			million litres						
Jan - Mar 2001	95.77	5.28	0.02	5.30	0.26	0.26	-	0.23	101.57
Apr - Jun	92.22	5.39	0.02	5.41	0.20	0.20	0.03	0.16	98.01
Jul - Sep	93.77	4.07	-	4.07	0.18	0.18	0.06	-0.14	97.94
Oct - Dec	96.47	2.42	-	2.42	0.42	0.42	-	-0.35	98.95
Jan - Mar 2002	93.05	3.81	-	3.81	0.16	0.16	-	0.03	97.04
Apr - Jun	94.43	3.90	-	3.90	2.74	2.74	-	0.14	101.22
Jul - Sept	93.90	2.72	-	2.72	0.18	0.18	-	0.11	96.91
Oct-Dec	96.42	2.37	-	2.37	0.14	0.14	-	-0.04	98.88
Jan-Mar 2003	96.54	3.03	-	3.03	0.19	0.19	-	0.14	99.90
Apr-Jun	96.58	3.50	-	3.50	10.80	10.80	-	0.15	111.03
Jul-Sep	93.30	2.02	-	2.02	15.73	15.73	1.69	0.01	112.75
Jan - Dec 2001 <sup>b</sup>	378.23	17.16	0.04	17.20	1.06	1.06	0.09	-0.10	396.47
Jan - Dec 2002	377.80	12.80	-	12.80	3.22	3.22	-	0.24	394.05
Apr 01 - Mar 02	375.51	15.69	0.02	15.71	0.96	0.96	0.09	-0.30	391.94
Apr 02 - Mar 03	381.29	12.02	-	12.02	3.25	3.25	-	0.35	396.91

<sup>a</sup> Provisional. Results are from a survey conducted by SEERAD of dairy companies. They include estimates for a small number of firms that did not respond to the survey of the milk available to dairies.

<sup>b</sup> February 2000 = 29 days.

Source: SEERAD

Table 68: Quarterly utilisation of cream by dairies, 2001 to 2003, Scotland

Period	Butter			Cheese		Cream	Other products	Transfers to other organisations	Other incl. stock change and wastage	Total disposals of cream <sup>a</sup>
	Cheddar	Other cheeses	Total cheese							
million litres										
Jan - Mar 2001	4.64	-	-	8.54	0.01	0.06	0.30	13.55		
Apr - Jun	4.07	-	-	8.59	0.03	0.09	0.03	12.81		
Jul - Sep	3.94	-	-	5.40	0.04	3.41	0.14	12.93		
Oct - Dec	4.34	-	-	9.65	0.04	0.10	0.04	14.17		
Jan - Mar 2002	3.73	-	-	8.97	0.07	-	0.02	12.78		
Apr - Jun	5.04	-	-	8.14	0.06	0.03	0.23	13.51		
Jul - Sep	6.21	-	-	7.57	0.07	-	0.13	13.98		
Oct - Dec	4.73	-	-	9.37	0.05	-	0.11	14.26		
Jan - Mar 2003	4.46	-	-	8.76	0.06	0.04	0.08	13.4		
Apr - Jun	6.77	-	-	7.79	0.07	1.03	-0.35	15.32		
Jul - Sep	7.11	-	-	4.72	0.06	2.92	0.15	14.96		
Jan - Dec 2001 <sup>b</sup>	16.99	-	-	32.18	0.12	3.66	0.51	53.46		
Jan - Dec 2002	19.71	-	-	34.05	0.25	0.03	0.49	54.53		
Apr 2001 - Mar 2002	16.08	-	-	32.61	0.18	3.60	0.23	52.69		
Apr 2002 - Mar 2003	20.44	-	-	33.84	0.24	0.07	0.55	55.15		

<sup>a</sup> Provisional. Results are from a survey conducted by SEERAD of dairy companies. They include estimates for a small number of firms that did not respond to the survey of the milk available to dairies.

<sup>b</sup> February 2000 = 29 days.

Source: SEERAD

Table 69: Utilisation of milk for liquid milk and cheese <sup>a</sup>, Northern Ireland

Product	2001			2002			2003		
	Whole milk million litres	Skim milk million skim litres	Cream million cream litres	Whole milk million litres	Skim milk million skim litres	Cream million cream litres	Whole milk million litres	Skim milk million skim litres	Cream million cream litres
Liquid milks									
Whole/ Standardised whole <sup>b</sup>	92.4	2.6	-	93.5	1.9	-	99.6	2.0	-
Semi-skimmed	105.0	13.2	-	108.4	12.7	-	113.4	12.7	-
Skimmed	-	5.1	-	-	4.8	-	-	5.4	-
Butter milk	-	13.5	-	-	13.0	-	-	13.9	-
<b>Total liquid milks</b>	<b>197.4</b>	<b>34.3</b>	-	<b>201.9</b>	<b>32.4</b>	-	<b>213.1</b>	<b>34.1</b>	-
Cheese									
Cheddar	64.6	12.6	-	70.1	7.2	-	49.8	4.4	-
Other	152.7	99.1	0.1	135.2	66.1	0.2	150.9	59.6	0.2
<b>Total cheese</b>	<b>217.3</b>	<b>111.7</b>	<b>0.1</b>	<b>205.3</b>	<b>73.3</b>	<b>0.2</b>	<b>200.6</b>	<b>64.0</b>	<b>0.2</b>

<sup>a</sup> Results are from a survey conducted by DARD of dairy companies. They include estimates for the small number of firms that did not respond to the survey.

<sup>b</sup> Including flavoured milks.

Source: DEFRA

Table 70: Monthly utilisation of whole milk by dairies, 2002<sup>a</sup>, Northern Ireland

2002	Liquid milk	Cheese	Milk powders	Yogurt	Other products	Sub-sales to other organisations	Stock change and wastage	Total disposals of whole milk
	million litres							
January	16.50	19.67	44.76	-	0.05	23.51	4.14	108.63
February	15.51	16.07	43.41	-	0.05	24.23	-2.93	96.34
March	17.77	17.05	34.06	-	0.06	37.73	-3.00	103.67
April	17.29	20.46	52.23	-	0.06	31.95	-2.65	119.34
May	17.53	24.85	53.79	-	0.07	33.31	0.88	130.43
June	16.52	18.90	54.42	-	0.60	26.90	3.40	120.74
July	16.98	17.07	51.13	-	0.06	24.65	5.44	115.33
August	16.65	17.73	44.04	-	0.06	19.98	4.31	102.77
September	15.90	14.00	38.91	-	0.05	24.43	3.66	96.95
October	17.90	14.07	38.54	-	0.05	25.12	-0.23	95.45
November	16.38	13.38	29.85	-	0.04	27.03	5.29	91.97
December	17.18	11.98	41.70	-	0.04	25.78	0.62	97.30
Jan - Dec 2002	202.11	205.23	526.84	-	1.19	324.62	18.93	1,278.92
Apr 2001 - Mar 2002	201.88	224.48	498.79	-	0.69	337.20	10.81	1,273.85

<sup>a</sup> Figures are provisional. 366 days. Results are from a survey conducted by DARD of dairy companies. They include estimates for a small number of firms that did not respond to the survey.

Source: DARD

Table 71: Monthly utilisation of whole milk by dairies, 2003<sup>a</sup>, Northern Ireland

2003	Liquid milk	Cheese	Milk powders	Yogurt	Other products	Sub-sales to other organisations	Stock change and wastage	Total disposals of whole milk
	million litres							
January	17.40	13.34	43.36	-	0.05	22.99	6.73	103.87
February	16.01	13.12	42.17	-	0.04	27.56	2.33	101.23
March	18.14	17.02	51.61	-	0.05	32.25	-0.52	118.55
April	17.36	19.89	61.94	-	0.06	34.57	0.90	134.72
May	18.64	20.79	65.22	-	0.07	38.54	1.85	145.11
June	17.29	20.51	60.66	-	0.07	31.36	1.38	131.27
July	17.59	19.73	59.56	-	0.07	31.67	3.19	131.81
August	17.92	17.35	60.31	-	0.09	31.50	-2.62	124.55
September	16.82	14.79	46.99	-	0.07	24.23	1.44	104.34
October	19.07	15.01	29.16	-	0.07	33.35	0.70	97.36
November	17.98	14.67	25.67	-	0.06	31.33	2.11	91.82
December	18.83	14.39	40.50	-	0.06	28.72	-0.20	102.30
Jan - Dec 2003 <sup>a</sup>	213.05	200.61	587.15	-	0.76	368.07	17.29	1,386.93
Apr 2002 - Mar 2003	203.15	195.91	541.73	-	0.63	321.96	29.24	1,292.62

<sup>a</sup> Figures are provisional. Results are from a survey conducted by DARD of dairy companies. They include estimates for a small number of firms that did not respond to the survey.

Source: DARD

Table 72: Monthly utilisation of skim milk by dairies, 2002<sup>a</sup>, Northern Ireland

2002	Liquid milk	Cheese	Milk powders	Yogurt	Other products	Sub-sales to other organisations	Stock change and wastage	Total disposals of skim milk
	million skim litres							
January	2.60	3.22	14.53	-	2.29	0.89	2.19	25.72
February <sup>b</sup>	2.48	6.33	22.81	-	3.83	2.01	2.09	39.55
March	2.76	8.80	29.15	-	7.59	1.16	1.43	50.89
April	2.80	7.97	39.37	-	3.63	5.73	0.72	60.22
May	3.03	7.28	47.24	-	5.39	6.94	0.53	70.41
June	2.73	8.13	38.57	-	1.93	5.55	-2.84	54.07
July	2.92	5.61	30.21	-	8.23	4.39	0.95	52.31
August	2.69	6.33	27.47	-	5.96	2.17	-2.71	41.91
September	2.48	5.72	19.16	-	4.54	-	0.10	32.00
October	2.72	5.02	16.15	-	1.13	-	-0.29	24.73
November	2.55	4.50	11.90	-	0.84	-	0.82	20.61
December	2.71	4.42	15.31	-	0.95	0.32	1.29	25.00
Jan - Dec 2002	32.47	73.33	311.87	-	46.31	29.16	4.28	497.42
Apr 2001 - Mar 2002	32.49	102.67	251.16	-	53.62	55.13	23.16	518.23

<sup>a</sup> Figures are provisional. 366 days. Results are from a survey conducted by DARD of dairy companies. They include estimates for a small number of firms that did not respond to the survey.

Source: DARD

Table 73: Monthly utilisation of skim milk by dairies, 2003<sup>a</sup>, Northern Ireland

2003	Liquid milk	Cheese	Milk powders	Yogurt	Other products	Sub-sales to other organisations	Stock change and wastage	Total disposals of skim milk
	million skim litres							
January	2.54	4.43	18.46	-	1.09	0.05	-0.05	26.52
February	2.43	4.80	18.41	-	0.01	-	0.66	26.31
March	2.84	6.24	27.80	-	1.17	0.06	1.13	39.24
April	2.76	5.19	30.45	-	1.14	1.84	1.00	42.38
May	3.01	5.01	27.92	-	7.37	8.16	1.24	52.71
June	2.78	5.80	35.54	-	1.24	6.05	0.99	52.40
July	3.26	4.55	31.28	-	1.21	3.95	0.88	45.13
August	3.02	5.08	20.37	-	4.19	0.70	-0.17	33.19
September	2.75	5.85	21.25	-	1.10	0.55	-0.05	31.45
October	3.01	5.92	15.22	-	1.25	0.91	1.07	27.38
November	2.75	5.61	10.05	-	1.15	0.47	1.47	21.50
December	2.92	5.53	13.78	-	1.07	1.27	0.06	24.63
Jan - Dec 2003 <sup>a</sup>	34.07	64.01	270.53	-	21.99	24.01	8.23	422.84
Apr 2002 - Mar 2003	32.45	70.45	310.04	-	34.88	25.21	0.32	473.35

<sup>a</sup> Figures are provisional. Results are from a survey conducted by DARD of dairy companies. They include estimates for a small number of firms that did not respond to the survey.

Source: DARD

Table 74: Monthly utilisation of cream by dairies, 2002<sup>a</sup>, Northern Ireland

2002	Butter	Cheese	Cream	Yogurt	Other products	Sub-sales to other organisations	Stock change and wastage	Total disposals of cream
	million cream litres							
January	4.19	0.01	1.17	-	0.02	0.26	-0.66	4.99
February	4.90	0.01	1.49	-	0.02	0.40	-0.64	6.18
March	5.09	0.01	1.78	-	0.02	0.22	0.09	7.21
April	5.45	0.02	1.95	-	0.02	1.39	-0.24	8.59
May	6.92	0.02	1.88	-	0.02	1.39	-1.13	9.10
June	4.16	0.02	1.99	-	0.02	1.35	-1.19	6.35
July	3.50	0.02	1.56	-	0.02	0.66	-0.11	5.65
August	3.17	0.01	1.26	-	0.02	0.60	-0.45	4.61
September	2.49	0.01	1.22	-	0.01	0.08	-0.26	3.55
October	2.19	0.01	1.31	-	0.02	10.00	0.35	13.88
November	2.11	0.01	0.98	-	0.01	0.09	-0.68	2.52
December	2.67	0.01	1.15	-	0.02	0.25	-0.66	3.44
Jan - Dec 2002	46.84	0.16	17.74	-	0.22	16.69	-5.58	76.07
Apr 2001- Mar 2002 <sup>a</sup>	45.92	0.11	19.78	-	0.26	7.06	-4.86	68.27

<sup>a</sup> Figures are provisional. 366 days. Results are from a survey conducted by DARD of dairy companies. They include estimates for a small number of firms that did not respond to the survey. The individual items do not sum to Total Disposals due to surplus cream arising from the production of reduced fat milks which has been included in the cream disposals column.

Source: DARD

Table 75: Monthly utilisation of cream by dairies, 2003<sup>a</sup>, Northern Ireland

2003	Butter	Cheese	Cream	Yogurt	Other products	Sub-sales to other organisations	Stock change and wastage	Total disposals of cream
	million cream litres							
January	3.02	0.01	1.19	-	0.02	0.56	-1.27	3.53
February	2.61	0.01	1.33	-	0.02	0.53	-0.50	4.00
March	2.75	0.02	1.59	-	0.02	1.08	-0.69	4.77
April	3.02	0.02	1.09	-	0.02	0.86	-0.76	4.25
May	4.30	0.02	1.30	-	0.02	0.66	-0.89	5.41
June	3.98	0.01	1.26	-	0.02	0.60	-0.69	5.18
July	3.12	0.01	1.27	-	0.02	0.48	-0.81	4.09
August	1.88	0.02	1.35	-	0.02	0.65	-0.78	3.14
September	2.20	0.02	1.33	-	0.02	0.72	-1.02	3.27
October	2.50	0.01	1.04	-	0.01	0.67	-1.00	3.23
November	2.08	0.01	1.36	-	0.01	0.54	-0.88	3.12
December	2.80	0.02	1.52	-	0.01	0.72	-1.45	3.62
Jan - Dec 2003 <sup>a</sup>	34.26	0.18	15.63	-	0.21	8.07	-10.74	47.61
Apr 2002 - Mar 2003 <sup>a</sup>	41.03	0.17	17.40	-	0.22	8.07	-8.20	58.69

<sup>a</sup> Figures are provisional. Results are from a survey conducted by DARD of dairy companies. They include estimates for a small number of firms that did not respond to the survey. The individual items do not sum to Total Disposals due to surplus cream arising from the production of reduced fat milks which has been included in the cream disposals column.

Source: DARD

## Product Supplies

For the majority of milk products, there is unfortunately no direct measure of the quantities produced by milk processors in the UK. Figures for cream, butter and cheese presented on [Table 76](#) are estimates derived from utilisation data by applying standard conversion factors. As discussed in the previous section (Marketing: Use of wholesale milk by processors), the increasing complexity and variety of the products has made the task of assembling utilisation data increasingly difficult and thereby possibly diminishing the reliability of the production estimates. It is hoped that at some point in the future the Government's Agricultural Departments will conduct annual surveys of processors to ascertain the actual quantities of dairy products manufactured and thereby improve the accuracy of this data.

In the case of the liquid milk market, it is not possible to produce a breakdown for the whole of the United Kingdom into the different market sectors (whole, semi-skimmed, skimmed, UHT etc.). However, market research data shown in the Marketing: Consumption section, [Tables 100-102](#), gives a breakdown of the household market for liquid milk in England and Wales by type, with similar figures for Scotland shown on [Table 102](#).

Production statistics on the main varieties of cheese manufactured in the UK are now being calculated by DEFRA, see [Table 76](#). However, production of cheese on farm is not included in these estimates. An alternative indicator of trends in the cheese sector is provided by market research data presented on [Table 104](#) which shows a breakdown of cheese types purchased by households in Great Britain.

A further problem arises in the case of stocks of the longer-life products such as butter and cheese. At one time these were accurately recorded by Government surveys of cold stores. However, the tremendous changes in the food distribution network and the emergence of the very large retailing chains with their own extensive storage facilities has rendered the task of monitoring stock levels much more difficult thereby affecting some of the data presented in [Tables 78-79](#) on UK Supplies and Disappearance.

The progressive rationalisation of the dairy industry has reduced the number of companies involved in the manufacture of some products, creating problems of confidentiality. This accounts for the absence of some products, such as chocolate crumb and yogurt, on [Table 76](#).

**Table 76: Production of milk products  
United Kingdom estimates**

Product	1998	1999	2000	2001	2002
	thousand tonnes				
Liquid milk <i>a</i>	6,939	7,056	6,969	6,961	6,957
Butter <i>b</i>	137	141	132	126	136
Cheese <i>c</i>	366	368	340	395	380
Cheddar <i>d</i>	208	209	196	239	233
Other long-life territorials <i>d</i>	21	28	22	26	27
Short-life territorials <i>d</i>	20	18	17	17	17
Blue Vein <i>d</i>	11	10	10	11	10
Mozzarella <i>d</i>	41	43	40	46	46
Other cheeses <i>d</i>	57	53	46	48	42
Cream <i>e</i>	266	275	270	290	290
Condensed milk <i>f</i>	192	177	162	161	175
Milk powder	263	269	249	224	254
Whole	97	102	105	87	105
Skimmed	107	102	83	71	87
Buttermilk & Whey	59	64	61	66	62

*a* Includes wholesale and direct sales but excludes on-farm liquid milk consumption.

*b* Includes butter obtained from the residual fat of low fat milk products plus butterfat and oil, dehydrated butter and ghee.

*c* Includes farmhouse manufacture.

*d* Excludes farmhouse manufacture.

*e* Figures include an estimate of cream manufactured from the residual fat of low fat milk products.

*f* Includes condensed milk used in the production of chocolate crumb plus production of sweetened and unsweetened machine skimmed milk.

Source: DEFRA

**Table 77: UK intervention and other stocks  
butter and skimmed milk powder**

At 31 Dec	Butter				Skimmed Milk Powder		
	Intervention	Private Storage Aid	Other	Total	Intervention	Other	Total
	thousand tonnes						
1998	0.7	6.3	10.3	17.2	76.9	5.0	81.9
1999	7.2	8.8	14.9	30.9	58.2	12.7	70.9
2000	7.2	6.7	7.0	23.8	-	5.2	5.2
2001	11.1	8.1	7.2	26.5	-	12.4	12.4
2002	15.2	9.9	4.2	29.3	23.2	5.4	28.6

Source: RPA, DEFRA

**Table 78: UK supplies and disappearance  
butter, cheese and whole milk powder**

Calendar Year	Opening Stock	UK Production	Imports	Total Availability	Exports & Re-exports	Closing Stock	Disappearance
thousand tonnes							
<b>Butter <sup>a</sup></b>							
1994	35.7	148	116.3	300.2	52.7	21.2	226.3
1995	21.2	133	104.6	258.8	52.0	12.4	194.3
1996	12.4	130	114.7	256.9	49.7	15.3	191.8
1997	15.3	139	103.8	257.8	71.9	9.7	176.2
1998	9.7	137	105.3	252.0	65.0	17.2	169.8
1999	17.2	141	118.3	276.8	55.0	30.9	191.0
2000	30.9	132	109.4	272.0	45.0	23.8	203.2
2001	23.8	126	102.3	252.5	40.8	26.5	185.3
2002	26.5	136	115.9	278.4	38.8	19.4	220.2
<b>Cheese <sup>b</sup></b>							
1993	25	338	186.0	548.5	57.3	28	463.4
1994	28	341	214.8	584.0	60.4	22	501.3
1995	22	362	199.5	583.7	53.7	17	512.8
1996	17	377	229.6	623.8	59.2	16	548.5
1997	16	377	235.5	629.0	50.2	18	560.3
1998	18	366	257.2	641.3	55.2	9	577.1
1999	9	368	272.3	649.8	61.0	10	578.9
2000	10	340	259.8	609.4	56.5	9	543.3
2001	9	395	272.0	676.4	67.5	15	593.9
2002	15	380	285.2	680.2	82.3	12	585.9
<b>Whole Milk Powder</b>							
1994	2.8	83	7.3	93.3	64.9	2.0	26.4
1995	2.0	90	7.7	100.0	75.1	3.2	21.7
1996	3.2	83	11.7	97.5	77.3	2.0	18.2
1997	2.0	97	10.2	108.7	106.3	3.2	-
1998	3.2	97	9.5	109.5	108.4	2.7	-
1999	2.7	102	9.6	114.7	92.3	2.7	19.6
2000	2.7	105	11.2	119.1	101.9	2.1	15.1
2001	2.1	87	8.3	97.4	86.7	5.3	5.4
2002	5.4	105	9.5	119.9	102.6	5.2	12.1
<p><i>a</i> Includes production from the residual fat of low fat milk products plus butter other than natural (i.e. butterfat and oil, dehydrated butter and ghee).</p> <p><i>b</i> Includes estimates of farmhouse cheese production. Trade data includes processed cheese but production is 'natural cheese' only.</p>							
Source: Eurostat, DEFRA, RPA, MDC							

**Table 79: UK supplies and disappearance  
cream, skimmed milk powder and condensed milk**

Calendar Year	Opening Stock	UK Production	Imports	Total Availability	Exports & Re-exports	Closing Stock	Disappearance
thousand tonnes							
<b>Fresh, UHT and Frozen Cream</b>							
1994	-	274	3.1	277.2	83.3	-	193.9
1995	-	281	4.3	285.7	76.3	-	209.4
1996	-	281	5.7	286.5	95.8	-	190.7
1997	-	268	11.3	279.3	92.6	-	186.7
1998	-	266	10.4	276.5	102.0	-	174.5
1999	-	275	7.8	283.1	95.2	-	188.0
2000	-	270	11.2	281.1	86.1	-	195.1
2001	-	263	17.1	280.4	84.7	-	195.7
2002	-	264	14.8	278.8	90.5	-	188.3
<b>Skimmed Milk Powder</b>							
1994	13.4	142	11.6	167.4	61.6	18.1	87.8
1995	18.1	117	13.3	148.2	55.9	10.9	81.4
1996	10.9	108	12.9	131.4	20.3	36.5	74.6
1997	36.5	109	13.4	158.5	44.7	54.9	58.9
1998	54.9	107	11.4	173.5	33.9	81.9	57.7
1999	81.9	102	17.8	202.2	39.8	70.9	91.5
2000	70.9	83	13.7	167.4	52.7	5.2	109.5
2001	5.2	71	22.7	98.4	30.0	12.4	56.0
2002	12.4	87	18.1	117.5	29.6	28.4	59.5
<b>Condensed Milk <sup>a</sup></b>							
1994	10	196	10	217	52	12	153
1995	12	182	12	206	65	10	131
1996	10	206	10	227	58	9	160
1997	9	214	13	236	63	7	166
1998	7	192	13	212	64	7	141
1999	7	177	14	198	52	8	138
2000	8	162	15	184	30	7	147
2001	7	161	14	181	21	10	150
2002	10	146	12	168	30	8	130
<p><sup>a</sup> Includes whole and skimmed sweetened and unsweetened condensed milk and condensed milk used in the production of chocolate crumb.</p> <p style="text-align: right;">Source: Eurostat, DEFRA, RPA, MDC</p>							

**Table 80: Self sufficiency ratios  
United Kingdom**

Calendar Year	Butter <i>a</i>	Cheese <i>b</i>	Fresh, UHT & Frozen Cream	Whole Milk Powder	Skimmed Milk Powder	Sweetened Condensed	Unsweetened Condensed
%							
1991	65.0	67.5	115.6	551.1	166.8	120.5	
1992	61.0	65.2	118.6	1,279.5	116.3	128.5	
1993	62.1	72.9	137.4	378.4	149.0	127.6	
1994	65.5	68.1	141.4	314.3	162.2	128.6	
1995	68.4	70.6	134.4	414.7	143.5	138.9	
1996	67.7	68.7	147.3	456.0	144.3	129.0	
1997	78.7	67.3	143.6	<i>c</i>	184.3	129.0	
1998	80.7	63.3	152.5	<i>c</i>	185.9	135.9	
1999	74.0	63.7	146.5	520.4	112.0	127.6	
2000	64.8	62.5	138.4	695.3	75.6	110.5	
2001	68.2	66.5	134.6	1,611.1	125.9	106.8	
2002	61.8	64.9	140.2	867.8	146.2	112.3	

*For the individual products, self sufficiency is equivalent to production divided by domestic disappearance.*

*a Includes products obtained from the residual fat of low fat products.*

*b Includes estimates of farmhouse cheese manufacture and products obtained from the residual fat of low fat milk products.*

*c Not available due to data limitations.*

*Source: estimates by MDC*

## UK Trade

The method for collecting trade data was radically changed in 1993 as a result of the advent of the EU Single Market. Import/export statistics from HM Customs no longer include goods moving to/from other Member States. This very large gap has been overcome by the use of VAT information but this inevitably has resulted in a discontinuity in the time-series. A degree of estimation is now used which has reduced the accuracy of the data.

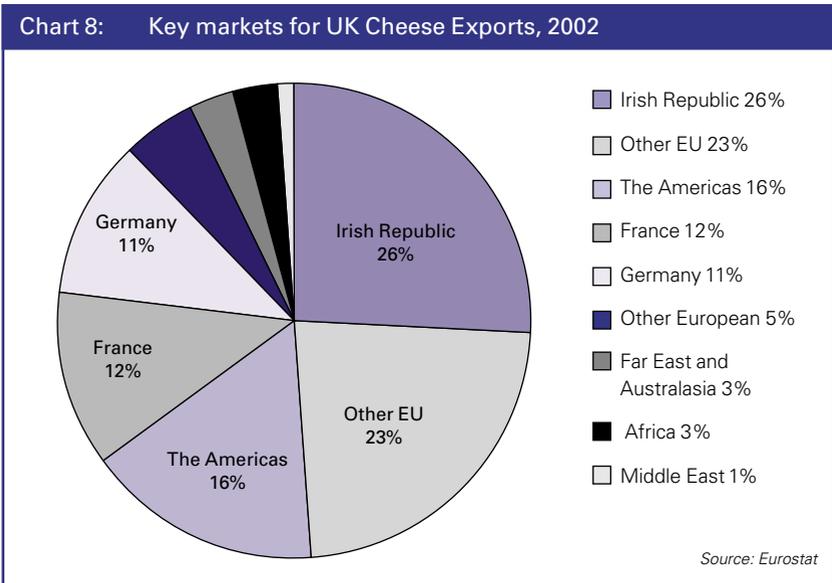
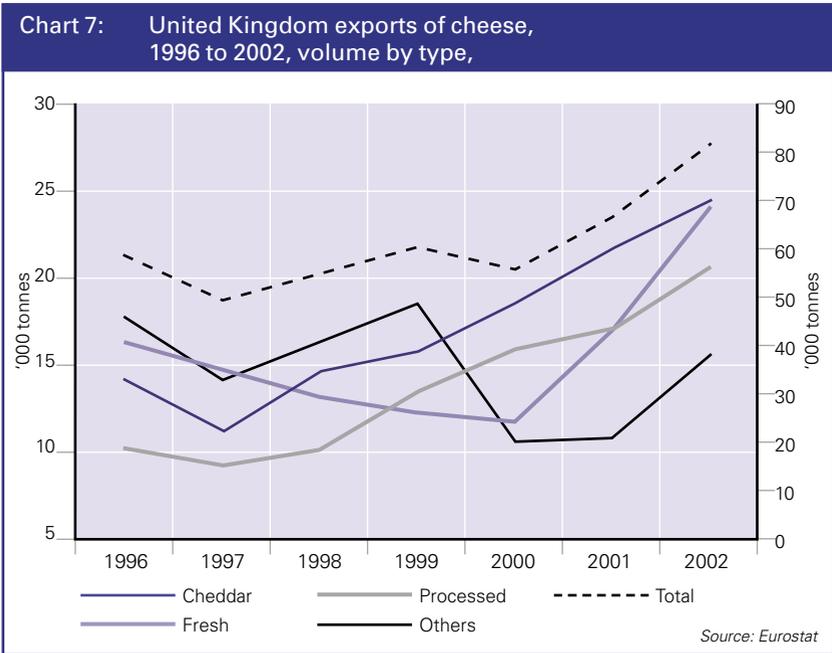
It should be noted that goods travelling between Great Britain and Northern Ireland via the Irish Republic may appear as both an import and an export in trade statistics. This may affect the data on some tables.

Each year there are revisions to the categories for classifying trade. The trade tables in this section and data in other sections of this book are affected by these reclassifications. In general, these changes do help to identify the actual products traded more clearly and thus improve accuracy but they can cause problems with comparability.

**Table 81: UK exports and re-exports  
Milk products by destination**

2002	Cheese				
	Cheddar	Fresh	Processed	Others	Total
	tonnes				
<b>EU</b>					
Belgium/Luxembourg	486	1,034	264	198	1,982
Denmark	3,343	70	250	3,726	7,388
France	1,383	4,528	3,696	568	10,175
Germany	4,312	4,102	191	497	9,103
Greece	50	638	189	448	1,324
Irish Republic	4,431	8,313	6,558	1,951	21,253
Italy	135	1	0	36	173
Netherlands	544	191	2,088	257	3,080
Portugal	68	476	37	22	603
Spain	755	593	45	106	1,499
Austria	830	119	0	23	972
Finland	17	37	85	9	148
Sweden	77	179	1,572	55	1,882
<b>Intra-EU</b>	<b>16,430</b>	<b>20,280</b>	<b>14,974</b>	<b>7,896</b>	<b>59,581</b>
<b>Other Countries</b>					
Central & East European	26	0	2	8	36
Other European	321	87	3,695	84	4,187
Africa	2,089	2	9	70	2,169
Middle East	213	199	37	39	488
Far East & Australasia	1,821	93	60	253	2,227
The Americas	3,680	3,535	1,961	4,352	13,528
<b>Extra-EU</b>	<b>8,150</b>	<b>3,916</b>	<b>5,763</b>	<b>4,806</b>	<b>22,635</b>
<b>Total 2002</b>	<b>24,580</b>	<b>24,196</b>	<b>20,737</b>	<b>15,702</b>	<b>82,216</b>
2001	21,944	17,211	17,296	11,062	67,513
2000	18,734	12,016	15,107	10,814	56,671
1999	16,020	12,532	13,728	18,748	61,028
1998	14,861	13,421	10,349	16,574	55,205
1997	11,396	14,966	9,430	14,399	50,191
1996	14,412	16,516	10,360	17,869	59,157

Source: Eurostat



**Table 82: UK exports and re-exports  
Milk products by destination**

2002	Butter <i>a</i>	Butteroil	Chocolate Crumb	Condensed Milk <i>b</i>	
				Sweetened	Unsweetened
tonnes					
<b>EU</b>					
Belgium/Luxembourg	1,889	8,238	-	-	476
Denmark	249	145	-	-	-
France	5,094	121	20	-	3,230
Germany	2,106	71	-	-	13,701
Greece	8	-	-	-	2,563
Irish Republic	3,581	315	-	225	3,689
Italy	69	5,887	-	-	1
Netherlands	5,291	1,179	-	-	1,711
Portugal	20	-	-	-	-
Spain	95	6	-	-	1,252
Austria	98	-	-	-	889
Finland	-	-	-	-	-
Sweden	29	8	-	-	-
<b>Intra-EU</b>	<b>18,530</b>	<b>15,970</b>	<b>20</b>	<b>225</b>	<b>27,510</b>
<b>Other Countries</b>					
Central & East European	22.8	-	-	1.6	-
Other European	235.1	0.4	43.0	13.4	885.5
Africa	341.4	276.7	0.8	3.2	24.1
Middle East	642.3	112.0	1.8	0.4	-
Far East & Australasia	273.8	16.5	25.7	1.2	922.6
The Americas	844.5	145.9	11334.8	7.5	2.6
<b>Extra-EU</b>	<b>2,360</b>	<b>552</b>	<b>11,406</b>	<b>27</b>	<b>1,835</b>
<b>Total 2002</b>	<b>20,890</b>	<b>16,522</b>	<b>11,426</b>	<b>252</b>	<b>29,345</b>
2001	24,948	15,093	9,986	440	20,798
2000	30,375	15,107	11,690	485	30,710
1999	43,842	12,275	11,196	615	50,957
1998	56,591	9,029	12,219	578	63,399
1997	61,725	11,005	12,441	3,052	59,946
1996	41,332	9,746	10,776	467	57,179

*a* Includes dairy spreads.

*b* Includes skim condensed.

Source: Eurostat

**Table 83: UK exports and re-exports  
Milk products by destination**

2002	Milk Powder		Whey Powder	Liquid Milk	Cream
	Whole <sup>a</sup>	Skimmed			
	tonnes				
<b>EU</b>					
Belgium/Luxembourg	1,509	1,046	3,128	1,160	44,265
Denmark	297	4	145	680	-
France	9,083	138	4,064	-	17,606
Germany	15,382	1,520	1,170	1,705	24,496
Greece	205	32	362	22	-
Irish Republic	3,211	2,078	3,822	63,730	612
Italy	14	64	1,622	750	3
Netherlands	21,396	14,826	20,920	-	3,370
Portugal	-	1	35	-	1
Spain	937	647	1,144	162	134
Austria	-	-	-	-	-
Finland	-	-	-	-	-
Sweden	-	-	1,189	-	-
<b>Intra-EU</b>	<b>52,034</b>	<b>20,356</b>	<b>37,602</b>	<b>68,209</b>	<b>90,485</b>
<b>Other Countries</b>					
Central & East European	345	8	-	-	7
Other European	210	247	512	33	84
Africa	20,630	3,392	-	38	-
Middle East	8,997	114	501	7	19
Far East & Australasia	7,340	2,998	413	25	63
The Americas	22,555	1,978	64	329	125
<b>Extra-EU</b>	<b>60,075</b>	<b>8,736</b>	<b>1,489</b>	<b>431</b>	<b>298</b>
<b>Total 2002</b>	<b>112,109</b>	<b>29,092</b>	<b>39,091</b>	<b>68,640</b>	<b>90,783</b>
2001	86,664	30,001	29,015	64,768	84,742
2000	101,918	52,680	25,961	160,161	87,189
1999	92,348	39,808	25,974	209,003	95,181
1998	108,382	33,911	23,905	160,349	101,962
1997	106,259	44,682	24,593	87,683	92,649
1996	77,261	20,302	20,494	47,628	95,817

<sup>a</sup> Whole, semi skimmed and skimmed milk, packaged in bulk.

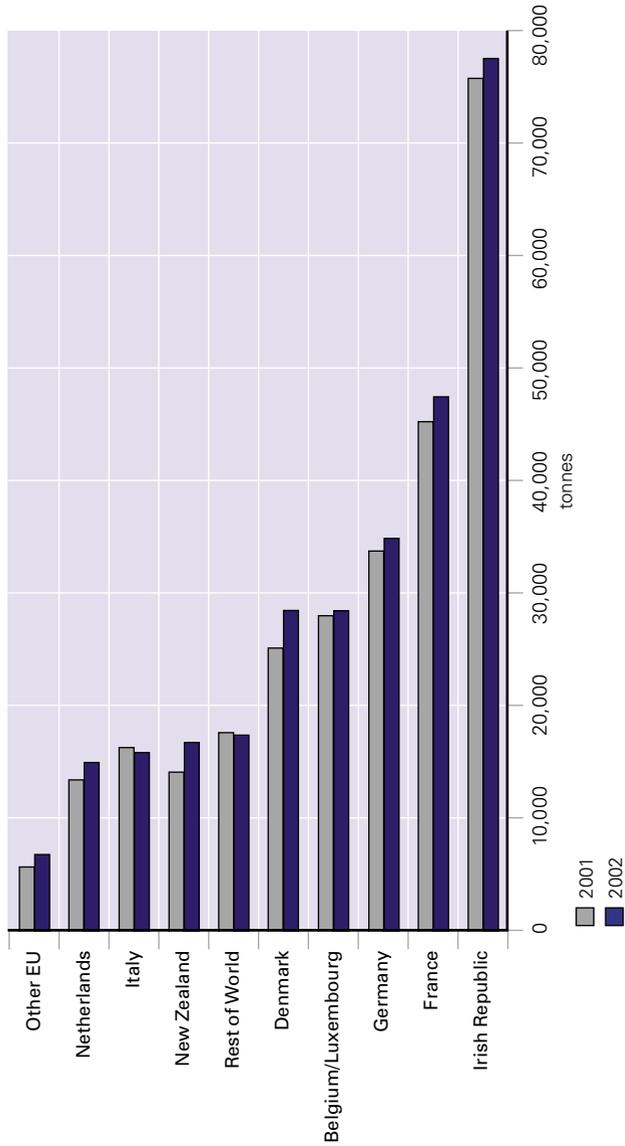
Source: Eurostat

Table 84: UK imports: milk and milk products, volume by exporting country

2002	Cheese										Total
	Cheddar	Blue Vein	Edam	Brie & Camembert	Fresh	Grated & Powdered	Processed	Others			
	tonnes										
Belgium/Luxembourg	1,428	1	305	-	2,992	6	19,979	3,496			28,206
Denmark	545	2,445	30	12	14,329	3,982	1,184	5,808			28,335
France	40	1,830	586	9,476	17,295	2,336	6,531	9,129			47,222
Germany	6,482	42	528	107	18,492	183	4,416	4,392			34,642
Greece	-	1	-	-	-	-	-	1,142			1,143
Irish Republic	50,027	52	21	18	8,289	530	5,522	13,008			77,466
Italy	-	1,692	-	5	2,668	2,109	506	8,769			15,749
Netherlands	1,893	115	9,018	18	236	667	509	2,463			14,919
Portugal	-	-	-	-	-	-	-	-			-
Spain	1	6	47	-	782	-	2,406	85			3,327
Austria	-	7	-	-	-	-	1,831	176			2,013
Finland	-	-	-	-	-	-	-	-			-
Sweden	-	-	-	-	-	-	191	2			193
Intra-EU	60,416	6,189	10,535	9,636	65,081	9,813	43,075	48,469			253,214
Extra-EU	25,029	-	-	-	96	2	134	8,603			33,864
<b>Total 2002</b>	<b>85,445</b>	<b>6,189</b>	<b>10,535</b>	<b>9,636</b>	<b>65,177</b>	<b>9,815</b>	<b>43,209</b>	<b>57,072</b>			<b>287,078</b>
2001	87,855	4,815	8,601	8,302	57,027	8,247	41,426	55,713			271,986
2000	91,001	4,423	7,927	8,010	52,021	7,341	39,347	50,005			260,075
1999	105,007	4,194	8,567	9,008	50,542	7,140	33,235	54,619			272,312
1998	96,030	3,542	7,899	8,262	57,737	6,705	32,885	44,179			257,239

Source: Eurostat

Chart 9: UK imports of cheese, 2001 and 2002, volume by source country



Source: DEFRA

Table 85: UK imports: milk and milk products, volume by exporting country

2002	Butter <sup>a</sup>	Butteroil	Condensed Milk		Chocolate Crumb	Milk Powder		Whey Powder	Cream	
			Sweetened	Unsweetened <sup>b</sup>		Whole <sup>c</sup>	Skimmed			
			tonnes							
Belgium/Luxembourg	559	842	1,301	9	-	201	580	4	1,008	
Denmark	56,797	966	101	7	-	88	224	166	1,952	
France	3,938	617	131	65	14	3,633	1,263	1,324	958	
Germany	7,908	17	884	6,530	7	1,307	852	1,343	8,019	
Greece	-	-	-	-	-	-	-	-	-	
Irish Republic	20,875	164	229	371	33,284	2,540	11,021	15,601	2,431	
Italy	32	-	-	-	-	265	103	135	428	
Netherlands	1,577	714	1,915	30	-	1,385	1,904	3,576	68	
Portugal	-	-	-	-	-	15	-	-	-	
Spain	30	-	21	1	3	-	1	-	-	
Austria	272	-	-	-	-	30	45	64	8	
Finland	33	-	-	-	-	-	-	-	-	
Sweden	-	-	-	-	-	27	1,490	-	-	
Intra-EU	92,020	3,319	4,580	7,014	33,309	9,491	17,484	22,212	14,871	
Extra-EU	23,047	7	7	-	18,300	39	3	25	-	
<b>Total 2002</b>	<b>115,067</b>	<b>3,326</b>	<b>4,587</b>	<b>7,014</b>	<b>51,609</b>	<b>9,530</b>	<b>17,487</b>	<b>22,237</b>	<b>14,871</b>	
2001	102,462	4,571	4,860	9,136	43,835	8,307	22,685	24,790	17,101	
2000	114,072	7,895	4,925	10,007	39,398	10,987	13,816	19,226	11,180	
1999	115,676	6,400	3,075	10,958	36,736	9,560	17,839	21,192	7,848	
1998	102,536	6,411	3,226	9,517	31,432	9,456	11,368	28,444	10,364	

<sup>a</sup> Includes dairy spreads.<sup>b</sup> Includes skimmed condensed.<sup>c</sup> Includes semi-skimmed milk powder.

Source: Eurostat

Table 86: UK imports: milk and milk products, volume by exporting country

2002	Yogurt				All types of yogurt	Liquid Milk		Buttermilk <sup>a</sup>
	Plain	Flavoured	Plain & flavoured	Powdered		Packaged	Bulk	
					tonnes			
Belgium/Luxembourg	8,126	4,549	12,675	-	12,675	2,352	63	2,415
Denmark	490	2,054	2,544	-	2,544	582	237	819
France	3,174	57,912	61,086	3,515	64,601	10,298	307	10,605
Germany	9,200	31,618	40,817	4,682	45,499	5,785	11	5,796
Greece	3,981	174	4,154	-	4,154	-	-	-
Irish Republic	3,882	5,950	9,831	1,879	11,711	7,159	19,853	27,012
Italy	-	78	78	-	78	103	1	104
Netherlands	-	45	45	-	45	-	2,230	2,230
Portugal	-	-	-	-	-	-	-	-
Spain	-	461	461	12	474	-	-	169
Austria	-	491	491	1	492	-	-	-
Finland	-	-	-	-	-	-	-	-
Sweden	-	16	16	-	16	-	-	95
Intra-EU	28,852	103,347	132,199	10,089	142,288	26,279	22,700	48,979
Extra-EU	164	2	166	5	171	10	-	10
<b>Total</b>	<b>29,016</b>	<b>103,349</b>	<b>132,365</b>	<b>10,094</b>	<b>142,459</b>	<b>26,289</b>	<b>22,700</b>	<b>48,989</b>
2001	22,654	96,803	119,457	19,014	138,471	30,489	59,844	90,333
2000	24,364	93,483	117,847	14,011	131,858	36,209	89,787	125,996
1999	14,656	41,761	56,417	12,067	68,484	37,683	100,733	138,416
1998	5,378	60,795	66,173	15,558	81,731	57,315	135,913	193,228

<sup>a</sup> Includes curdled milk and cream, kephir and other fermented or acidified milk or creams.

Source: Eurostat

**Table 87a: UK trade in dairy products  
1999 - 2003**

	1999	2000	2001	2002	2003
	tonnes				
<b>Liquid Milk</b>					
Imports	138,416	122,040	90,333	115,079	237,672
Exports	209,003	160,161	64,768	265,968	489,394
Net	70,587	38,121	-25,565	150,889	251,723
<b>Cream</b>					
Imports	7,848	11,235	17,101	14,871	14,748
Exports	95,180	86,052	84,742	90,784	113,557
Net	87,332	74,817	67,641	75,913	98,809
<b>Yogurt</b>					
Imports	68,484	131,643	138,471	142,459	191,723
Exports	3,401	5,517	8,070	8,506	9,751
Net	-65,083	-126,126	-130,401	-133,953	-181,971
<b>Buttermilk</b>					
Imports	22,537	25,999	27,872	29,523	56,310
Exports	13,155	13,524	9,823	11,147	11,658
Net	-9,382	-12,475	-18,049	-18,376	-44,652
<b>Butter</b>					
Imports	115,676	114,077	102,462	115,067	107,067
Exports	43,842	30,268	24,948	22,140	23,689
Net	-71,834	-83,809	-77,514	-92,928	-83,378
<b>Butteroil</b>					
Imports	6,400	7,895	4,571	3,326	10,706
Exports	12,275	15,077	15,903	16,522	20,361
Net	5,875	7,182	11,332	13,196	9,654
<b>Cheese</b>					
Imports	272,321	259,794	271,986	287,078	318,497
Exports	61,028	56,518	67,513	82,215	88,231
Net	-211,293	-203,276	-204,473	-204,863	-230,266
<b>Sweetened Condensed Milk</b>					
Imports	3,034	4,903	4,860	4,587	8,476
Exports	615	485	440	253	438
Net	-2,419	-4,418	-4,420	-4,334	-8,039
<b>Unsweetened Condensed Milk</b>					
Imports	10,958	9,810	9,136	7,014	11,104
Exports	50,957	29,982	20,798	29,345	20,031
Net	39,999	20,172	11,662	22,332	8,927

Source: Eurostat

**Table 87b: UK trade in dairy products  
1999 - 2003**

	1999	2000	2001	2002	2003
	tonnes				
<b>Chocolate Crumb</b>					
Imports	36,736	39,398	45,835	33,309	37,973
Exports	11,196	11,690	9,986	11,426	3,139
Net	-25,540	-27,708	-35,849	-21,883	-34,834
<b>Whole Milk Powder</b>					
Imports	9,560	11,228	8,307	9,530	12,881
Exports	92,348	101,941	86,664	112,162	108,387
Net	82,788	90,713	78,357	102,632	95,505
<b>Skimmed Milk Powder</b>					
Imports	17,823	13,715	22,685	17,487	32,388
Exports	39,808	52,680	30,001	29,093	48,518
Net	21,985	38,965	7,316	11,606	16,130
<b>Whey Powder</b>					
Imports	21,191	19,226	24,790	22,237	26,473
Exports	25,754	25,961	29,015	39,092	30,997
Net	4,563	6,735	4,225	16,855	4,525
<b>Liquid Whey</b>					
Imports	623	268	288	289	202
Exports	9,671	10,027	13,069	14,018	11,650
Net	9,048	9,759	12,781	13,730	11,448

Source: Eurostat

**Table 88: UK balance of trade <sup>a</sup>  
Milk products by country**

2002	Cheese				
	Cheddar	Fresh	Processed	Others	Total
	tonnes				
<b>EU</b>					
Belgium/Luxembourg	-942	-1,958	-19,715	-3,610	-26,224
Denmark	2,798	-14,259	-934	-8,551	-20,946
France	1,343	-12,767	-2,835	-22,789	-37,048
Germany	-2,170	-14,390	-4,225	-4,755	-25,539
Greece	50	637	189	-695	181
Irish Republic	-45,596	24	1,036	-11,678	-56,213
Italy	135	-2,667	-506	-12,539	-15,576
Netherlands	-1,349	-45	1,579	-12,024	-11,839
Portugal	68	476	37	22	603
Spain	754	-189	-2,361	-32	-1,829
Austria	830	119	-1,831	-160	-1,041
Finland	17	37	85	9	148
Sweden	77	179	1,381	53	1,689
<b>Intra-EU</b>	<b>-43,985</b>	<b>-44,803</b>	<b>-28,099</b>	<b>-76,747</b>	<b>-193,634</b>
<b>Other Countries</b>					
New Zealand	-11,265	-78	-	-5,267	-16,610
Australia	-6,237	-	-45	63	-6,219
Canada	-3,428	2	1	225	-3,200
USA	941	2	1,880	4,107	6,930
Rest of the World	3,109	3,895	3,819	-2,952	7,871
<b>Extra-EU</b>	<b>-16,879</b>	<b>3,821</b>	<b>5,655</b>	<b>-3,824</b>	<b>-11,229</b>
<b>Total 2002</b>	<b>-60,864</b>	<b>-40,982</b>	<b>-22,444</b>	<b>-80,571</b>	<b>-204,863</b>
<b>2001</b>	<b>-65,911</b>	<b>-39,816</b>	<b>-24,130</b>	<b>-74,616</b>	<b>-204,473</b>
<b>2000</b>	<b>-72,267</b>	<b>-40,005</b>	<b>-24,240</b>	<b>-66,892</b>	<b>-203,404</b>
<b>1999</b>	<b>-88,987</b>	<b>-38,010</b>	<b>-19,507</b>	<b>-64,780</b>	<b>-211,284</b>
<b>1998</b>	<b>-81,169</b>	<b>-44,316</b>	<b>-22,536</b>	<b>-54,013</b>	<b>-202,034</b>
<b>1997</b>	<b>-75,520</b>	<b>-39,253</b>	<b>-22,306</b>	<b>-48,253</b>	<b>-185,332</b>
<b>1996</b>	<b>-73,641</b>	<b>-41,085</b>	<b>-20,119</b>	<b>-35,628</b>	<b>-170,473</b>
<b>1995</b>	<b>-49,240</b>	<b>-38,757</b>	<b>-20,653</b>	<b>-37,155</b>	<b>-145,805</b>

<sup>a</sup> Exports from the UK minus imports into the UK.

Source: Eurostat

**Table 89: UK balance of trade <sup>a</sup>  
Milk products by country**

2002	Butter <sup>b</sup>	Butteroil	Chocolate crumb	Condensed Milk <sup>c</sup>	
				Sweetened	Unsweetened
tonnes					
<b>EU</b>					
Belgium/Luxembourg	1,330	7,396	-	-1,301	467
Denmark	-56,548	-821	-	-101	-7
France	1,156	-496	6	-131	3,165
Germany	-5,802	54	-7	-884	7,171
Greece	8	-	-	-	2,563
Irish Republic	-17,294	151	-33,284	-4	3,318
Italy	37	5,887	-	-	1
Netherlands	3,714	465	-	-1,915	1,681
Portugal	20	-	-	-	-
Spain	65	6	-3	-21	1,251
Austria	-174	-	-	-	889
Finland	-33	-	-	-	-
Sweden	29	8	-	-	-
<b>Intra-EU</b>	<b>-73,492</b>	<b>12,650</b>	<b>-33,288</b>	<b>-4,357</b>	<b>20,499</b>
<b>Other Countries</b>					
New Zealand	-22,993	-7	-	-	-
Australia	-	-	-	-6	-
Canada	335	143	11,335	-	-
USA	141	2	-	-	2
Rest of the World	3,190	406	71	27	1,831
<b>Extra-EU</b>	<b>-19,327</b>	<b>545</b>	<b>11,406</b>	<b>21</b>	<b>1,833</b>
<b>Total 2002</b>	<b>-92,819</b>	<b>13,195</b>	<b>-21,882</b>	<b>-4,336</b>	<b>22,332</b>
<b>2001</b>	-77,514	+11,332	-35,894	-4,420	+11,662
<b>2000</b>	-83,697	+7,212	-27,708	-4,440	+20,703
<b>1999</b>	-71,834	+5,875	-25,540	2,460	+39,999
<b>1998</b>	-45,945	+2,618	-19,213	2,648	+53,882
<b>1997</b>	-39,852	+5,403	-18,426	+132	+49,425
<b>1996</b>	-70,649	+5,744	-30,891	-2,408	+50,287
<b>1995</b>	-52,681	+141	-34,233	-1,576	+54,006

<sup>a</sup> Exports from the UK minus imports to the UK.

<sup>b</sup> Includes dairy spreads.

<sup>c</sup> Includes skim condensed.

Source: Eurostat

**Table 90: UK balance of trade <sup>a</sup>  
Milk products by country**

2002	Milk Powder		Whey Powder	Liquid Milk <sup>c</sup>	Cream
	Whole <sup>b</sup>	Skimmed			
tonnes					
<b>EU</b>					
Belgium/Luxembourg	1,308	466	3,124	-1,255	43,257
Denmark	209	-220	-21	-139	-1,952
France	5,450	-1,125	2,740	-10,605	16,648
Germany	14,075	668	-173	-4,091	16,477
Greece	205	32	362	22	-
Irish Republic	671	-8,943	-11,779	36,718	-1,819
Italy	-251	-39	1,487	646	-425
Netherlands	20,011	12,922	17,344	-2,230	3,302
Portugal	-15	1	35	-	1
Spain	937	646	1,144	162	134
Austria	-30	-45	-64	-	-8
Finland	-	-	-	-	-
Sweden	-27	-1,490	1,189	-	-
<b>Intra-EU</b>	<b>42,543</b>	<b>2,873</b>	<b>15,388</b>	<b>19,228</b>	<b>75,615</b>
<b>Other Countries</b>					
New Zealand	-	-2	-6	-	-
Australia	-	-	-2	-	-
Canada	3	20	15	-	23
USA	436	-	0	-	95
Rest of the World	59,688	9,715	1,456	421	180
<b>Extra-EU</b>	<b>60,127</b>	<b>9,733</b>	<b>1,464</b>	<b>421</b>	<b>298</b>
<b>Total 2002</b>	<b>102,670</b>	<b>12,606</b>	<b>16,852</b>	<b>19,649</b>	<b>75,913</b>
<b>2001</b>	<b>+78,357</b>	<b>+7,316</b>	<b>+4,225</b>	<b>-25,565</b>	<b>+67,641</b>
<b>2000</b>	<b>+90,931</b>	<b>+38,864</b>	<b>+6,735</b>	<b>+34,165</b>	<b>+76,009</b>
<b>1999</b>	<b>+82,788</b>	<b>+21,969</b>	<b>+4,782</b>	<b>+70,587</b>	<b>+87,333</b>
<b>1998</b>	<b>+98,926</b>	<b>+22,549</b>	<b>-4,539</b>	<b>-32,879</b>	<b>+91,598</b>
<b>1997</b>	<b>+96,026</b>	<b>+31,260</b>	<b>-779</b>	<b>-66,696</b>	<b>+81,344</b>
<b>1996</b>	<b>+65,577</b>	<b>+7,443</b>	<b>+3,935</b>	<b>-70,978</b>	<b>+90,132</b>
<b>1995</b>	<b>+67,338</b>	<b>+42,595</b>	<b>+5,722</b>	<b>-22,873</b>	<b>+71,981</b>

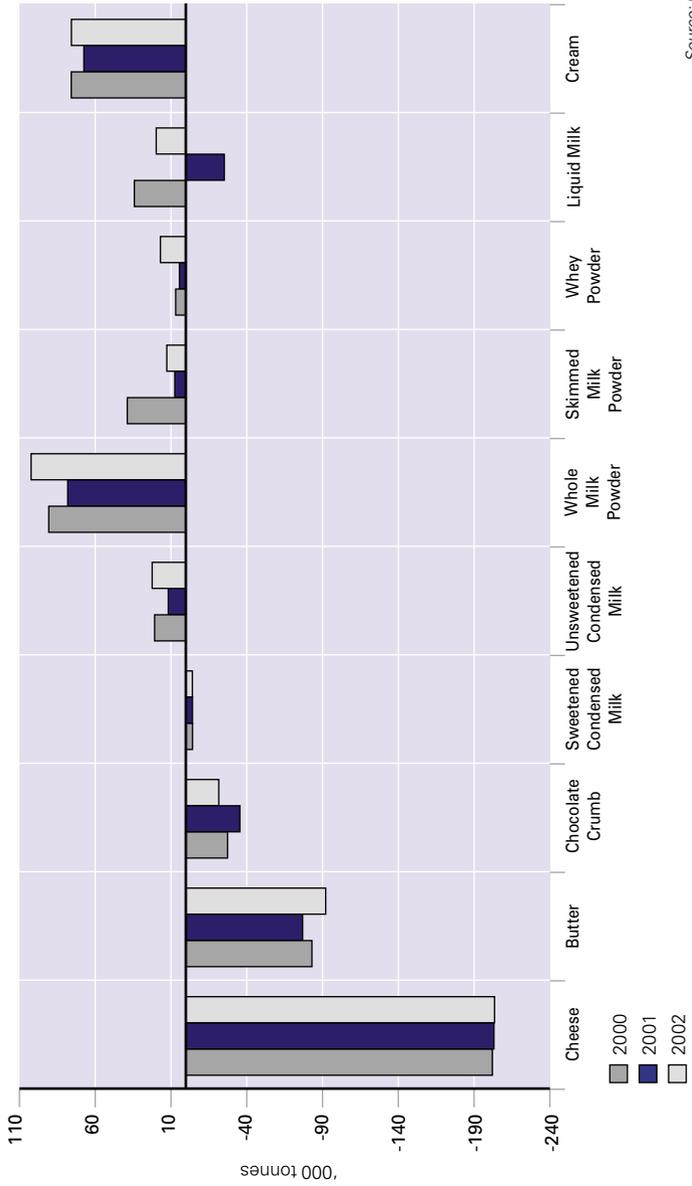
<sup>a</sup> Exports from the UK minus imports to the UK.

<sup>b</sup> Includes semi-skimmed milk powder.

<sup>c</sup> Whole, semi-skimmed, and skimmed milk, packaged and in bulk.

Source: Eurostat

Chart 10: UK balance of trade, 2000 to 2002, net volume of milk and dairy products



Source: Eurostat

## Consumption

### 1. Compositional quality of drinking milk

Council Regulation (2597/97) which sets marketing and quality standards for drinking milk came into force on 1 January 1998 and repealed previous legislation in this sector as laid down in Regulation 1411/71. The aim being to simplify, clarify and amend the provisions defining the types of drinking milk and the permissible fat and protein content ranges for these milks. UK legislation has been introduced to enforce this Regulation (The Drinking Milk Regulations 1998 and Drinking Milk Regulations (Northern Ireland) 1998).

The permitted types of drinking milk are as follows:

- **raw milk:** milk which has not been heated above 40°C or subjected to treatment which has an equivalent effect.
- **whole (standardised):** heat-treated milk standardised to a minimum 3.50% fat content.  
Member States may provide for an additional category of whole milk with a fat content of 4% or above. (DEFRA has not taken up this option in domestic legislation).
- **whole (non-standardised):** heat-treated, non-standardised milk with a ('natural') fat content that has not been altered since the milking stage. However, the fat content may not be less than 3.50%.
- **semi-skimmed:** heat-treated milk standardised to a fat content of between 1.50% and 1.80%.
- **skimmed:** heat-treated milk standardised to a fat content of not more than 0.50% (previously 0.3%).

The Regulations also permit the addition of milk protein, vitamins and minerals to drinking milk, provided that, in the case of protein enriched milk, the protein content is at least 3.8%.

Council Regulation 2597/97 also establishes a new freezing point requirement for drinking milk (a test to detect the illegal addition of water). Former legislation stipulated that the freezing point could not be higher than -0.52°C. The new freezing point requirement for drinking milk is stipulated in more general terms, i.e. it must be close to the average freezing point for raw milk recorded in the area where the milk originated. The Regulation also specified minimum standards relating to mass and solids-not-fat content of drinking milk. These particular provisions applied from January 1999 but have since been withdrawn by Regulation 1602/99.

All drinking milks which have been modified in any of the ways previously described must display clear and appropriate labelling on their packaging.

Each Member State can choose to limit or ban protein enrichment and/or lactose reduction in drinking milk but the UK Government has not introduced any such restrictions.

Fears that the revised Regulations might permit protein standardisation or a downward adjustment of protein content were not realised. Indeed, the

regulation directed Member States to lay down appropriate rules to ensure that milk products contain at least the natural protein content of milk and to make provision for penalties to be applied if any part of the regulations are contravened. The establishment of uniform standards is intended to enhance consumer confidence in the quality and nutritional value of drinking milk, which it is hoped will ultimately increase sales.

Milk imported into the EU must also comply with all aspects of this Regulation.

## 2. Liquid milk and community hygiene standards

Moves have been made to harmonise hygiene standards within the Community in order to facilitate intra-Community trade without placing in jeopardy existing Member State hygiene rules. This process started with Council Directive 85/397/EEC of 5 August 1985. This covered all aspects of the production, transport and processing of milk from farm to the final consumer. Those aspects relating to the quality of raw milk from individual farms are discussed under Milk Output: Quality. As a result of this Directive, new UK legislation became effective from 1 January 1989. In England and Wales, this was *The Milk (Special Designation) Regulations 1989* and *The Milk and Dairies (Semi-Skimmed and Skimmed Milk) (Heat Treatment and Labelling) Regulations 1988*. Parallel legislation applied to Scotland and Northern Ireland. A new Milk Hygiene Directive (92/46/EEC) was issued in June 1992 effective from 1 January 1994. The provisions of this have been enacted throughout the United Kingdom in new national hygiene Regulations (*The Dairy Products (Hygiene) Regulations 1995*, *The Dairy Products (Hygiene) (Scotland) Regulations 1995* and *Dairy Products (Hygiene) Regulations (Northern Ireland) 1995*) which replace most of the previous milk and dairies' hygiene legislation. They include a few provisions from previous legislation which following review have been retained on public health grounds, including controls on the sale and microbiological standard of raw cows' drinking milk.

In addition to laying-down the standards in regard to fat-content (since revoked by the Drinking Milk Regulations) and general hygiene, the legislation specifies four categories of drinking milk on the basis of the heat-treatment to which it has been subjected to improve keeping properties and destroy potentially harmful bacteria:

- untreated (no heat-treatment)
- pasteurised
- sterilised
- ultra heat treated (UHT)

Untreated milk is raw whole milk packaged on the farm (see Milk Producers: On Farm Processors for details). The other categories can apply to whole, semi-skimmed, skimmed or standardised milk.

All retail sales of raw cows' milk continue to be banned in Scotland.

The Regulations also introduce the EU "health mark", which indicates that a

product has been produced in compliance with Directive 92/46/EEC. All dairy products, including drinking milk, must carry a health mark somewhere on the packaging. The intention of health marking is to enable enforcement authorities to trace products back to originating establishments where difficulties arise. All products destined for another Member State must carry a health mark. Raw drinking milk is exempt from this requirement and hence can only be supplied on the national market.

### 3. Colour coding on milk packaging

As previously mentioned, the Dairy Products (Hygiene) Regulations 1995 revoked the majority of former dairy legislation, including that which related to bottle tops, the *Milk and Dairies (Milk Bottle Caps) (Colour) Regulations 1976*. There are now no guidelines laid down in UK legislation regarding bottle tops. As cap colour codes for milk packaged in returnable bottles are a universally recognised method of quickly identifying the type of milk contained in the bottle, the national Dairymen’s Association (now known as the Dairy Industry Association Limited) produced a Code of Practice to supersede the now redundant legislation.

Milk type	Cap colour	Colour of lettering
<b>Pasteurised:</b>		
Whole	Silver	Black
Semi-Skimmed	Red/Silver Stripe	Red/Silver
Skimmed	Blue/Silver Cross	Black/Silver
Homogenised	Red	Black/Silver
Channel Island	Gold	Black/Silver
Kosher	Blue/Silver Stripes	Black/Silver
Kedassia	Purple/Silver Stripes	Black
<b>Untreated:</b>		
Whole <sup>a</sup>	Green	
Channel Island <sup>a</sup>	Green/Gold Stripe	Black/Silver
<b>Sterilised</b>		
	Blue	Black/Silver
<b>Ultra Heat Treated</b>		
	Pink	Black/Silver
<p><sup>a</sup> Untreated milk must also display a health warning on the bottle stating that, "This milk has not been heat treated and may therefore contain organisms harmful to health".</p>		

Retailers have also agreed to standardise the colours used to designate whole, semi-skimmed and skimmed milk sold in non-returnable containers. The colours, chosen by members of the British Retail Consortium (BRC), are blue for whole milk; green for semi-skimmed milk and red for skimmed milk. Coincidentally, the choice of colours follows the existing agreed standard for cream (double = blue; whipping = green; single = red). The BRC represents about 90% of the total retail trade in the UK.

## 4. School milk scheme

Since the Education Act 1980, as amended, which has been superseded by the Education Act 1996, Local Education Authorities (LEA's) and former Grant Maintained (GM) schools are not under a duty to provide school milk. Where they do provide it, it must be free to children whose parents receive Income Support or Income Based Jobseeker's Allowance. In all other cases a charge should be made. However, LEA's and former GM schools may apply for assistance under the EU School Milk Subsidy Scheme.

In 1977, the Community set up a programme to help fund school milk schemes in Member States to provide milk and milk products to school children using funds collected from milk producers by way of the co-responsibility levy. This levy was abolished in March 1993. However, the EU set up funding for a new school milk scheme in 1992.

The Scheme entitles school children, in both State and Independent schools, to a daily allowance of 250 mls (0.44 pints) of plain or flavoured milk (whole or semi-skimmed) or the equivalent amount of unflavoured, unsweetened whole milk yogurt or plain semi-skimmed milk yogurt. Several elements of the EU Scheme could be implemented at the discretion of the Member State, such as the provision of drinking milk in secondary schools and subsidising the provision of cheese. The Scheme did not normally allow milk to be subsidised when used as an ingredient in school meals but the UK was given a derogation allowing it to do so (which it stopped using in 1996). But the provision of subsidised milk in schools was non-discretionary from the Member State's point of view, although individual local authorities were not obliged to participate in the Scheme.

In recent years, Government financial policy has removed a significant amount of funding from the School Milk Scheme, reducing it to minimum levels of operation. From April 1993, the government opted out of the cheese subsidy. In the November 1995 budget, the government also opted out of the two remaining discretionary parts of the Scheme: that which subsidised the use of milk as an ingredient in school meals and that which subsidised the provision of milk in secondary schools (this option having been introduced on 1 January 1994). These changes came into force at the beginning of the 1996 summer term.

Since Summer term 1996, eligibility for the subsidy has been limited in Great Britain to children receiving Key Stage 1 and Key Stage 2 education (5 to 11 years of age), who are regularly attending a nursery school (also see 5. Welfare food scheme) or a primary school. These children are entitled to a maximum of 250 mls (0.44 pints) per school day of subsidised milk or plain yogurt. As from 1 January 2001 holiday camps are not eligible to claim subsidy.

As from 2001, the subsidy rate available in the UK is made up of two components - the EU subsidy and the UK top-up (see next page). The EU component is subject to monthly currency fluctuations. Therefore the actual subsidy rate available to claimants will vary depending on the month in which the claim period starts. Figures shown on next page, are the rates applicable for school term claim periods, rates for monthly claim periods will vary. See the RPA website for monthly subsidy rates.

## Marketing Consumption

Recent subsidy rates have been:

Applicable from start of school term:	Milk		Plain, milk yogurt a	
	Whole	Semi-skimmed	Whole	Semi-skimmed
	pence per pint		pence per 100g	
Spring 2002	10.54	8.53	1.80	1.46
Summer 2002	10.60	8.57	1.81	1.46
Autumn 2002 <i>b</i>	10.78	8.71	1.84	1.49
Autumn 2002 <i>c</i>	10.91	8.80	1.86	1.50
Spring 2003	11.11	8.96	1.90	1.53
Summer 2003	11.57	9.31	n.a	n.a
Autumn 2003 <i>d</i>	11.81	9.49	n.a	n.a
Autumn 2003 <i>e</i>	11.69	9.39	n.a	n.a

*a* unflavoured/unsweetened.  
*If school term started in: b August 2002. c September 2002. d August 2003. e September 2003.*

There is considerable variation across the country in the provision of subsidised school milk depending on the policy of the Local Education Authority or - particularly in the case of Independent schools - the school itself. Charges can vary from the purely nominal to those necessary to recover in full costs net of subsidy but the price must not exceed the 'maximum price' which is calculated by a formula to ensure that the full subsidy is passed on to pupils.

The future funding of the School Milk Scheme by the European Commission came under discussion in 1999. Initial fears that EU funding could be withdrawn altogether were allayed when the Commission agreed to moderate its proposals and the EU School Milk Scheme was reprieved, albeit with a significant reduction in the EU subsidy level available from 1 January 2001 (Regulation 1670/2000). For whole milk, Community funding is fixed at 75% of the target price for milk.

However, Member States may top up the Community aid. In England, the Government bridges this funding gap with money provided by DEFRA, the Department of Health and the Department for Education and Skills. Similar arrangements apply for the devolved administrations/parliaments. EC Regulation 2707/2000 which also came into effect on 1 January 2001, clarifies the existing legislation and, among other things, gives Member States the option of including certain low fat products in the list of products qualifying for aid.

The National Assembly for Wales introduced legislation in February 2001 which effectively makes milk free for pupils in Key Stage 1 (5 to 7 years of age). The funds made available by the National Assembly for this purpose are disbursed, like the EU subsidy, by the Rural Payments Agency.

## 5. Welfare food scheme

This is a nationally funded scheme which is administered by the Health Departments. Families who receive Income Support or income-based Jobseekers' Allowance are entitled to free milk under this scheme if, within the family, there is:

- 1) a pregnant woman
- 2) a woman who is breast-feeding her baby
- 3) a child aged under 5 years

Expectant or nursing mothers and children under five receiving these benefits are entitled to receive seven pints (or four litres) of cows' milk a week. Bottle-fed babies, aged under one, are entitled to 900g of dried baby milk (specified brands) a week. Certain families receiving Working Families Tax Credit are entitled to cheaper, as opposed to free, baby milk for babies under one year.

Either whole or semi-skimmed liquid milk can be obtained from milkmen or participating shops and supermarkets in exchange for tokens which are issued by Post Offices and local Social Security Offices. The tokens cannot be exchanged for cash or other goods. Dried baby milk tokens can be exchanged at the local maternity or child health clinic, or at a special welfare food distribution centre.

The Welfare Food Scheme also enables children under the age of five attending approved day care facilities for two hours or more to receive, free of charge, 200 mls of milk (whole or semi-skimmed) on each day they attend.

At the time of going to the press discussions are taking place to update the Food Welfare Scheme, which was introduced in 1940 as a war time measure to protect the health of mothers and children at a time of shortages. The proposal is that the new scheme, renamed Healthy Start, will come into effect in 2004 and will give pregnant women, mothers and young children in low income groups greater access to a healthy diet.

**Table 91: Resident population  
United Kingdom by country**

Year	England & Wales	Scotland	Northern Ireland	United Kingdom	
	millions				
1971	49.1	5.2	1.5	55.9	
1981	49.6	5.2	1.5	56.4	
1991	50.8	5.1	1.6	57.4	
2001	52.3	5.1	1.7	59.1	
2002	52.5	5.1	1.7	59.2	
2011	53.8	5.0	1.7	60.5	
<b>Projection:</b>					
2021	55.7	4.9	1.8	62.4	
<b>10 year change:</b>					
2021 on 2011:	<b>number</b>	1.9	-0.1	0.1	<b>1.9</b>
	<b>%</b>	+3.5%	-2%	+5.9%	<b>+3.1%</b>

*Mid-year estimates for 1971 to 2002; 2001-based projections for 2011 to 2021.  
Population estimates for 2001 and 2002 include provisional results from the Manchester matching exercise.*

*Source: Office for National Statistics; Government Actuary's Department;  
General Register Office for Scotland; Northern Ireland Statistics and Research Agency*

Age Band	1971	1981	1991	2001 <sup>a</sup>	2002 <sup>a</sup>	2011	2021	9 year change 2002-2011	19 year change 2002-2021
	% of total population							%	%
Under 16	25.5	22.0	20.0	20.0	20.0	18.0	18.0	-10	-10
16-24	13.5	14.5	14.0	11.0	11.5	12.0	11.0	0	-9
25-34	12.5	14.5	16.0	15.0	14.0	13.0	13.0	-7	-7
35-44	11.5	12.0	14.0	15.0	15.0	14.0	12.0	-7	-20
45-54	12.0	11.0	12.0	13.0	13.0	14.0	13.0	8	0
55-64	11.5	11.0	10.0	11.0	11.0	12.0	13.0	9	18
65-74	8.5	9.0	9.0	9.0	8.5	9.0	11.0	6	24
75 and over	4.5	6.0	7.0	8.0	7.5	8.0	9.0	7	20
All ages: %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6	16
thousands	55,928	56,357	57,439	59,051	59,229	61,022	63,239	3	7

<sup>a</sup> 2002 and 2001-based mid-year resident population projections by the ONS.

Source: ONS

**Table 93: Number of households  
Great Britain by country**

Year	England	Wales	Scotland	Great Britain
	thousands of households			
1981	17,310	1,020	1,850	20,180
1991	19,210	1,130	2,050	22,390
2001	20,750	1,190	2,190	24,130
Projection:				
2006 <sup>a</sup>	21,733	1,239	2,317	25,289
2011 <sup>a</sup>	22,520	1,280	2,410	26,210
5 year change:				
2006 on 2001: number	983	49	127	1,159
%	4.7	4.1	5.8	4.8
5 year change:				
2011 on 2001: number	1,770	90	220	2,080
%	8.5	7.6	10.0	8.6

<sup>a</sup> For England and Wales, projections are 1996-based. For Scotland figures are 2000-based.  
All projections do not take account of the 2001 results.

Source: Regional Trends, ONS

Type of household	1971	1981	1991	2001	2003
	% of all households				
<b>One person</b>					
Under state pensionable age	6	8	11	14	15
Over state pensionable age	12	14	16	15	14
<b>Total</b>	<b>18</b>	<b>22</b>	<b>27</b>	<b>29</b>	<b>29</b>
<b>Two or more unrelated adults</b>	4	5	3	8	8
<b>Single family households <sup>a</sup></b>					
<b>Couple <sup>a</sup></b>					
No children	27	26	28	28	28
1 - 2 dependent children <sup>b</sup>	26	25	20	19	18
3 or more dependent children <sup>b</sup>	9	6	5	4	4
Non-dependent children only	8	8	8	6	6
<b>Lone parent <sup>a</sup></b>					
Dependent children <sup>b</sup>	3	5	6	5	5
Non-dependent children only	4	4	4	3	3
<b>Multi-family households</b>	1	1	1	1	1
<b>All households: %</b>	100	100	100	100	100
millions	18.6	20.2	22.4	24.2	24.5

*a Other individuals who were not family members may also be included.*  
*b May also include non-dependent children.*

*Source: Census, Labour Force Study, Office for National Statistics*

Household size	1971	1981	1991	2001	2003
	% of all households				
One person	18	22	27	29	29
Two people	32	32	34	35	35
Three people	19	17	16	16	15
Four people	17	18	16	14	14
Five people	8	7	5	5	5
Six or more people	6	4	2	2	2
<b>Average household size (number of people)</b>	2.9	2.7	2.5	2.4	2.4
<b>All households: %</b>	100	100	100	100	100
millions	18.6	20.2	22.4	24.2	24.5

*Source: Census, Labour Force Survey, Office of national statistics*

**Table 96: Estimated total liquid milk consumption <sup>a b</sup>  
United Kingdom**

January to December	pints	litres
	per head per week	
1993	4.14	2.35
1994	4.09	2.32
1995	4.07	2.31
1996 <sup>c</sup>	4.03	2.29
1997	3.98	2.26
1998	3.94	2.24
1999	3.94	2.24
2000 <sup>c</sup>	3.89	2.21
2001	3.84	2.18
2002	3.79	2.15

<sup>a</sup> Provisional. Revised series due to a downward adjustment to UK population figures issued following the outcome of the 2001 census. Further revisions are anticipated.

<sup>b</sup> Based on DEFRA estimates of the amount of milk produced in the UK for the liquid market including on farm use and direct sales.

<sup>c</sup> Adjusted for leap year.

Source: estimated by MDC

**Table 97: Estimated consumption of dairy products  
United Kingdom**

Jan to Dec	Liquid Milk	Cream	Condensed Milk <sup>a</sup>	Butter	Cheese <sup>b</sup>
	kilograms per head per annum				
1992 <sup>c</sup>	126.8	3.5	2.8	3.6	8.8
1993	126.3	3.2	2.6	3.9	8.0
1994	124.7	3.4	2.6	3.9	8.6
1995	124.3	3.6	2.3	3.4	8.8
1996 <sup>c</sup>	123.0	3.3	2.7	3.3	9.4
1997	121.4	3.2	2.8	3.0	9.6
1998	120.3	3.0	2.4	2.9	9.9
1999	120.2	3.2	2.4	3.3	9.9
2000 <sup>c</sup>	118.7	3.3	2.5	3.5	9.2
2001	117.2	3.3	2.6	3.1	10.1
2002	116.1	3.2	2.2	3.6	9.9

<sup>a</sup> Includes condensed milk used in the production of chocolate crumb plus production of sweetened and unsweetened machine skimmed milk.

<sup>b</sup> Based on DEFRA estimates of the total amount of product manufactured in the UK, including farmhouse cheese manufacture.

<sup>c</sup> Adjusted for leap year.

Source: estimated by MDC

**Table 98: Household consumption of dairy products  
Great Britain**

Product	1996-97	2000-01	2001-02
	litres per head per annum <sup>a</sup>		
Whole milk	37.5	15.9	15.0
Semi skimmed milk	52.5	54.0	48.4
Skimmed milk	7.6	8.6	8.3
Total low fat milks	60.1	62.7	56.7
Other milks and dairy desserts <sup>b</sup> (eq litres )	0.1	0.1	0.2
Yogurt and Fromage Frais	6.9	7.9	8.0
Cream	1.0	0.9	1.0
Butter <sup>c</sup>	42.0	43.0	41.0
Cheese: natural <sup>c</sup>	100.0	99.0	100.0
processed <sup>c</sup>	12.0	12.0	12.0

<sup>a</sup> Except where otherwise stated.  
<sup>b</sup> Here includes, condensed, infant, and instant milks but excludes soya milk.  
<sup>c</sup> In grams.

*Source: National Food Survey*

**Table 99: Household consumption of various foods  
United Kingdom**

Product	1998-99	1999-00	2000-01	2001-02
	grams per person per week, unless otherwise stated			
Milk & cream (ml or eq ml)	2,123	2,112	2,156	2,023
Cheese	103	106	110	112
Meat & meat products	9,78	9,64	1,016	1,032
Fish	161	156	163	157
Eggs (number)	1.62	1.58	1.62	1.65
Fats and oils	202	200	201	196
Sugar & preserves	188	169	173	147
Vegetables & vegetable products	2,172	2,117	2,140	1,999
Fruit and fruit products	1,144	1,140	1,206	1,156
Cereal products	1,738	1,747	1,790	1,655
Beverages	73	68	71	60
Miscellaneous	538	559	600	648
Soft drinks <sup>a</sup> (ml)	1,514	1593	1,630	1,744
Alcoholic drinks (ml)	658	645	799	735
Confectionery	131	128	152	128

<sup>a</sup> Converted to unconcentrated equivalent.

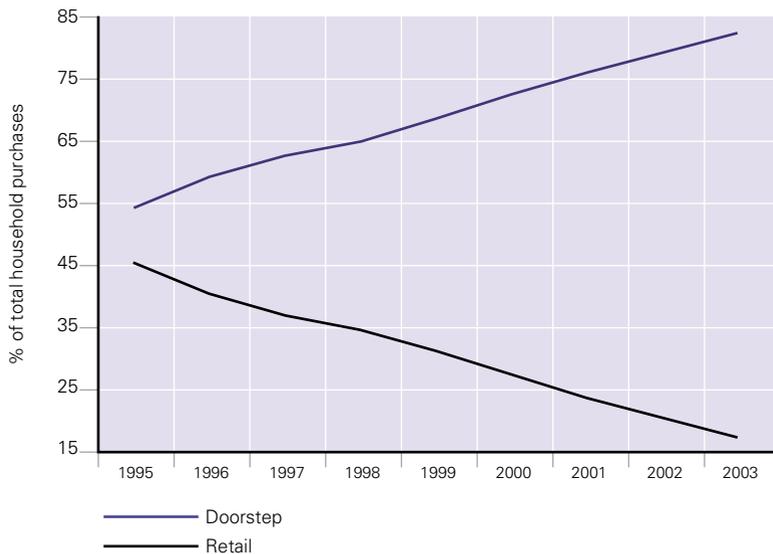
*Source: National Food Survey*

**Table 100: Liquid milk market Great Britain**

Calendar Year	Total Liquid Milk Purchases	Household Purchases		
		Total	Doorstep	Retail
		million litres		
1995	6,515	5,641	2,565	3,075
1996	6,448	5,399	2,194	3,206
1997	6,394	5,237	1,937	3,300
1998	6,372	5,080	1,754	3,326
1999	6,496	4,947	1,533	3,415
2000	6,403	4,818	1,304	3,515
2001	6,397	4,709	1,106	3,603
2002	6,396	4,630	937	3,693
2003	6,267	4,596	782	3,814

Source: TNS, DEFRA, DARD

**Chart 11: Household liquid milk purchases – by source of purchase, % volume share, Great Britain 1995-2003**



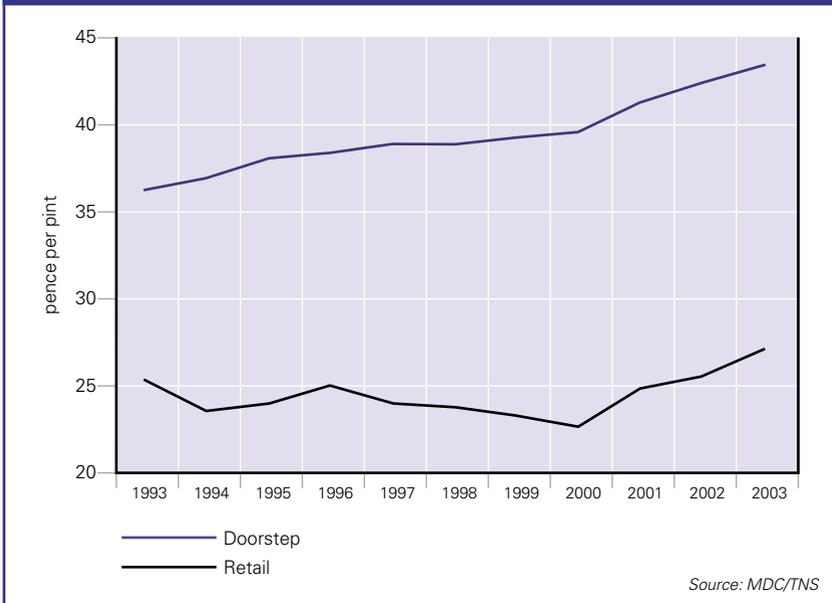
Source: TNS, DEFRA, DARD

**Table 101: Average milk prices by source of purchase  
Great Britain**

Calendar Year	Source of Purchase		Differential (a-b)
	Doorstep (a)	Retail (b)	
	pence per pint		
1993	36.1	25.2	10.9
1994	36.8	23.5	13.3
1995	37.9	23.9	14.0
1996	38.2	25.0	13.2
1997	38.7	23.9	14.8
1998	38.7	23.7	15.0
1999	39.1	23.2	15.9
2000	39.4	22.6	16.8
2001	41.1	24.7	16.4
2002	42.2	25.5	16.6
2003	43.2	27.0	16.2

*Source: MDC/TNS*

**Chart 12: Average milk prices in Great Britain,  
doorstep prices compared with retail prices 1993-2003**



**Table 102: Household milk purchases by fat content  
Great Britain**

Calendar Year	Whole	Semi-skimmed	Skimmed
	% of total household milk purchases		
1994	43.4	42.9	12.7
1995	39.6	46.1	13.3
1996	37.7	48.3	13.1
1997	36.3	50.1	12.7
1998	35.4	50.6	12.9
1999	33.9	52.2	13.0
2000	32.3	52.9	13.8
2001	30.3	53.7	14.9
2002	28.8	54.6	15.4
2003	27.3	57.2	15.5

*Source: TNS*

**Table 103: Milk sales by container type <sup>a</sup>  
Great Britain**

Type & Size of Container	2000	2001	2002	2003
% of sales through grocery outlets				
<b>Container type</b>				
Carton	10.9	10.9	11.0	11.1
Glass Bottle	25.8	22.5	19.0	15.8
Plastic container	63.0	66.4	69.9	73.0
Other container	0.2	0.2	0.1	0.1
<b>Container size by milk type</b>				
Pasteurised 1 Litre	2.0	2.0	1.7	1.9
1 Pint	31.2	28.1	24.8	21.6
2 Litre	6.4	5.8	5.8	6.2
2 Pint	11.3	12.9	14.1	15.3
4 Pint	30.0	32.4	34.5	36.2
6 Pint	17.7	17.4	17.7	17.6
UHT 1 Litre	68.9	24.9	24.1	29.0
500 ml	6.6	69.5	66.8	67.1
6 x 1 Litre	20.9	3.3	7.8	3.7
Sterilised 1 Litre	22.3	24.9	24.1	29.0
1 Pint	73.1	69.5	66.8	67.1
500 ml	3.0	3.3	7.8	3.7

<sup>a</sup> Includes doorstep deliveries.

*Source: TNS*

Table 104: Household milk purchases by type, Great Britain by country

Product	England and Wales			Scotland			Great Britain		
	2001	2002	2003	2001	2002	2003	2001	2002	2003
	% of total household milk purchases								
Whole milk	30.1	28.8	27.2	33.4	32.1	32.1	30.4	29.1	27.7
Pasteurised <sup>a</sup>	28.5	27.4	25.2	33.2	32.0	31.7	29.0	27.8	25.8
Sterilised	0.7	0.7	0.6	0.1	0.1	0.6	0.6	0.6	0.6
Channel Island	0.2	0.2	0.5	-	-	-	0.2	0.1	0.5
UHT	0.6	0.6	0.3	0.1	0.1	0.1	0.6	0.5	0.3
<b>Semi-skimmed</b>	<b>53.7</b>	<b>53.7</b>	<b>57.2</b>	<b>55.4</b>	<b>57.3</b>	<b>58.3</b>	<b>53.9</b>	<b>54.9</b>	<b>57.3</b>
Pasteurised	51.6	51.6	53.3	54.5	56.2	56.8	51.8	52.8	53.6
Sterilised	0.5	0.5	0.4	0.1	-	0.1	0.4	0.3	0.4
UHT	1.7	1.7	1.7	0.8	1.0	0.8	1.6	1.8	1.6
<b>Skimmed</b>	<b>14.9</b>	<b>15.4</b>	<b>13.1</b>	<b>10.3</b>	<b>9.3</b>	<b>7.8</b>	<b>14.4</b>	<b>14.8</b>	<b>12.6</b>
Pasteurised	8.8	9.0	9.1	6.1	5.2	5.3	8.6	8.6	8.8
Sterilised	0.3	0.2	0.3	0.2	0.1	0.1	0.3	0.2	0.3
UHT	5.8	6.2	3.5	4.0	4.0	2.1	5.6	6	3.3
<b>Other types</b>	<b>1.3</b>	<b>1.3</b>	<b>2.4</b>	<b>0.9</b>	<b>1.3</b>	<b>1.8</b>	<b>1.3</b>	<b>1.3</b>	<b>2.4</b>

<sup>a</sup> Includes homogenised milk.

Source: TNS

**Table 105: Sales under school milk scheme <sup>a</sup>  
United Kingdom**

Product	1999-0 <sup>b</sup>	2000-1 <sup>b</sup>	2001-2 <sup>b c</sup>
	million litres		
Whole milk	42.9	43.8	44.6
Semi-skimmed milk	1.4	1.2	1.8
<b>Total Milk</b>	<b>44.3</b>	<b>45.1</b>	<b>46.4</b>
Whole milk yogurt	0.0	0.0	0.0
Semi-skimmed milk yogurt	0.0	0.0	0.0
<b>Total Yogurt</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<sup>a</sup> Milk products supplied during the year.

<sup>b</sup> Academic year.

<sup>c</sup> Great Britain Only.

Source: RPA

**Table 106: Household cheese purchases by type  
Great Britain**

Type of cheese	52 weeks ending:		
	9 Dec 01	8 Dec 02	8 Dec 03
	% of total household cheese purchases (weight)		
Cheddar	56.7	53.9	51.2
Cheshire	1.3	1.1	1.0
Cottage Cheese	6.4	6.4	3.1
Double Gloucester	1.6	1.8	1.6
Edam	2.2	2.1	1.6
Leicester/Red Leicester	3.7	5.2	3.6
Processed cheese slices	3.6	3.8	2.7
Processed cheese spread	4.5	4.5	4.2
Soft White Cheese	4.4	4.5	9.1
All Others	15.6	16.7	21.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: TNS

**Table 107: Retail price index, all items, United Kingdom**

Month	1997	1998	1999	2000	2001	2002	2003
index (January 1987 = 100)							
January	154.4	159.5	163.4	166.6	171.1	173.3	178.4
February	155.0	160.3	163.7	167.5	172.0	173.8	179.3
March	155.4	160.8	164.1	168.4	172.2	174.5	179.9
April	156.3	162.6	165.2	170.1	173.1	175.7	181.2
May	156.9	163.5	165.6	170.7	174.2	176.2	181.5
June	157.5	163.4	165.6	171.1	174.4	176.2	181.3
July	157.5	163.0	165.1	170.5	173.3	175.9	181.3
August	158.5	163.7	165.5	170.5	174.0	176.4	181.6
September	159.3	164.4	166.2	171.7	174.6	177.6	182.5
October	159.5	164.5	166.5	171.6	174.3	177.9	182.6
November	159.6	164.4	166.7	172.1	173.6	178.2	182.7
December	160.0	164.4	167.3	172.2	173.4	178.5	183.5

Source: ONS

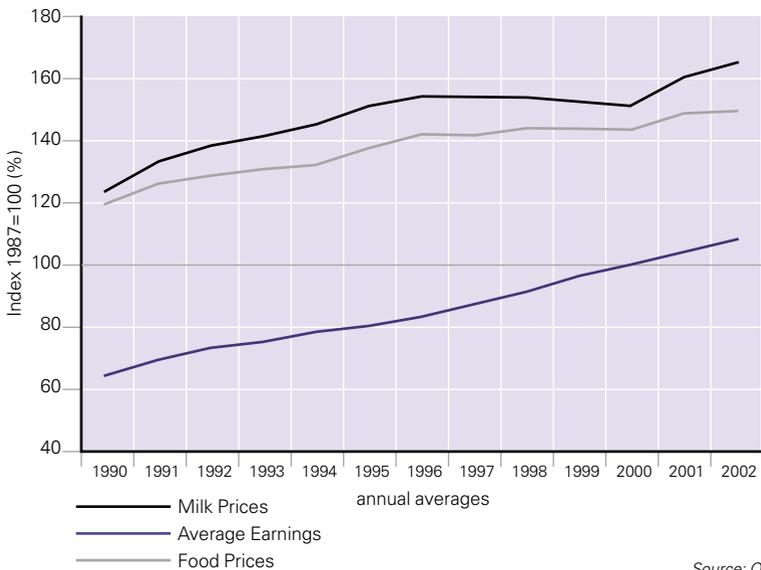
**Table 108: Retail price of milk comparison of annual index against other indices**

Calendar Year	Milk Prices	Average Earnings <sup>a</sup>	Retail prices	Food Prices
	index (January 1987 = 100)			
1990	123	64	126	119
1991	133	69	134	126
1992	138	73	139	128
1993	141	75	141	131
1994	145	78	144	132
1995	151	80	149	137
1996	154	83	153	141
1997	153	87	158	142
1998	154	91	163	143
1999	152	96	165	144
2000	151	100	170	143
2001	160	104	173	148
2002	165	108	176	149

<sup>a</sup> The base year is 2000 = 100 for average earnings.

Source: ONS

**Chart 13: Retail price indices 1990-2002, 1987=100, milk, food and average earnings**



Source: ONS

**Table 109: Retail price of dairy products  
annual averages for Great Britain**

Calendar Year	Butter		Cheese		Retail Food
	price <i>a</i>	index <i>b</i>	price <i>c</i>	index <i>b</i>	index <i>b</i>
1990	62.0	121.6	330.0	119.3	119.4
1991	62.0	121.1	343.0	121.4	125.6
1992	65.0	126.5	383.0	132.5	128.3
1993	68.0	135.5	411.0	143.0	130.6
1994	68.0	135.3	422.0	144.3	131.9
1995	78.0	152.7	455.0	154.2	137.0
1996	82.0	165.7	458.0	163.1	141.4
1997	83.0	166.4	525.0	167.6	141.5
1998	85.0	169.1	500.0	161.4	143.4
1999	84.0	167.0	484.0	158.9	143.8
2000	82.0	166.6	505.0	156.9	143.4
2001	79.0	164.9	510.0	163.2	148.1
2002	77.0	165.1	524.0	165.1	149.2

*a* Pence per 250g.

*b* 1987 = 100

*c* Pence per kilogram.

Source: ONS

Table 110: Retail price of non-dairy products, indices of annual averages for Great Britain

Calendar Year	Eggs	Fish <sup>a</sup>	Sugar & Preserves	Potatoes <sup>b</sup>	Bread <sup>c</sup>	Tea	Coffee & other hot drinks
1990	115.8	129.5	127.0	112.9	121.0	131.6	91.0
1991	111.4	139.9	137.5	117.4	130.4	148.0	90.6
1992	115.4	143.1	137.5	111.3	134.8	151.2	91.1
1993	121.7	133.0	146.3	108.4	138.6	149.0	91.1
1994	128.6	129.3	142.0	146.3	135.9	147.0	105.8
1995	133.7	125.1	149.3	190.8	136.2	144.9	123.7
1996	148.8	125.3	157.3	150.5	138.7	150.1	120.7
1997	147.1	127.2	155.6	104.7	136.8	151.0	128.1
1998	145.7	136.6	148.7	139.5	135.2	168.1	129.3
1999	150.9	151.2	140.5	144.2	135.2	166.7	122.5
2000	152.7	161.1	133.1	132.3	136.5	155.8	116.9
2001	152.5	163.6	134.1	164.8	139.5	158.9	115.6
2002	148.5	165.7	137.8	144.1	142.8	163.7	115.3

<sup>a</sup> White, filleted fresh.

<sup>b</sup> Unprocessed potatoes.

<sup>c</sup> White, sliced, standard loaves.

Source: ONS

**Table 111: Average household expenditure 2001-02 <sup>a</sup>  
dairy products, Great Britain**

Product	Average weekly expenditure		% of food expenditure <sup>b</sup>
	£ per household	pence per person	
Whole milk	0.7	28.7	1.63
Low fat milk	1.3	54.1	3.08
Preserved milk	0.1	5.1	0.29
Yogurt	0.7	27.0	1.54
Cheese and Curd	1.4	57.4	3.27
Butter	0.3	10.1	0.58
Other Milk Products	1.4	30.4	3.37
<b>Dairy Products</b>	<b>5.9</b>	<b>212.8</b> <b>£2.13</b>	<b>13.76</b>
<b>Food and non- alcoholic drinks</b>	<b>42.7</b>	<b>1,756.8</b>	<b>100.00</b>

<sup>a</sup> Data are taken from a new survey which replaces the National Food Survey.  
Results are based on a sample of households in the UK and are not directly comparable with previous results from the discontinued National Food Survey.

<sup>b</sup> Food and Non-alcoholic drinks.

Source: NFS

**Table 112: Average household expenditure 2002-03 <sup>a</sup>  
a selection of non-dairy foods, United Kingdom**

Product	Average weekly expenditure		% of food expenditure <sup>b</sup>
	£ per household	pence per person	
Beef	1.40	55.7	3.17
Pork	0.60	23.6	1.35
Lamb	0.60	23.6	1.35
Poultry	1.50	60.8	3.46
Bacon and Ham	0.90	35.5	2.02
Other meats <sup>c</sup>	4.80	197.6	11.25
Fish and fish products	1.80	74.3	4.23
Eggs	0.40	16.9	0.96
Margarine <sup>d</sup>	0.40	16.9	0.96
Sugar and sugar products	0.30	11.8	0.67
Fresh Vegetables	3.00	125.0	7.12
Processed Vegetables	1.00	42.2	2.40
Potatoes	0.70	30.4	1.73
Other tubers and products of tuber vegetables	1.20	47.3	2.69
Fresh fruit	2.40	99.6	5.67
Bread	2.00	81.0	4.62
Buns, cakes and biscuits	2.80	114.9	6.54
Cereals	1.70	67.6	3.85
Tea	0.50	18.6	1.06
Coffee	0.50	20.2	1.15
Soft drinks	1.50	59.1	3.37
Fruit and vegetable juices	1.00	38.9	2.21
Chocolate	1.20	50.7	2.88
Confectionery products	0.60	23.6	1.35
<b>Total of Selected Foods</b>	<b>32.80</b>	<b>1,335.8</b> £13.36	<b>76.06</b>
<b>Foods and non-alcoholic drinks</b>	<b>42.70</b>	<b>1,756.8</b> £17.57	<b>100.00</b>

<sup>a</sup> Data taken from the survey which replaces the National Food Survey. Results are based on a sample of households in the UK and are directly comparable with previous results from the discontinued National Food Survey.

<sup>b</sup> Food and non-alcoholic drinks.

<sup>c</sup> Including meat preparations.

<sup>d</sup> Including other vegetable fats.

Source: Expenditure & Food Survey, ONS

## Nutrition

### 1. Nutritional value of milk and dairy products

Although no food is a complete diet in itself (except breast milk for the first few months of life), cows' milk contains nearly all the constituents of nutritional importance to humans. In a mixed diet, milk is particularly valuable for its high quality protein and easily assimilated calcium and as a rich source of riboflavin and vitamin B12. The functions of some of the nutrients found in milk are shown below:

- Carbohydrate for energy
- Magnesium for muscle function
- Potassium for nerve function
- Protein for growth and repair
- Riboflavin for healthy skin
- Vitamin A for eyesight
- Vitamin B12 for red blood cells
- Zinc for the immune system

### Proteins

The proteins in milk can be classified as either casein or whey proteins. In terms of quantity, casein proteins predominate, with whey proteins contributing only 18% of the total protein in milk. Whey proteins which are soluble, whereas casein is suspended in milk in the form of minute particles, giving milk its opaque whiteness. Among the whey proteins are beta-lactoglobulin, alpha-lactalbumin, immunoglobulin and albumin. New research is now focusing on health-promoting effects of milk proteins and smaller biologically active protein fragments or peptides (termed bioactive peptides). Possible health-promoting effects of these bioactive peptides include the enhancement of nutrient absorption, anti-carcinogenic activity, and defence against pathogens. Considerable work is still required to clearly demonstrate the benefits of bioactive peptides and proteins for human health.

### Carbohydrate

Carbohydrate is also present in milk in the form of lactose, or milk sugar; this accounts for about 4.6% of the total weight of milk (i.e. 4.6g/100g). Compared with table sugar (sucrose), lactose is less carcinogenic (decay causing) and relatively free from sweetness. Tooth decay occurs when bacteria present on the tooth surface feed on sugars in the mouth. The acid produced as a by-product of this bacterial action attacks the enamel on teeth, eventually causing tooth decay. It is thought that the protein in milk helps buffer any acids produced by bacterial digestion of lactose at the tooth surface. In addition, milk provides calcium and other minerals needed to repair the effects of the early stages of acid attack (remineralisation of enamel). For these reasons milk is one of only two drinks recommended as safe for teeth by dentists, the other safe drink is water.

### Lactose intolerance

Lactose cannot be absorbed intact, it needs to be broken down to its constituent sugars glucose and galactose, a function carried out by the enzyme lactase in the intestine. Individuals with low levels of the enzyme (typically non-Caucasians) are said to be lactose intolerant or lactose maldigesters. It is rare for lactase to be totally absent from the intestine. Research has shown that most people with lactose maldigestion can consume moderate amounts of milk and dairy products without experiencing adverse effects if, for example, milk is consumed with a meal. Despite reports in the popular press, lactose maldigestion is not particularly common in white British Caucasians, studies indicate that it affects 1-2% of the population to some degree. It is, however, more common in people from other continents e.g. Africa and India, as these populations tend to develop low levels of lactase shortly after early childhood. This is a genetic phenomenon, scientists speculate that these individuals no longer possess the enzyme lactase because prevailing climatic conditions have not been conducive to dairy farming.

### Fat

Many people perceive milk to be a high fat food, consumer research indicates that many people believe the fat content lies between 20% and 50%. In reality whole milk is only 4% fat (i.e. it contains 3.9g fat per 100g). [Table 127](#) compares the fat content of milk and dairy foods with food sources of fat. Semi skimmed milk contains approximately half the fat of whole milk (1.7g per 100g or 1.7% fat) and skimmed milk with 0.3g per 100g (0.3%) has the lowest fat content. About one third of the fat found in milk is classified as monounsaturated (olive oil consists mainly of monounsaturated fat). Milk also provides small amounts of essential fatty acids linoleic acid and alpha-linolenic acid. The remainder of the fat comprises saturated. One of the minor components of milk fat is known as conjugated linoleic acid (CLA). There is now considerable interest in this constituent of milk because it has been shown to have many health-promoting effects, for example anti-carcinogenic, anti-diabetogenic, antimutagenic and antiatherogenic activities have been demonstrated in experimental animals. Human studies in the area of CLA and health are not as numerous as animal studies, however many are currently in progress.

### Vitamins and Minerals

Vitamins and minerals are substances that are required by the body in small amounts and are essential to life. Milk is rich source of a range of vitamins and minerals including calcium, phosphorus, magnesium, zinc potassium, riboflavin, vitamin B12 and vitamin A. The fat soluble vitamins A and D are contained in the cream fraction of milk, they are therefore present in higher concentrations in milks with the highest fat levels. Skimmed milk contains only traces of these fat soluble vitamins. Conversely, the other constituents of milk (the protein, carbohydrate, minerals and water-soluble vitamins) are present in slightly higher quantities in the skimmed and semi-skimmed milks.

Virtually all the milk consumed in Britain has been pasteurised. Even though the heat treatment associated with pasteurisation does cause a slight reduction in

vitamin content of milk (about 10% of thiamin and vitamin B12 and about 25% of vitamin C is lost) these losses are of little consequence in a varied diet. Riboflavin and vitamin C content of milk is affected by sunlight and for this reason milk should not be left on the doorstep longer than necessary.

## 2. Milk's Contribution to the Diet

The average consumption of milk in the home in Britain in 2000 was 258ml per person per day (the equivalent of one large glass). This provides approximately 8% of an average male's and 10% of an average female's daily energy requirement (based on the consumption of whole milk), and 45% of adult daily calcium requirements. One pint of milk contains all the calcium needed to meet the daily calcium requirements of adults and younger children. Teenagers have higher requirements because large amounts of bone are laid down during this period of life.

## 3. Other Nutritional Benefits

Milk and other dairy products, such as cheese and yogurt are a rich source of calcium. The same amount of calcium is absorbed from one 200ml glass of milk as from over four servings of broccoli or more than twelve servings of spinach. Calcium vital for the structural integrity of the skeleton and of the teeth (99% of the calcium in our bodies is contained in our bones and teeth). There is considerable evidence to indicate that the achievement of peak bone density at the end of the growth period is greatly assisted by consumption of a diet that provides adequate amounts of calcium, together with regular physical activity throughout childhood. Calcium is also required for regulating various metabolic processes such as contraction and relaxation of muscles (especially the heart muscle), blood clotting and transmission of impulses in nerve cells. In addition, ongoing research indicates that calcium (especially when consumed from dairy products) may play an important role in weight loss by influencing the partitioning of dietary energy in the body, may have a strong protective effect on the recurrence of colon cancer and can effectively lower blood pressure as part of an overall dietary approach to hypertension called the DASH diet.

**Table 113: Consumption of food nutrients  
contribution from dairy products, Great Britain**

2000	Energy Value <sup>a</sup>	Protein	Calcium	Vitamin A <sup>b</sup>
	% of total consumption			
Liquid whole milk	3.72	4.94	13.41	4.11
Liquid skimmed milk	4.35	8.82	23.40	4.35
Condensed milk	0.11	0.14	0.38	0.17
Infant milk	0.25	0.19	0.56	1.00
Dried milk	0.03	0.06	0.20	0.07
Yogurt/fromage frais	1.04	1.39	3.51	0.55
Other milk and cream	0.97	0.60	1.12	2.04
Cheese	3.29	5.36	11.26	6.78
Butter	2.37	0.05	0.12	7.08
<b>Total Dairy Products</b>	<b>16.13</b>	<b>21.55</b>	<b>53.96</b>	<b>26.15</b>
Other Foods	83.87	78.45	46.04	73.85
<b>Total All Foods</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

<sup>a</sup> Excludes confectionery and soft and alcoholic drinks.  
<sup>b</sup> Retinol equivalent.  
 No data available from 2001 due to the abolition of the National Food Survey.

Source: NFS

Table 114a: Nutritional composition of dairy products, per 100g of product

Product	Energy kcal	Protein	Lactose (milk sugar)	Fat			Vitamin A µg	Thiamin	Riboflavin	Calcium	Zinc
				Total fat	saturates	mono- unsaturates					
				grams					milligrams		
Whole milk	66	3.3	4.6	3.9	2.5	1.0	30	0.03	0.23	118	0.4
Semi-skimmed milk	46	3.5	4.7	1.7	1.1	0.4	19	0.03	0.24	120	0.4
Skimmed milk	34	3.5	4.8	0.3	0.1	0.1	1	0.03	0.22	125	0.5
Cheddar cheese	416	25.4	0.1	34.9	21.7	9.4	1.1	0.03	0.39	739	4.1
Blue Stilton	410	23.7	0.1	35.0	23.0	9.2	1.2	0.03	0.47	326	2.9
Cottage cheese	101	12.6	3.1	4.3	2.3	1.2	0.2	0.05	-0.24	127	0.6
Fromage Frais <sup>a</sup>	50	6.8	4.9	0.2	0.1	0.1	trace (3)	(0.03)	(0.37)	(87)	(0.3)
Butter	744	0.6	0.6	82.2	52.1	20.9	2.8	958	trace	-0.07	18
Single cream (19% fat)	193	3.3	2.2	19.1	12.2	5.1	0.6	291	0.03	0.19	89
Whipping cream (39% fat)	381	2.0	2.7	40.3	25.2	11.7	1.1	399	0.02	0.17	58
Double cream (48% fat)	496	1.6	1.7	53.7	33.4	13.8	1.9	779	0.02	0.19	49

Figures in brackets are estimated.

<sup>a</sup> Very low fat.

Source: McCance and Widdowson, *The Composition of Foods*, 4th supplement to 4th edition and 5th edition (1991),  
The Royal Society of Chemistry and DEFRA

Table 114b: Nutritional composition of dairy products, per 100g of product

Product	Energy kcal	Protein	Lactose (milk sugar)	Fat			Vitamin A µg	Thiamin	Riboflavin	Calcium	Zinc
				Total fat	saturates	mono- unsaturates					
				grams			milligrams				
Yogurt (low fat, plain)	56	4.8	4.4	1.0	0.7	0.2	8	0.12	0.22	162	0.6
Yogurt (whole milk, fruit)	109	4.0	16.6	3.0	2.0	0.7	36	0.12	0.16	122	0.4
Dried skimmed milk	348	36.1	52.9	0.6	0.4	0.2	350 <sup>b</sup>	0.38	1.63	1,280	4.0
Dried skimmed milk with vegetable fat	487	23.3	42.6	25.9	16.8	7.3	395	0.23	1.20	840	0.6
Evaporated milk (whole milk)	151	8.4	8.5	9.4	5.9	2.7	105	0.07	0.42	290	0.9
Sweetened condensed milk (whole milk)	333	8.5	55.5	10.1	6.3	2.9	110	0.09	0.46	290	1.0

Figures in brackets are estimated.

a Very low fat.

b Will reduce if exposed to sunlight.

Source: McCance and Widdowson, *The Composition of Foods*, 4th supplement to 4th edition and 5th edition (1997),  
The Royal Society of Chemistry and DEFRA

**Table 115: Nutritional composition of milk per litre of pasteurised milk**

Nutrient		Whole	Semi-skimmed	Skimmed
Energy	kcal	680.0	470.0	350.0
	KJ	2,820.0	2,010.0	1,480.0
Protein	g	34.0	36.0	36.0
Carbohydrate (lactose)	g	47.0	48.0	49.0
Total Fat	g	40.0	18.0	3.0
of which: saturates	g	26.0	11.0	1.0
monounsaturates	g	10.0	4.0	1.0
polyunsaturates	g	1.0	trace	trace
Vitamin A	µg	310.0	200.0	10.0
Vitamin D	µg	trace	trace	trace
Vitamin C	mg	20.0	20.0	10.0
Thiamin (B1)	mg	0.3	0.3	0.3
Riboflavin (B2)	mg	2.4	2.5	2.3
Niacin equivalent	mg	2.0	1.0	1.0
Vitamin B6	mg	0.6	0.6	0.6
Vitamin B12	µg	9.0	9.0	8.0
Calcium	mg	1,220.0	1,240.0	1,290.0
Phosphorus	mg	960.0	970.0	990.0
Iron	mg	0.3	0.2	0.3
Magnesium	mg	110.0	110.0	110.0
Zinc	mg	4.0	4.0	5.0

*All figures are typical values: natural variations may occur throughout the year.*

*Source: McCance and Widdowson, 'The Composition of Foods', 4th supplement to 4th edition and 5th edition (1991), The Royal Society of Chemistry and DEFRA*

**Table 116: Fat content of various foods compared with a glass of milk**

	Average Portion	Grams of fat per portion
Whole milk	Average Glass (200ml)	8.0
Semi-skimmed milk	Average Glass (200ml)	3.3
Skimmed milk	Average Glass (200ml)	0.2
Grilled pork sausages	2 sausages (120g)	26.5
Mayonnaise	1 tablespoon (33g)	24.9
Potato chips (frozen, fried)	18 chips (180g)	24.3
Cod fried in batter	1 piece (180g)	18.5
Roast chicken with skin	3 slices (120g)	15.0
Peanut butter	1 tablespoon (30g)	16.1
Fruit pie	1 slice (120g)	16.0
Milk chocolate	Small bar (50g)	15.4
Fruit cake	1 slice (90g)	11.6
Potato crisps	1 bag (28g)	9.6
Digestive biscuits	2 biscuits (34g)	7.1
Butter or margarine	1 pat (7g)	5.7
Whole milk yogurt (natural)	1 pot (150g)	4.5
Low fat yogurt (fruit)	1 pot (150g)	1.1

*Source: McCance and Widdowson, The Composition of Foods, 4th supplement to 4th edition and 5th edition (1991), The Royal Society of Chemistry and DEFRA*

**Table 117: Calcium content of various foods compared with a glass of milk**

	Average Portion	mg of calcium per portion <i>a</i>
Whole milk	Average Glass (200ml)	243
Semi-skimmed milk	Average Glass (200ml)	248
Skimmed milk	Average Glass (200ml)	259
Low fat yogurt (fruit)	1 pot (150g)	210
Cheddar cheese	1 portion (30g)	222
Cottage cheese	Small pot (112g)	142
Dairy ice cream, vanilla	2 scoops (120g)	120
Canned sardines with bones <i>b</i>	2 fish (50g)	215
Peeled prawns	1 portion (60g)	66
Cooked broccoli	1 portion (85g)	34
Baked beans	Small can (150g)	80
Orange	1, medium size (160g)	75
Sesame seeds	1 tablespoon	80
White bread	2 large slices (72g)	127
Brown bread	2 large slices (72g)	72
Wholemeal bread	2 large slices (72g)	76
Unsalted peanuts	1 bag (50g)	30

*a* Note these values do not take into account calcium bioavailability.

*b* In tomato sauce.

Source: McCance and Widdowson, *The Composition of Foods*, 5th edition (1991) and 4th, 5th and 6th supplements, *The Royal Society of Chemistry and DEFRA*

## Promotion of Dairy Products

### 1. The Dairy Council

The Dairy Council has been actively promoting the positive image of milk and dairy products to the consumer since 1920. But it was in 1994, with the demise of the Milk Marketing Scheme in England and Wales (and subsequently, 1995 in Northern Ireland) that the Dairy Council in London and the Dairy Council for Northern Ireland became the only two UK organisations to receive funding dedicated to this generic promotion.

Funding for today's Dairy Council is split equally between farming producers, via the Milk Development Council (MDC), and milk processors and manufacturers, via the Dairy Industry Association Limited (DIAL). The Dairy Council's board is made up of key representatives from all sides of the dairy business whose common interest is to ensure that The Dairy Council continues effectively to promote the benefits of milk and dairy products to consumers and health professionals.

The Dairy Council's core activities are divided into two areas - Communications and Nutrition.

The Nutrition team keeps health professionals and consumers informed about the health benefits of consuming milk and dairy products, through a range of booklets and posters. All of the Dairy Council's publications outline the importance of including milk and dairy products in a healthy balanced diet. Because of this, and the fact that many of the Council's publications are endorsed by respective agencies, many health professionals are keen to distribute the literature to patients and clients. The Dairy Council's qualified nutritionists regularly publish reviews on research papers, respond to government consultation documents and keep health professionals abreast of emerging issues or new research papers through regular contact and e-mail alerts.

The Dairy Council also manages a Nutrition Database, which is a computer archive of more than 50,000 papers on nutrition and health, taken from some 300 international journals on a weekly basis. This important service, which allows subscribers to access new research immediately, is a fast and effective way of identifying opportunities to promote dairy products as well as highlighting negative issues that could damage consumer confidence in food. To make it easier for subscribers to assess the importance of certain research papers, several expert consultants are employed to independently review papers on a monthly basis.

Plans are underway to improve the Nutrition Database so that subscribers can also access current press releases on new research papers, Positive Statements, Question and Answer documents and background information on a variety of interesting issues. With this ability to quickly access research from all over the world, it is easy to understand why The Dairy Council is responsible for handling issues on behalf of the UK dairy industry.

The Dairy Council works both proactively and reactively for the whole industry to dispel any negative publicity about milk and dairy products. It achieves this by

providing the media (and therefore consumers) with fast and accurate information or statements and access to experts from within the dairy sector.

The Dairy Council is the industry's official spokesperson and presents a united front in times of adversity or crisis. At the same time, the council offers the industry sound advice on how to handle media issues. Through its Issues Working Party, which is made up of experts from within the industry, The Dairy Council is able to forecast future issues that may affect the industry and implement an agreed strategy to handle them.

On a day to day basis, the communications team at The Dairy Council handles press enquiries, issues press releases promoting dairy products and monitors all the media to ensure coverage is accurate.

## **2. The Dairy Council for Northern Ireland**

The Dairy Council for Northern Ireland is also funded by voluntary and equal contributions from both the body of producers and dairy companies. Its role is to promote the image and the products of the industry within Northern Ireland. Its activities currently include: advertising and promotional support for the home milk delivery service; nutrition communications to school health professionals and the general public; the provision of a range of education material for schools and health professionals; cookery demonstrations for schools and appropriate adult groups; encouragement of milk consumption in schools; sponsorship of the Milk Cup, an international youth soccer tournament; the provision of milk bars at agricultural shows and other appropriate events; and, a crisis management facility on behalf of the industry.

## Marketing Promotion of Dairy Products

**Table 118a: Advertising expenditure in the United Kingdom <sup>a</sup>  
milk, dairy products and milk substitute products**

April - March	2000-01	2001-02	2002-03	Yr on yr % change	
	£ thousand			2001-02 on 2000-01	2002-03 on 2001-02
<b>Milk <sup>b</sup></b>					
Cows' milk: generic	5,152	2,814	156	-46	-95
Cows' milk: non-generic	3,317	1,366	2,564	-45	88
Cows' milk: substitutes	1,525	1,089	3,325	-29	205
<b>Total Milk</b>	<b>9,994</b>	<b>5,269</b>	<b>6,045</b>	<b>-42</b>	<b>15</b>
<b>Top 3 Brands (03)</b>					
Alpro	-	-	1,693	-	-
Arla - Cravendale	-	-	1,634	-	-
Nestle - Nesquik	-	-	1,448	-	-
<b>Yellow Fats</b>					
Butter	7,709	6,933	7,973	-10	15
Margarine and low fat	21,862	19,005	16,543	-21	-13
<b>Total Yellow Fats</b>	<b>29,571</b>	<b>25,938</b>	<b>24,516</b>	<b>-12</b>	<b>-5</b>
<b>Top 3 Butter Brands (03)</b>					
Lurpack	-	-	3,978	-	-
Anchor	-	-	3,123	-	-
Kerrygold	-	-	419	-	-
<b>Cream</b>					
Dairy Cream	31	93	347	200	273
Cream substitutes	968	397	99	-59	-75
<b>Total Cream</b>	<b>999</b>	<b>490</b>	<b>447</b>	<b>-51</b>	<b>-9</b>
<b>Top 3 Brands (03)</b>					
Anchor - Squirty Cream	-	-	314	-	-
Nestle - Coffee Mate	-	-	98	-	-
Dale Farm	-	-	24	-	-

*a Total Press, Cinema, Radio, Outdoor, TV, Direct Mail and Internet expenditure  
(does not take account of bulk or other discounts).*

*b Includes flavoured milks.*

Source: A C Nielsen

**Table 118b: Advertising expenditure in the United Kingdom <sup>a</sup>  
milk, dairy products and milk substitute products**

April - March	2000-01	2001-02	2002-03	Yr on yr % change	
	£ thousand			2001-02 on 2000-01	2002-03 on 2001-02
<b>Cheese</b>	15,502	12,237	15,862	-21	30
<b>Top 3 Brands (03)</b>					
Kraft - Dairy/lea	-	-	3,406	-	-
Kraft - Philadelphia	-	-	2,926	-	-
Golder Vale - Cheestrings	-	-	1,968	-	-
<b>Yogurt &amp; fromage frais</b>					
Yogurt & fromage frais	28,396	22,867	19,303	-20	-16
Yogurt substitutes	2,781	1,412	842	-49	-40
<b>Total Yogurt &amp; fromage frais</b>	<b>31,177</b>	<b>24,279</b>	<b>20,144</b>	<b>-22</b>	<b>-17</b>
<b>Top 3 Brands (03)</b>					
Muller	-	-	11,920	-	-
Danone (Shape/Bio-Active)	-	-	3,110	-	-
Yoplait	-	-	1,689	-	-
<b>Total dairy and dairy substitute products</b>	<b>87,243</b>	<b>68,213</b>	<b>67,014</b>	<b>-22</b>	<b>-2</b>
of which:					
Dairy products	60,107	46,310	46,205	-22	nc
Dairy substitutes	27,136	21,903	20,809	-22	-5
% dairy share	68.9	67.9	68.9		

<sup>a</sup> Total Press, Cinema, Radio, Outdoor, TV, Direct Mail and Internet expenditure  
(does not take account of bulk or other discounts).

<sup>b</sup> Includes flavoured milks.

Source: A C Nielsen

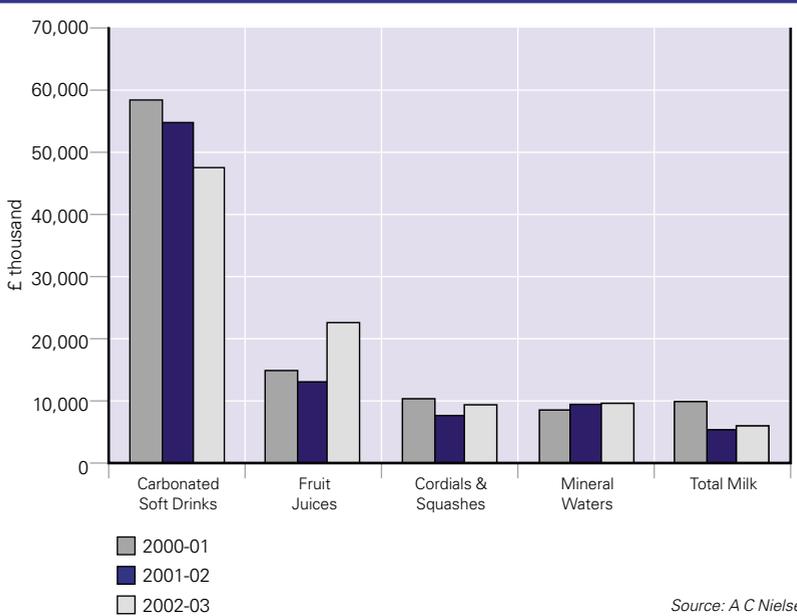
**Table 119: Advertising expenditure in the United Kingdom <sup>a</sup>  
Various non-dairy products**

April - March	2000-01	2001-02	2002-03	Yr on yr % change	
	£ thousand			2001-02 on 2000-01	2002-03 on 2001-02
<b>Cordials and squashes</b>	<b>10,626</b>	<b>7,838</b>	<b>9,548</b>	<b>-26</b>	<b>22</b>
<b>Top 3 Brands (03)</b>					
Ribena	-	-	5,478	-	-
Robinsons	-	-	1,470	-	-
Vimto	-	-	1,386	-	-
<b>Carbonated soft drinks</b>	<b>58,686</b>	<b>55,000</b>	<b>47,684</b>	<b>-6</b>	<b>-13</b>
<b>Top 3 Brands (03)</b>					
Coca Cola	-	-	24,238	-	-
Fanta	-	-	4,471	-	-
Tango	-	-	3,524	-	-
<b>Mineral waters</b>	<b>8,450</b>	<b>9,597</b>	<b>9,704</b>	<b>14</b>	<b>1</b>
<b>Top 3 Brands (03)</b>					
Volvic	-	-	3,042	-	-
Evian	-	-	2,395	-	-
Danone - Activ Still Water	-	-	1,085	-	-
<b>Fruit juices <sup>b</sup></b>	<b>15,004</b>	<b>13,111</b>	<b>22,616</b>	<b>-13</b>	<b>73</b>
<b>Top 3 Brands (03)</b>					
Sunny Delight	-	-	7,491	-	-
Tropicana	-	-	2,449	-	-
Britvic - J20	-	-	2,282	-	-
<b>Cereals</b>	<b>69,563</b>	<b>73,378</b>	<b>65,598</b>	<b>6</b>	<b>-11</b>

<sup>a</sup> Total Press, Cinema, Radio, Outdoor, TV, Direct Mail and Internet expenditure (does not take account of bulk or other discounts).  
<sup>b</sup> Includes fruit juice based drinks.

Source: A C Nielsen

**Chart 14: Advertising expenditure in the United Kingdom, milk compared with various other drinks products 2000-01 to 2002-03**





# European Union

## European Union

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# European Union

## General

This section aims to provide readers with basic economic and agricultural facts on each European Union country, along with a range of key dairy industry statistics including cow numbers, milk output, quotas, producer prices, production of dairy products and imports and exports of various dairy products by individual Member States.

Information has been gathered wherever possible from officially recognised national sources of the country in question, or from Eurostat (the Statistical Office of the European Union responsible for collating statistics from Member States), or the European Commission.

Unless otherwise stated, figures for Germany include the former East Germany.

Table 120: Land area, population and employment, 2002, European Union by country

Country	Total area		Utilised agricultural area		Total	Population		Year on year % change in total population	Employment in agriculture <sup>a</sup>	
	thousand hectares	thousand hectares	As % of total area	thousand inhabitants		Civilian Labour Force	thousand persons		percent of total labour force	
										thousand hectares
Germany	35,703	16,971	48%	82,440	36,275	902	+0.4	2.5		
France	54,909	29,622	54%	59,344	23,885	987	+0.5	4.1		
Italy	30,132	15,341	51%	56,994	21,758	1,072	-1.5	4.9		
Netherlands	3,552	1,933	54%	16,105	8,176	218	+0.2	2.9		
Belgium	3,051	1,393	46%	10,310	4,052	73	+0.5	1.8		
Luxembourg	259	127	49%	444	188	4	+0.7	2.0		
United Kingdom	24,410	15,722	64%	58,922	28,338	391	-1.6	1.4		
Irish Republic	7,030	4,372	62%	3,883	1,750	121	+1.5	6.9		
Denmark	4,310	2,690	62%	5,368	2,740	88	+0.3	3.2		
Greece	13,196	3,917	30%	10,988	3,949	624	+4.1	15.8		
Spain	50,489	25,554	51%	40,409	16,241	964	+0.3	5.9		
Portugal	9,190	3,813	41%	10,336	5,133	640	+0.7	12.5		
Austria	8,386	3,387	40%	8,139	3,735	212	+0.2	5.7		
Finland	33,815	2,216	7%	5,195	2,406	133	+0.3	5.5		
Sweden	49,997	3,039	6%	8,909	4,348	110	+0.2	2.5		
<b>EU Fifteen</b>	<b>323,430</b>	<b>130,809</b>	<b>40%</b>	<b>377,787</b>	<b>162,974</b>	<b>6,537</b>	<b>+0.0</b>	<b>4.0</b>		

<sup>a</sup> Agriculture includes the forestry, hunting and fishing sectors.

Source: Eurostat, European Commission

Table 121: Unemployment, GDP, inflation, consumer food expenditure, 2002, European Union by country

Country	Unemployment Rate	GDP	Share of agriculture in the GDP	Inflation	Trend in food prices	Household food expenditure as % of total consumer household expenditure <sup>a/b</sup>
	% of civilian working population	inhabitant purchasing power standard	%	% change on previous year	% change on previous year	%
Germany	8.6	24,650	0.8	1.6	+ 1.3	17.4
France	8.8	24,660	2.1	1.8	+ 2.0	14.3
Italy	9.0	24,570	2.3	2.8	+ 2.6	16.9
Netherlands	2.7	27,050	2.0	3.4	+ 3.9	14.3
Belgium	7.7	25,880	1.0	1.7	+ 1.6	16.3
Luxembourg	2.8	45,490	0.6	0.6	+ 2.1	19.7
United Kingdom	5.1	25,000	0.7	3.2	+ 1.3	13.8
Irish Republic	4.4	30,140	2.0	5.4	+ 4.7	16.5
Denmark	4.6	27,480	1.8	0.9	+ 2.4	17.4
Greece	10.0	15,840	6.5	4.0	+ 3.9	20.6
Spain	11.3	20,280	3.4	4.4	+ 3.6	18.8
Portugal	5.1	16,470	2.5	4.6	+ 3.7	22.7
Austria	4.3	26,930	1.2	1.4	+ 1.7	15.5
Finland	9.1	24,800	1.2	1.1	+ 2.0	18.7
Sweden	4.9	24,540	0.6	1.4	+ 2.0	17.3
<b>EU Fifteen</b>	<b>7.7</b>	<b>24,060</b>	<b>1.6</b>	<b>2.1</b>	<b>+ 2.1</b>	<b>16.2</b>

<sup>a</sup> Food includes beverages and tobacco.

<sup>b</sup> 2001

Source: Eurostat, European Commission

Table 122: Shares of individual products in final agricultural production, 2002, European Union by country

Country	Cereals <sup>a</sup>	Fresh fruit & vegetables	% of total agricultural production in each country <sup>c</sup>							Other livestock <sup>b</sup>	Other Products	Value in Euros million
			Milk	Eggs/poultry	Cattle	Cattle	Other livestock <sup>b</sup>	Other Products	Value in Euros million			
Germany	14.2	4.7	21.0	4.8	7.1	15.3	32.9	44,369				
France	11.3	9.6	12.4	6.4	11.7	7.0	41.6	63,550				
Italy	5.6	22.3	10.1	6.4	8.1	7.3	40.2	42,630				
Netherlands	0.9	11.6	18.5	5.5	4.8	13.0	45.7	20,650				
Belgium	4.2	15.3	12.6	5.8	12.6	21.8	27.7	7,317				
Luxembourg	7.2	1.7	34.8	2.3	21.1	7.6	25.3	257				
United Kingdom	13.9	9.4	18.9	11.9	15.0	10.0	20.9	23,229				
Irish Republic	5.0	3.7	26.4	3.1	29.8	12.1	19.9	5,879				
Denmark	18.2	1.6	16.7	3.2	4.1	31.4	24.8	9,093				
Greece	5.9	30.0	8.5	3.0	2.5	9.8	40.3	11,185				
Spain	6.6	28.0	7.0	6.5	5.9	18.7	27.3	34,705				
Portugal	1.8	26.5	12.0	9.4	5.7	12.4	32.2	5,944				
Austria	9.0	7.7	17.5	3.9	11.7	15.0	65.2	5,357				
Finland	16.9	5.1	27.9	3.4	7.6	7.3	31.8	3,842				
Sweden	18.3	3.9	23.9	4.6	10.4	9.0	29.9	4,401				
<b>EU Fifteen</b>	<b>9.5</b>	<b>13.8</b>	<b>14.5</b>	<b>6.1</b>	<b>9.1</b>	<b>12.2</b>	<b>34.8</b>	<b>282,408</b>				

<sup>a</sup> Wheat, rye, oats, barley and maize.

<sup>b</sup> Pigs, sheep and goats.

<sup>c</sup> Owing to rounding items do not always add to 100%.

Source: Eurostat, European Commission

Table 123: Cattle population, 2002<sup>a, b</sup>, European Union by country

Country	Total cattle and calves <sup>b</sup>		Heifers <sup>c</sup>		Cows <sup>c</sup>			% of dairy cows in total cow population
	thousands	Year on year % change (2002 on 2001)	For slaughtering	Others	Total	Dairy	Others	
Germany	13,732	-3.5	70	923	5,136	4,373	763	85.1
France	19,729	-2.7	337	1,909	8,223	4,128	4,095	50.2
Italy	6,695	-3.4	59	541	2,355	1,911	444	81.1
Netherlands	3,780	-1.6	14	112	1,628	1,546	82	95.0
Belgium	2,758	-5.2	49	272	1,093	591	502	54.1
Luxembourg	190	-4.0	2	18	73	42	31	57.6
United Kingdom	10,381	+2.1	127	579	3,923	2,230	1,694	56.8
Irish Republic	6,338	-1.1	121	290	2,280	1,129	1,151	49.5
Denmark	1,740	-5.4	6	109	726	613	113	84.4
Greece	573	+2.5	4	23	286	152	134	53.1
Spain	6,279	+0.1	22	281	3,126	1,154	1,971	36.9
Portugal	1,395	-0.6	5	52	700	341	359	48.7
Austria	2,067	-2.4	8	118	834	589	245	70.6
Finland	1,012	-0.7	2	22	372	343	29	92.3
Sweden	1,612	-0.3	9	82	562	403	158	71.8
<b>EU Fifteen</b>	<b>78,281</b>	<b>-1.8</b>	<b>834</b>	<b>5,331</b>	<b>31,316</b>	<b>19,545</b>	<b>11,771</b>	<b>62.4</b>

<sup>a</sup> December census. Data are provisional.

<sup>b</sup> Including buffaloes.

<sup>c</sup> Two years old and over.

Source: Eurostat

Table 124: Dairy cow numbers <sup>a</sup>, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002	Average Dairy herd size <sup>b</sup>
	thousands							
Germany	5,195	5,026	4,833	4,709	4,539	4,475	4,367	36
France	4,562	4,476	4,416	4,421	4,413	4,205	4,156	35
Italy	2,070	2,078	2,216	2,215	2,172	2,169	1,911	34
Netherlands	1,606	1,634	1,611	1,588	1,505	1,546	1,486	60
Belgium	649	641	649	637	629	611	591	38
Luxembourg	48	46	46	45	44	44	42	39
United Kingdom	2,511	2,498	2,475	2,438	2,339	2,203	2,229	97
Irish Republic	1,272	1,269	1,276	1,261	1,152	1,148	1,129	43
Denmark	697	695	680	681	644	628	613	76
Greece	184	184	172	154	180	172	165	17
Spain	1,283	1,254	1,301	1,201	1,176	1,173	1,107	25
Portugal	362	362	355	357	355	338	341	18
Austria	633	630	618	619	621	612	600	10
Finland	396	383	380	374	358	352	343	18
Sweden	478	462	471	447	426	425	403	39
<b>EU Fifteen</b>	<b>21,946</b>	<b>21,638</b>	<b>21,504</b>	<b>21,148</b>	<b>20,579</b>	<b>20,100</b>	<b>19,483</b>	<b>36</b>

<sup>a</sup> December census.<sup>b</sup> 2002

Source: Eurostat, National statistics

Table 125: Distribution of dairy herds by herd size, 2001, European Union by country

Country	Size Group (number of dairy cows)					Total number of dairy herds (thousands)
	1-9	10-29	30 - 49	50 - 99	100 and over	
	% of total dairy herds in each country					
Germany	18.2	42.4	21.2	14.4	3.0	132
France	9.9	33.1	38.0	18.2	0.8	121
Italy	-	-	-	-	-	-
Netherlands	12.9	16.1	22.6	41.9	6.5	31
Belgium/Luxembourg	10.5	36.8	31.6	21.1	-	19
United Kingdom	10.0	13.3	16.7	33.3	26.7	30
Irish Republic	9.7	32.3	32.3	22.6	3.2	31
Denmark	10.0	10.0	20.0	40.0	20.0	10
Greece	61.9	23.8	9.5	4.8	-	21
Spain	40.3	34.3	14.9	7.5	1.5	67
Portugal	62.5	25.0	8.3	4.2	-	24
Austria	66.2	32.4	1.4	-	-	74
Finland	20.8	58.3	8.3	-	-	24
Sweden	9.1	45.4	27.3	18.2	9.1	11
<b>EU Fifteen <sup>a</sup></b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>

<sup>a</sup> Unable to acquire estimate figures for the EU due to Italy not producing figures.

Source: Eurostat

Table 126: Distribution of dairy cows by herd size, 2001, European Union by country

Country	Size Group (number of dairy cows)						Total number of dairy cows (thousands)
	1-9	10 - 19	20 - 29	30 - 49	50 - 99	100 and over	
	% of total dairy herds in each country						
Germany	2.8	10.9	13.6	23.5	27.8	22.8	4,549
France	1.2	5.6	14.1	41.4	33.8	3.8	4,191
Italy <sup>a</sup>	9.3	12.0	11.2	16.7	23.5	27.3	2,126
Netherlands	0.9	1.9	4.1	17.9	55.2	19.8	1,606
Belgium/Luxembourg	1.5	6.7	13.8	33.5	38.1	6.4	669
United Kingdom	0.4	1.0	2.2	8.9	31.9	55.5	2,203
Irish Republic	1.2	5.7	11.5	34.4	37.2	9.9	1,148
Denmark	0.5	1.4	3.2	12.7	46.4	36.0	623
Greece	17.4	18.6	8.1	19.2	19.2	18.0	172
Spain	7.5	14.4	16.4	24.7	21.0	16.0	1,159
Portugal	11.2	13.3	17.2	21.6	20.7	16.0	338
Austria	32.1	42.6	16.1	7.4	1.7	0.2	598
Finland	8.5	39.5	30.4	16.8	4.3	0.5	352
Sweden	0.9	7.3	14.8	29.2	31.3	16.9	425
<b>EU Fifteen</b>	<b>4.6</b>	<b>10.4</b>	<b>13.4</b>	<b>24.9</b>	<b>28.5</b>	<b>18.3</b>	<b>21,087</b>

<sup>a</sup> Unable to acquire estimate figures for the EU due to Italy not producing figures.

Source: Eurostat

Table 127: Milk yields <sup>a</sup>, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002
	kg per cow						
Germany	5,522	5,616	5,744	5,935	6,110	6,238	6,305
France	5,378	5,453	5,530	5,571	5,600	5,774	6,022
Italy	4,852	5,082	5,240	4,998	4,912	4,973	5,334
Netherlands	6,636	6,742	6,777	6,986	7,213	7,191	7,043
Belgium	5,076	4,981	5,299	5,260	5,409	5,413	5,740
Luxembourg	5,534	5,660	5,770	5,840	5,991	6,158	6,286
United Kingdom	5,706	5,926	5,885	6,112	6,066	6,476	6,710
Irish Republic	4,258	4,223	4,086	4,119	4,362	4,733	4,649
Denmark	6,655	6,657	6,790	6,842	7,123	7,261	7,504
Greece	4,071	4,076	4,208	4,755	4,725	4,420	4,499
Spain	4,740	4,713	4,681	4,934	4,964	5,299	5,566
Portugal	4,917	5,011	5,160	5,730	5,787	5,723	6,205
Austria	4,653	4,774	4,877	5,064	5,215	5,353	5,432
Finland	6,095	6,330	6,416	6,567	6,900	7,129	7,287
Sweden	6,908	7,094	7,140	7,298	7,670	7,847	7,908
<b>EU Fifteen</b>	<b>5,433</b>	<b>5,529</b>	<b>5,597</b>	<b>5,706</b>	<b>5,800</b>	<b>5,968</b>	<b>6,136</b>

<sup>a</sup> Calculated using: cows milk production / ((December cow numbers in current year + previous year) / 2) + June cow numbers) / 2.

Source: Eurostat



Table 129: Milk quotas 2002-03, by member state

member state	Wholesale Quota				2002-03 Direct Sales Quota <i>b</i>	2002-03 Total Quota
	Provisional 2002-03 Quota <i>a</i>	SLOM	Converted from Direct Sales Quota			
			'000 tonnes			
Austria	2,599.1		15.4	2,614.5	134.9	2,749.4
Belgium	3,189.2		13.2	3,201.4	109.1	3,310.5
Denmark	4,454.7		0.1	4,454.8	0.6	4,455.4
Finland	2,398.3		0.1	2,398.4	8.6	2,407.0
France	23,844.3		9.5	23,853.8	382.0	24,235.8
Germany	27,769.2		0.1	27,769.3	95.5	27,864.8
Greece	699.6		0.1	699.7	0.8	700.5
Irish Republic	5,386.2		0.1	5,386.3	9.5	5,395.8
Italy	10,316.5		0.0	10,316.5	213.6	10,530.1
Luxembourg	268.6		0.0	268.6	0.5	269.1
Netherlands	11,001.3		-6.6	10,994.7	80.0	11,074.7
Portugal	1,863.2		-2.8	1,860.4	10.1	1,870.5
Spain	6,035.6		4.4	6,040.0	76.9	6,116.9
Sweden	3,300.0		0.0	3,300.0	3.0	3,303.0
United Kingdom	14,437.5		10.5	14,448.0	161.7	14,609.7
<b>EU Fifteen</b>	<b>117,562.3</b>		<b>44.1</b>	<b>117,606.4</b>	<b>1,286.6</b>	<b>118,893.0</b>

*a* Quota at start of 2002-3 quota year.

*b* Quota at end of 2002-3 quota year.

Source: OJ

Table 130: Milk delivered to dairies relative to quota - percentage difference<sup>a</sup>, European Union by country

Country	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
	% difference from quota							
Germany	0.1	1.4	1.1	0.7	0.6	0.9	0.5	-0.5
France	0.7	-0.1	-0.1	-0.4	-0.4	-0.7	-0.1	0.1
Italy	5.9	5.9	6.4	4.7	5.9	3.9	3.8	3.7
Netherlands	0.9	0.7	0.5	0.5	0.5	-0.8	0.5	0.2
Belgium	0.6	0.2	0.6	0.1	...	-0.5	0.2	0.4
Luxembourg	1.1	1.0	0.8	0.8	1.1	0.3	1.3	1.6
United Kingdom	1.0	0.4	0.8	0.1	0.4	-2.0	-0.8	-0.9
Irish Republic	1.0	0.6	0.7	-0.2	0.3	-0.3	0.2	0.8
Denmark	0.3	0.5	0.3	0.2	0.4	0.4	0.1	0.5
Greece	1.2	-7.2	0.8	3.8	5.9	2.3	-0.2	-9.0
Spain	2.2	1.2	-0.7	0.7	1.6	-3.6	-2.4	-1.6
Portugal	-9.9	-9.2	-6.5	-2.0	3.4	0.4	-4.0	4.7
Austria	-2.4	-0.7	1.5	4.3	0.8	3.9	3.8	3.7
Finland	-0.9	-2.9	-0.1	-1.8	0.6	1.1	2.9	1.4
Sweden	-2.8	-1.0	-0.8	-0.6	-0.1	-0.4	-0.3	-2.9
<b>EU Fifteen</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>

<sup>a</sup> Including fat adjustment and transfers from direct sales.

Source: European Commission

Table 131: Production of cow's milk <sup>a</sup>, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002
	thousand tonnes						
Germany	28,779	28,702	28,329	28,334	28,332	28,191	27,874
France	24,832	24,644	24,585	24,614	24,734	24,879	25,173
Italy	10,068	10,540	11,250	11,072	10,774	10,793	10,879 <sup>b</sup>
Netherlands	11,013	10,922	10,995	11,174	11,155	10,970	10,677
Belgium	3,416	3,213	3,418	3,382	3,425	3,357	3,450
Luxembourg	267	266	266	267	267	269	270
United Kingdom	14,672	14,841	14,632	15,013	14,489	14,707	14,869
Irish Republic	5,407	5,366	5,200	5,225	5,265	5,445	5,293
Denmark	4,695	4,633	4,668	4,656	4,719	4,618	4,656
Greece	741	750	749	775	789	778	758
Spain	6,084	5,979	5,980	6,172	5,900	6,224	6,345
Portugal	1,785	1,814	1,850	2,040	2,060	1,983	2,106
Austria	2,957	3,015	3,043	3,132	3,233	3,300	3,292
Finland	2,431	2,463	2,447	2,475	2,524	2,530	2,532
Sweden	3,316	3,334	3,331	3,350	3,348	3,339	3,274
<b>EU Fifteen</b>	<b>120,463</b>	<b>120,482</b>	<b>120,743</b>	<b>121,681</b>	<b>121,013</b>	<b>121,383</b>	<b>121,448</b>

<sup>a</sup> Excluding estimates of the quantities of milk suckled by young animals.

Production = deliveries to dairies + direct sales + milk fed to livestock + farm household consumption.

<sup>b</sup> Estimate.

Source: National statistics, Eurostat.

Table 132: Cow's milk delivered to dairies <sup>a</sup>, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002
	thousand tonnes						
Germany	27,180	27,171	26,940	26,980	27,212	27,082 <sup>b</sup>	26,839
France	23,111	23,045	23,032	23,109	23,303	23,225	23,622
Italy	10,040	10,130	10,292	10,325	10,084	10,136	10,184
Netherlands	10,535	10,458	10,541	10,777	10,734	10,623 <sup>b</sup>	10,357 <sup>b</sup>
Belgium	2,996 <sup>b</sup>	2,859	3,066	3,025	3,090	3,061 <sup>b</sup>	3,058 <sup>b</sup>
Luxembourg	257	255	255	256	261	261	257
United Kingdom	13,880	13,962	13,679	13,977	13,473	14,157 <sup>b</sup>	14,360 <sup>b</sup>
Irish Republic	5,297	5,256	5,092	5,121	5,160	5,338	5,189
Denmark	4,495	4,432	4,468	4,456	4,519	4,418	4,456
Greece	608	617	648	655	670	706	678
Spain	5,547	5,463	5,482	5,664	5,413	5,763	5,875
Portugal	1,632	1,661	1,696	1,872	1,892	1,822	1,935
Austria	2,345 <sup>b</sup>	2,419	2,448	2,540	2,661	2,654	2,649
Finland	2,329	2,370	2,363	2,394	2,441	2,449	2,448
Sweden	3,258	3,276	3,278	3,299	3,298	3,290 <sup>b</sup>	3,226
<b>EU Fifteen</b>	<b>113,510</b>	<b>113,374</b>	<b>113,280</b>	<b>114,450</b>	<b>114,211</b>	<b>114,985</b>	<b>115,133</b>

<sup>a</sup> Including milk equivalent of delivered dairy products.<sup>b</sup> Estimate.

Source: National statistics, Eurostat

Table 133: Average butterfat content of milk, European Union by country

Country	% by weight					
	1997	1998	1999	2000	2001	2002
Germany	4.24	4.25	4.22	4.22	4.23	4.20
France	4.10	4.12	4.10	4.08	4.09	4.08
Italy	3.66	3.72	3.69	3.66	3.67	3.67
Netherlands	4.41	4.41	4.35	4.40	4.43	4.44
Belgium	4.07	4.11	4.07	4.09	4.10	4.07
Luxembourg	4.22	4.21	4.21	4.20	4.17	4.19
United Kingdom	4.11	4.07	4.03	4.02	4.00	3.99
Irish Republic	3.70	3.72	3.75	3.77	3.80	3.80
Denmark	4.37	4.36	4.32	4.28	4.33	4.29
Greece	3.66	3.65	3.66	3.67	3.62	3.60
Spain	3.71	3.75	3.72	3.75	3.74	3.75
Portugal	3.80	3.79	3.80	3.84	3.84	3.84
Austria	4.11	4.13	4.15	4.13	4.17	4.17
Finland	4.32	4.31	4.24	4.22	4.23	4.22
Sweden	4.28	4.25	4.19	4.18	4.20	4.17
<b>EU Fifteen</b>	<b>4.09</b>	<b>4.11</b>	<b>4.08</b>	<b>4.08</b>	<b>4.09</b>	<b>4.07</b>

Source: National statistics, Eurostat

Table 134: Average protein content of milk, European Union by country

Country	1997	1998	1999	2000	2001	2002
	% by weight					
Germany	3.40	3.41	3.42	3.41	3.42	3.42
France	3.24	3.19	3.16	3.18	3.18	3.20
Italy	3.25	3.26	3.26	3.26	3.27	3.29
Netherlands	3.46	3.46	3.46	3.46	3.46	3.48
Belgium	3.36	3.34	3.33	3.32	3.35	3.32
Luxembourg	3.36	3.34	3.38	3.37	3.38	3.38
United Kingdom	3.30	3.30	3.30	3.29	3.29	3.30
Irish Republic	3.21	3.23	3.25	3.26	3.28	3.26
Denmark	3.44	3.44	3.42	3.42	3.41	3.40
Greece	3.15	3.13	3.11	3.10	3.05	3.04
Spain	3.07	3.09	3.11	3.13	3.13	3.14
Portugal	3.11	3.19	3.18	3.22	3.26	3.26
Austria	3.34	3.33	3.34	3.36	3.40	3.39
Finland	3.29	3.30	3.31	3.38	3.35	3.39
Sweden	3.32	3.31	3.30	3.28	3.28	3.32
<b>EU Fifteen</b>	<b>3.31</b>	<b>3.31</b>	<b>3.30</b>	<b>3.31</b>	<b>3.32</b>	<b>3.32</b>

Source: National statistics, Eurostat

**Table 135: Producer milk prices in ECU's (up to 1998), Euro's (from 1999), 3.7% fat, ex-farm <sup>a</sup>, European Union by country**

Country	1997	1998	1999	2000	2001	2002
	price per 100kg					
Germany	n.a	29.51	28.47	30.00	32.82	29.98
France	28.12	28.55	28.14	28.90	30.20	29.22
Italy	37.24	34.99	34.19	34.09	34.50	33.90
Netherlands	29.17	31.09	29.20	29.98	32.58	31.04
Belgium	26.50	28.73	26.67	28.80	30.06	27.58
United Kingdom	29.80	26.55	26.05	26.20	29.80	24.60
Irish Republic	28.49	28.41	27.62	28.44	29.60	27.30
Denmark	30.87	31.47	30.80	31.01	32.47	32.44
Greece	33.69	32.73	33.77	33.95	34.80	35.60
Spain	27.10	28.35	27.48	27.40	30.68	29.39
Portugal	28.46	28.36	28.03	28.03	32.00	32.60
Austria	26.91	27.64	27.76	27.83	32.00	30.20
Finland	n.a	30.09	30.06	30.50	32.50	32.00
Sweden	33.94	31.91	32.11	33.75	30.53	31.03
<b>EU Fifteen <sup>a</sup></b>	<b>29.94</b>	<b>30.53</b>	<b>28.83</b>	<b>29.18</b>	<b>31.40</b>	<b>29.50</b>

<sup>a</sup> Weighted average, in EUR

Source: Eurostat

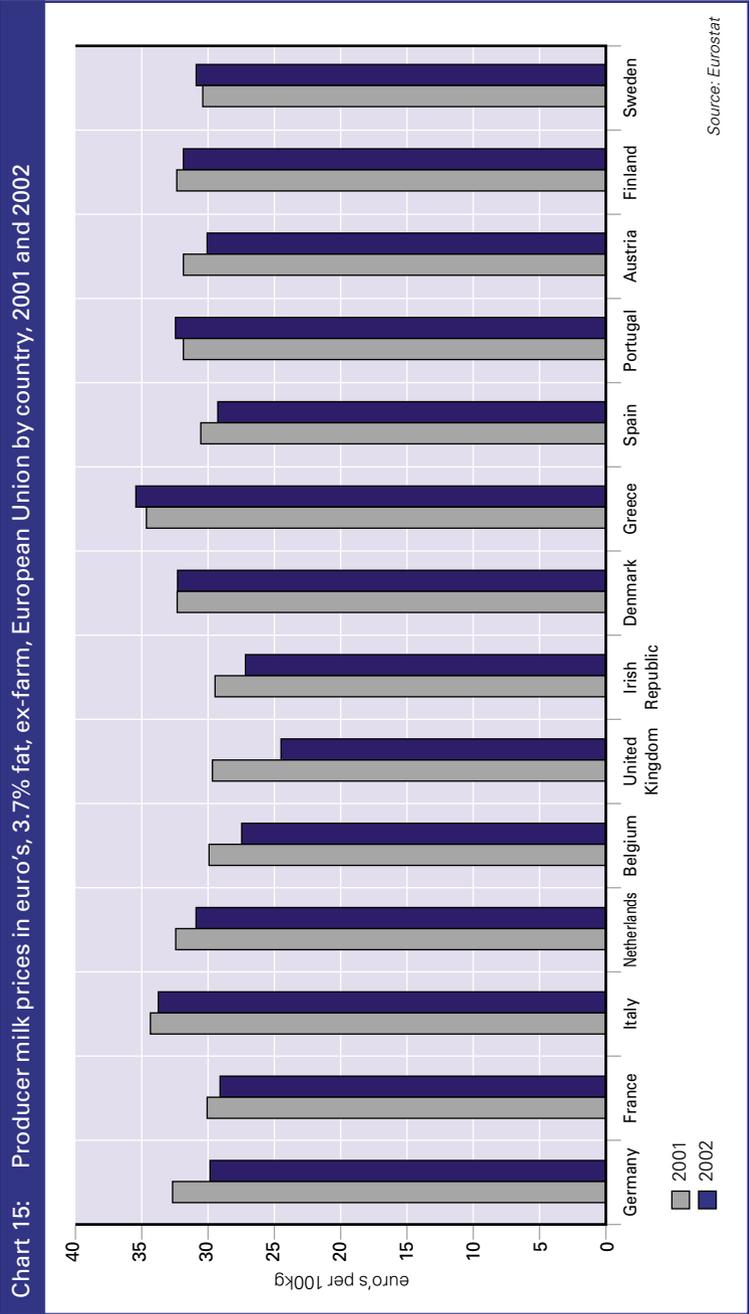


Table 136: Sales of liquid milk by dairies to the domestic market, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002
	thousand tonnes						
Germany	5,613	5,503	5,404	5,390	5,424	5,485	5,524
France <sup>a</sup>	3,910	3,957	4,048	3,878	3,813	3,992	3,887 <sup>e</sup>
Italy <sup>b</sup>	3,097	2,889	3,256	3,001	2,944	2,944	3,100 <sup>e</sup>
Netherlands	374	363	354	358	357	357	320
Belgium	776	787	760	704	712	712	675
Luxembourg <sup>b</sup>	106	106	106	106	106	106	106
United Kingdom	7,041	6,949	6,939	7,056	6,969	6,961	6,957
Irish Republic	558	559	560	546	546	556	553
Denmark	502	497	519	519	518	520	511
Greece <sup>b</sup>	342	379	372	373	408	429	415
Spain <sup>b</sup>	3,882	3,677	3,706	3,622	3,538	3,715	3,651
Portugal <sup>b</sup>	763	801	858	895	876	857	898 <sup>e</sup>
Austria <sup>c</sup>	470	481	499	504	513	533	534
Finland	767	752	749	742	738	733	719
Sweden <sup>d</sup>	1,065	1,040	1,028	1,010	1,000	1,002	1,003
<b>EU Fifteen</b>	<b>29,266</b>	<b>28,740</b>	<b>29,158</b>	<b>28,704</b>	<b>28,462</b>	<b>28,902</b>	<b>28,853</b>

<sup>a</sup> Total sales of liquid milk on the domestic market.

<sup>b</sup> Total manufactured.

<sup>c</sup> Excludes mixed milk drinks, soured milk products and yogurts.

<sup>d</sup> Excludes fermented milk but includes chocolate milk.

<sup>e</sup> Estimates.

Source: Eurostat

Table 137: Butter production <sup>a</sup>, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002
	thousand tonnes						
Germany	428	445	427	428	426	421	435
France	464	473	460	455	450	450	458
Italy	117	141	137	148	134	124	117
Netherlands	185	185	199 <sup>b</sup>	190 <sup>b</sup>	180 <sup>b</sup>	186 <sup>b</sup>	170 <sup>b</sup>
Belgium	108	104	109	117	125	102	112
Luxembourg	3	3	3	3	3	3	3
United Kingdom	130	139	137	141	132	126	136
Irish Republic	154	150	141	143	144	140	146
Denmark	78	71	78	80	80	80	83
Greece	3	3	2	2	3	2	2
Spain	23	30	31	35	39	32	54
Portugal	19	21	20	25 <sup>b</sup>	25	25	27
Austria	40	40	39	36	37	37	33
Finland	47	50	50	52	55	54	54
Sweden	57	59	53	48	50	51	47
<b>EU Fifteen</b>	<b>1,855</b>	<b>1,915</b>	<b>1,886</b>	<b>1,904</b>	<b>1,881</b>	<b>1,832</b>	<b>1,876</b>

<sup>a</sup> Including farm butter and butteroil in butter equivalent.

<sup>b</sup> Estimates.

Source: National statistics, Eurostat

Table 138: Cheese production <sup>a</sup>, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002
	thousand tonnes						
Germany	1,530	1,591	1,602	1,594	1,686	1,766	1,764
France	1,657	1,672	1,711	1,723	1,771	1,812	1,812
Italy	985	949	1,059	1,068	1,069	1,094	1,156
Netherlands	709	713	659	668	671	650	647
Belgium	70	73	73	62	61	65	65
Luxembourg	3	3	3	3	3	3	3
United Kingdom	377	377	366	368	340	395	380
Irish Republic	98	97	97	104	101	125	118
Denmark	298	290	289	293	306	318	320
Greece	192	205	218	218	219	230	232
Spain	247	253	275	270	261	272	288
Portugal	67	68	71	74	76	77	78
Austria	101	109	114	112	124	138	140
Finland	95	88	93	93	98	103	104
Sweden	127	118	125	128	127	125	128
<b>EU Fifteen</b>	<b>6,556</b>	<b>6,606</b>	<b>6,755</b>	<b>6,777</b>	<b>6,911</b>	<b>7,173</b>	<b>7,235</b>

<sup>a</sup> Including quarg, fresh cheese and farmhouse cheese manufacture.

Source: National statistics, Eurostat

Table 139: Condensed and evaporated milk production, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002
	thousand tonnes						
Germany	541	566	557	564	567	588	525
France	47	69	70	54	52	68	45
Italy	1	1	1	4	1	1	0 <sup>a</sup>
Netherlands	327	329	290	288	273	305	276
Belgium	47	52	65	64	80	89	72 <sup>a</sup>
Luxembourg	-	-	-	-	-	-	-
United Kingdom	206	214	192	177	162	161	146
Irish Republic	65	67	67	67	67	67	67
Denmark <sup>b</sup>	9	9	6	9	n.a	n.a	n.a
Greece	-	-	-	-	-	-	-
Spain	42	62	62	52	58	66	61
Portugal	1	1	1	1	1	1	1
Austria <sup>b</sup>	16	16	15	15	14	14	n.a
Finland	-	-	-	-	-	-	-
Sweden <sup>b</sup>	10	19	n.a	n.a	n.a	n.a	n.a
<b>EU Fifteen<sup>c</sup></b>	<b>1,306</b>	<b>1,372</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>

<sup>a</sup> Estimate.

<sup>b</sup> Figures from Dairy Facts & Figures 2002.

<sup>c</sup> Excluding Luxembourg, Greece and Finland where there is believed to be no or minimal condensed milk production.

Source: National statistics, Eurostat

Table 140: Whole milk powder production <sup>a</sup>, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002
	thousand tonnes						
Germany	201	202	207	200	182	167	153
France	237	251	262	260	258	241	241
Italy	1	-	-	-	-	-	-
Netherlands	142	150	153	172	149	156	148
Belgium	68	72	78	61	67	84	77
Luxembourg	-	-	-	-	-	-	-
United Kingdom	83	96	97	102	105	87	105
Irish Republic	28	34	32	33	37	32	26
Denmark	99	104	106	97	95	88	81
Greece	-	-	-	-	-	-	-
Spain	11	9	6	8	13	14	16
Portugal	6	8	8	9	9	8	9
Austria	7	5	3	4	3	1	1
Finland	2	3	4	3	2	2	2
Sweden <sup>b</sup>	8	6	5	7	7	6	n.a
<b>EU Fifteen <sup>c</sup></b>	<b>894</b>	<b>939</b>	<b>961</b>	<b>956</b>	<b>927</b>	<b>886</b>	<b>n.a</b>

<sup>a</sup> Including semi-skimmed milk powder production.

<sup>b</sup> Figures from Dairy Facts & Figures 2002.

<sup>c</sup> Estimate.

Source: National statistics, Eurostat.



Table 142: Buttermilk powder production, European Union by country

Country	1996	1997	1998	1999	2000	2001	2002
	thousand tonnes						
Germany	10	8	9	10	10	10	10
France	33	31	33	28	29	29	32
Italy	-	-	-	...	...	-	0 <sup>a</sup>
Netherlands	3	4	5	7	6	6	5
Belgium	3	2	2	2	2 <sup>a</sup>	2 <sup>a</sup>	2 <sup>a</sup>
Luxembourg	-	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-	-
Irish Republic	-	-	-	-	-	-	-
Denmark	5	5	4	5	4	4	4
Greece	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-
Austria	-	-	...	...	...	-	-
Finland	2	2	1	2	8	5	6
Sweden	2	2	2	2	n.a	n.a	n.a
<b>EU Fifteen</b>	<b>57</b>	<b>53</b>	<b>56</b>	<b>56</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>

<sup>a</sup> Estimate.

Source: National statistics, Eurostat

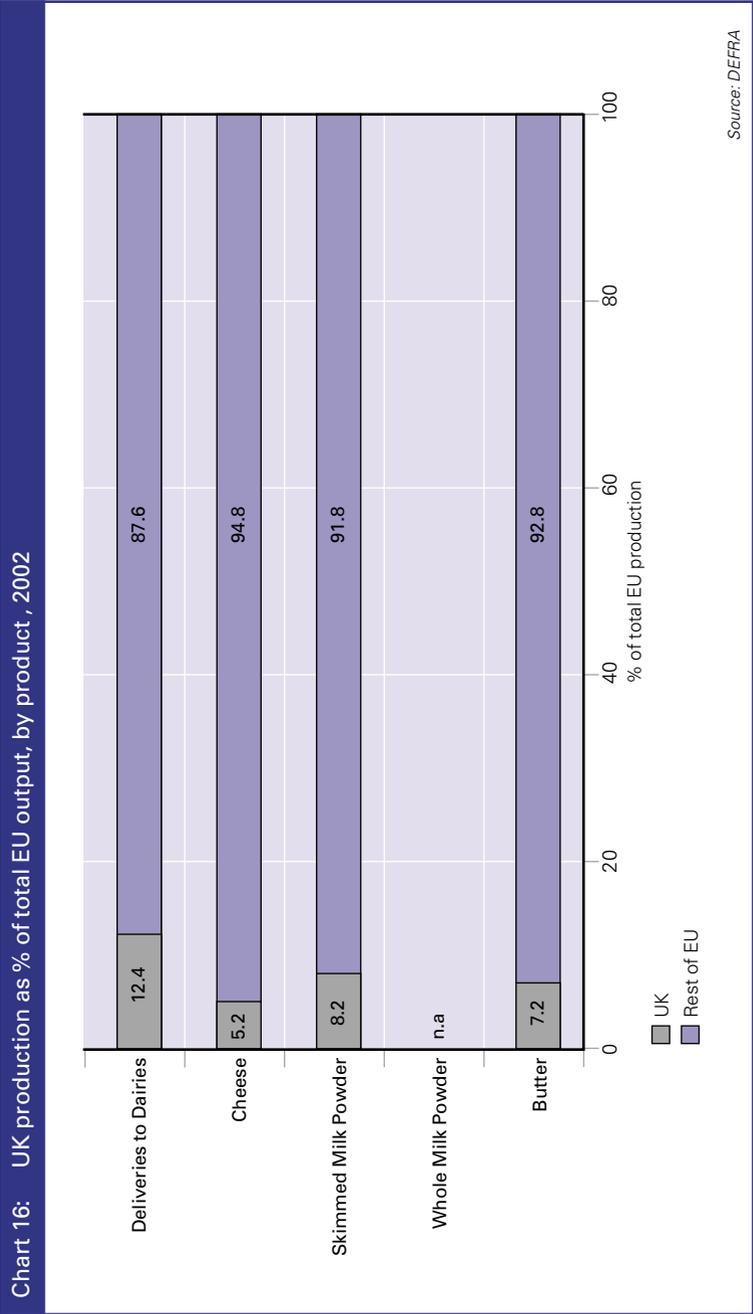




Table 144: EU exports of liquid milk, 2002<sup>a</sup>, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	2,200,154	8,656	2,196	12,299	9,410	123,996	156,557	2,356,711	
France	957,144	5,091	30,292	6,671	21,568	164,103	227,726	1,184,870	
Italy	4,523	891	151	151	11	1,309	2,513	7,036	
Netherlands	472,025	753	6,328	38,567	50,540	252,167	348,354	820,379	
Belgium/Luxembourg	1,065,725	848	683	10,661	4,622	77,677	94,492	1,160,217	
United Kingdom	258,823	361	1,475	24,996	11,349	33,273	71,455	330,278	
Irish Republic	128,476	-	294	7,784	8,622	13,005	29,704	158,180	
Denmark	35,126	55	1,541	25,195	9,974	41,086	77,852	112,978	
Greece	23	205	389	4	-	41	638	661	
Spain	199,870	49	24,947	2,057	4,948	25,277	57,278	257,148	
Portugal	184,770	41	14	0	242	1,710	2,007	186,777	
Austria	632,797	1,746	1,554	1,631	476	572	5,979	638,776	
Finland	8,850	0	0	16	4,015	7,931	11,963	20,813	
Sweden	24,588	6	999	504	1,455	4,741	7,705	32,293	
<b>EU Fifteen</b>	<b>6,172,892</b>	<b>18,703</b>	<b>70,862</b>	<b>130,537</b>	<b>127,233</b>	<b>746,887</b>	<b>1,094,223</b>	<b>7,267,117</b>	

<sup>a</sup> Includes packaged and bulk, semi-skimmed and whole milk.

Source: Eurostat

Table 145: EU imports of cream, 2002, by importing EU country and source

Destination	Source Country								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	65,029	1,947	113	-	-	-	2,060	67,089	
France	143,690	-	19	-	-	12	31	143,752	
Italy	72,262	42	649	-	-	-	691	72,953	
Netherlands	21,157	114	-	0	-	-	114	21,271	
Belgium/Luxembourg	153,225	-	-	-	-	-	-	153,225	
United Kingdom	14,871	-	-	-	-	-	-	14,871	
Irish Republic	2,514	-	-	-	-	-	-	2,514	
Denmark	12,237	-	-	-	-	-	-	12,237	
Greece	13,125	-	-	-	-	-	-	13,125	
Spain	27,066	1	-	-	514	-	515	27,581	
Portugal	8,755	-	-	-	-	-	-	8,755	
Austria	4,217	120	1,128	-	-	-	1,248	5,465	
Finland	120	-	-	-	-	-	-	120	
Sweden	1,108	-	-	-	-	-	-	1,108	
<b>EU Fifteen</b>	<b>539,375</b>	<b>2,223</b>	<b>1,909</b>	<b>0</b>	<b>514</b>	<b>12</b>	<b>4,659</b>	<b>542,985</b>	

Source: Eurostat

Table 146: EU exports of cream, 2002, by exporting EU country and destination

Source Country	Destination tonnes								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
Germany	83,347	5,998	37	53	303	3,035	9,426	92,773	
France	124,674	89	213	669	7,468	5,955	14,394	139,068	
Italy	922	45	16	85	10	120	275	1,197	
Netherlands	21,465	18	52	427	303	13,392	14,191	35,656	
Belgium/Luxembourg	88,204	290	34	-	199	55	578	88,782	
United Kingdom	90,486	7	84	125	63	19	298	90,784	
Irish Republic	2,331	-	3	-	-	-	3	2,334	
Denmark	4,316	50	539	487	771	8,868	10,716	15,032	
Greece	3	3	-	-	-	0	3	6	
Spain	40,958	-	189	10	-	-	199	41,157	
Portugal	5,689	-	8	-	0	218	225	5,914	
Austria	42,565	21	966	-	-	6	993	43,558	
Finland	54	-	-	-	-	1,026	1,026	1,080	
Sweden	11,726	6	-	-	-	1	7	11,733	
<b>EU Fifteen</b>	<b>516,738</b>	<b>6,526</b>	<b>2,141</b>	<b>1,855</b>	<b>9,116</b>	<b>32,694</b>	<b>52,334</b>	<b>569,074</b>	

Source: Eurostat

Table 147: EU imports of yogurt, 2002 <sup>a</sup>, by importing EU country and source

Destination	Source Country								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	58,918	42	1,924	0	-	-	1,966	60,884	
France	66,020	-	616	0	-	-	616	66,636	
Italy	81,489	4	0	114	-	-	118	81,607	
Netherlands	91,438	120	13	-	-	-	133	91,571	
Belgium/Luxembourg	99,017	-	-	-	-	-	-	99,017	
United Kingdom	142,288	-	60	5	106	-	171	142,459	
Irish Republic	14,778	-	-	-	-	-	-	14,778	
Denmark	6,505	-	-	-	-	-	-	6,505	
Greece	3,345	-	-	-	-	-	-	3,345	
Spain	137,779	-	-	-	-	-	-	137,779	
Portugal	85,213	-	-	-	-	-	-	85,213	
Austria	25,628	-	76	-	102	-	178	25,806	
Finland	6,531	-	-	-	-	-	-	6,531	
Sweden	43,925	-	2	-	-	-	2	43,927	
<b>EU Fifteen</b>	<b>862,875</b>	<b>166</b>	<b>2,691</b>	<b>119</b>	<b>208</b>	<b>-</b>	<b>3,184</b>	<b>866,059</b>	

<sup>a</sup> Includes plain, flavoured and powdered yogurt.

Source: Eurostat

Table 148: EU exports of yogurt, 2002 <sup>a</sup>, by exporting EU country and destination

Source Country	Destination									Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU	tonnes		
Germany	318,734	748	117	3	50	138	1,056	319,790		
France	237,759	288	90	35	6	1,107	1,526	239,285		
Italy	1,701	53	23	15	1	9	100	1,801		
Netherlands	2,423	14	0	34	36	524	607	3,030		
Belgium/Luxembourg	108,192	0	-	-	-	303	304	108,496		
United Kingdom	8,334	2	38	48	69	16	172	8,506		
Irish Republic	5,463	97	-	-	-	-	97	5,560		
Denmark	3,112	104	112	872	-	-	1,088	4,200		
Greece	8,026	11	453	478	1	77	1,021	9,047		
Spain	75,112	9	1,454	97	-	92	1,652	76,764		
Portugal	7	-	0	0	0	286	286	293		
Austria	64,255	1,059	0	0	0	0	1,059	65,314		
Finland	22,312	-	-	-	-	-	-	22,312		
Sweden	168	1	1	-	0	13	14	182		
<b>EU Fifteen</b>	<b>855,599</b>	<b>2,384</b>	<b>2,289</b>	<b>1,582</b>	<b>164</b>	<b>2,565</b>	<b>8,982</b>	<b>864,581</b>		

<sup>a</sup> Includes plain, flavoured and powdered yogurt.

Source: Eurostat

Table 149: EU imports of buttermilk, 2002<sup>a</sup>, by importing EU country and source

Destination	Source Country								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
tonnes									
Germany	61,325	1,023	2,463	1	-	-	-	3,486	64,811
France	49,038	1	2,013	-	-	4	-	2,018	51,056
Italy	22,619	1	-	0	-	-	2	-	22,621
Netherlands	36,842	-	-	-	306	3	308	-	37,150
Belgium/Luxembourg	29,885	-	-	-	53	74	127	-	30,012
United Kingdom	29,522	-	-	1	0	-	1	-	29,523
Irish Republic	11,757	1	-	-	-	-	1	-	11,758
Denmark	4,474	-	-	-	-	-	-	-	4,474
Greece	6,512	-	-	-	-	-	-	-	6,512
Spain	9,241	-	-	-	306	236	542	-	9,783
Portugal	17,784	-	-	1	-	-	1	-	17,785
Austria	4,874	-	0	-	7	-	7	-	4,881
Finland	1,415	-	-	0	-	-	0	-	1,415
Sweden	1,070	-	-	-	-	-	-	-	1,070
<b>EU Fifteen</b>	<b>286,358</b>	<b>1,026</b>	<b>4,476</b>	<b>2</b>	<b>672</b>	<b>317</b>	<b>6,493</b>	<b>6,493</b>	<b>292,851</b>

<sup>a</sup> Includes curdled milk and cream, kephir and other fermented or acidified milk or creams.

Source: Eurostat

Table 150: EU exports of buttermilk, 2002 <sup>a</sup>, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	81,344	37,761	648	182	660	20,388	59,638	140,982	
France	65,406	11	929	87	39	719	1,785	67,191	
Italy	412	34	422	14	2	15	486	898	
Netherlands	36,353	93	91	530	1,321	3,152	5,187	41,540	
Belgium/Luxembourg	149,471	3,182	-	550	2,061	3,738	9,531	159,002	
United Kingdom	10,489	-	3	126	172	358	658	11,147	
Irish Republic	3,848	-	-	2,059	5,417	2,335	9,811	13,659	
Denmark	5,725	12	13	379	2,737	2	3,143	8,868	
Greece	118	12	477	-	15	-	504	622	
Spain	22,989	566	1,667	3,027	443	2,935	8,638	31,627	
Portugal	22	-	1	-	-	28	29	51	
Austria	25,517	769	4	2	-	0	775	26,292	
Finland	540	15	-	-	-	945	960	1,500	
Sweden	1,275	-	2	-	-	-	2	1,277	
<b>EU Fifteen</b>	<b>403,509</b>	<b>42,455</b>	<b>4,256</b>	<b>6,955</b>	<b>12,867</b>	<b>34,616</b>	<b>101,147</b>	<b>504,656</b>	

<sup>a</sup> Includes curdled milk and cream, kephir and other fermented or acidified milk or creams.

Source: Eurostat

Table 151: EU imports of butter, 2002<sup>a</sup>, by importing EU country and source

Destination	Source Country								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
tonnes									
Germany	102,248	12,059	544	8	566	2	13,178	115,426	
France	105,901	1,211	57	-	199	-	1,466	107,367	
Italy	23,459	27	210	-	-	-	237	23,696	
Netherlands	35,913	11,121	158	1	58,878	-	70,159	106,072	
Belgium/Luxembourg	75,425	544	-	17	213	-	773	76,198	
United Kingdom	92,020	38	-	14	22,993	3	23,047	115,067	
Irish Republic	2,788	0	-	-	-	42	43	2,831	
Denmark	9,068	323	-	-	-	-	323	9,391	
Greece	15,642	-	-	-	-	0	0	15,642	
Spain	9,241	-	-	-	306	236	542	9,783	
Portugal	2,194	-	-	-	-	-	-	2,194	
Austria	7,083	611	21	-	145	-	777	7,860	
Finland	63	-	-	-	-	5	5	68	
Sweden	867	-	0	13	-	-	13	880	
<b>EU Fifteen</b>	<b>481,910</b>	<b>25,932</b>	<b>990</b>	<b>53</b>	<b>83,299</b>	<b>289</b>	<b>110,563</b>	<b>592,473</b>	

<sup>a</sup> Excludes dehydrated butter and ghee, but includes dairy spreads.

Source: Eurostat

Table 152: EU exports of butter, 2002 <sup>a</sup>, by exporting EU country and destination

Source Country	Destination										Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU	tonnes			
Germany	21,297	9,074	915	508	527	6,758	17,783				39,079
France	25,007	470	1,752	1,166	5,487	13,108	21,982				46,990
Italy	8,462	5	3	20	1	281	309				8,771
Netherlands	83,591	905	2,600	838	4,666	22,361	31,370				114,961
Belgium/Luxembourg	46,510	45	723	113	2,747	3,502	7,130				53,640
United Kingdom	18,419	23	235	845	274	2,344	3,720				22,140
Irish Republic	86,932	200	520	942	94	6,988	8,744				95,676
Denmark	24,001	208	944	838	843	21,101	23,933				47,934
Greece	0	0	-	-	-	9	9				9
Spain	13,551	-	412	130	-	4,302	4,844				18,395
Portugal	4,507	-	0	15	1	765	780				5,287
Austria	2,587	10	135	0	0	0	146				2,732
Finland	12,625	32	135	-	11	24,126	24,303				36,928
Sweden	4,741	196	496	80	-	6,454	7,226				11,967
<b>EU Fifteen</b>	<b>352,231</b>	<b>11,168</b>	<b>8,870</b>	<b>5,494</b>	<b>14,649</b>	<b>112,097</b>	<b>152,278</b>				<b>504,509</b>

<sup>a</sup> Excludes dehydrated butter and ghee, but includes dairy spreads.

Source: Eurostat

Table 153: EU imports of butteroil, 2002 <sup>a</sup>, by importing EU country and source

Destination	Source Country								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	21,243	-	-	-	89	-	89	21,332	
France	13,931	-	-	-	-	-	-	13,931	
Italy	26,581	-	-	-	-	-	-	26,581	
Netherlands	4,898	-	-	2	951	-	953	5,851	
Belgium/Luxembourg	12,996	-	6	-	176	-	182	13,177	
United Kingdom	3,319	-	-	-	7	-	7	3,326	
Irish Republic	510	-	-	-	-	-	-	510	
Denmark	6,722	-	-	3,552	-	-	3,552	10,274	
Greece	15,642	-	-	-	-	0	0	15,642	
Spain	2,097	-	-	-	111	-	111	2,208	
Portugal	1,372	-	-	-	-	-	-	1,372	
Austria	1,318	-	-	0	-	-	0	1,318	
Finland	29	-	-	0	-	-	0	29	
Sweden	8	-	-	-	-	-	-	8	
<b>EU Fifteen</b>	<b>110,666</b>	<b>-</b>	<b>6</b>	<b>3,554</b>	<b>1,333</b>	<b>0</b>	<b>4,893</b>	<b>115,560</b>	

<sup>a</sup> Fats and oils derived from milk plus dehydrated butter and ghee.

Source: Eurostat

Table 154: EU exports of butteroil, 2002 <sup>a</sup>, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	5,776	336	12	1	1	1	351	6,127	
France	17,469	71	125	172	765	7,185	8,318	25,786	
Italy	780	1	-	0	5	0	6	786	
Netherlands	27,071	30	168	3,401	1,813	18,948	24,359	51,431	
Belgium/Luxembourg	41,031	627	654	4,960	3,781	7,399	17,422	58,453	
United Kingdom	15,971	-	0	146	17	389	552	16,522	
Irish Republic	1,130	-	-	1,694	250	623	2,566	3,696	
Denmark	12	-	-	37	13	100	150	161	
Greece	-	-	-	-	-	-	-	-	
Spain	5	-	142	-	-	7	149	154	
Portugal	4,507	-	-	15	1	765	780	5,287	
Austria	2,587	10	135	0	0	0	146	2,732	
Finland	-	-	-	-	-	-	-	-	
Sweden	3,438	-	51	-	-	320	371	3,808	
<b>EU Fifteen</b>	<b>119,776</b>	<b>1,076</b>	<b>1,288</b>	<b>10,426</b>	<b>6,643</b>	<b>35,736</b>	<b>55,168</b>	<b>174,944</b>	

<sup>a</sup> Fats and oils derived from milk plus dehydrated butter and ghee.

Source: Eurostat

Table 155: EU imports of cheese, 2002 <sup>a</sup>, by importing EU country and source

Destination	Source Country								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	408,666	18,955	11,415	61	5,498	4	35,932	444,598	
France	191,096	531	6,414	1	1,601	23	8,570	199,666	
Italy	325,794	748	15,499	19	183	3	16,452	342,246	
Netherlands	100,802	14,224	474	64	30,628	20	45,411	146,212	
Belgium/Luxembourg	245,546	194	2,678	200	133	4	3,208	248,754	
United Kingdom	253,214	36	3,281	4,090	23,006	3,450	33,864	287,078	
Irish Republic	24,676	36	-	0	0	0	36	24,712	
Denmark	72,473	300	832	1	92	-	1,225	73,698	
Greece	68,949	3,232	783	-	13	-	4,028	72,977	
Spain	124,781	1	1,026	132	-	-	1,159	125,939	
Portugal	24,615	-	99	15	-	-	114	24,729	
Austria	66,475	667	3,377	0	709	4	4,756	71,231	
Finland	18,958	11	55	14	374	-	453	19,411	
Sweden	44,171	106	837	-	-	-	943	45,113	
<b>EU Fifteen</b>	<b>1,970,215</b>	<b>39,039</b>	<b>46,769</b>	<b>4,598</b>	<b>62,237</b>	<b>3,508</b>	<b>156,150</b>	<b>2,126,366</b>	

<sup>a</sup> Includes natural, fresh and processed cheese.

Source: Eurostat

Table 156: EU exports of cheese, 2002 <sup>a</sup>, by exporting EU country and destination

Source Country	Destination tonnes								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
Germany	412,227	21,625	3,714	19,712	12,179	53,376	110,606	522,833	
France	420,125	2,842	13,335	23,466	12,054	37,120	88,818	508,943	
Italy	135,580	1,551	15,359	32,083	6,590	2,405	58,018	193,598	
Netherlands	423,363	1,748	4,362	30,891	14,843	22,726	74,569	497,932	
Belgium/Luxembourg	123,012	359	354	1,181	20	999	2,913	125,925	
United Kingdom	59,581	31	4,187	13,528	2,227	2,662	22,635	82,215	
Irish Republic	105,056	11	365	5,654	715	3,037	9,783	114,839	
Denmark	181,558	1,145	5,113	18,547	15,574	30,956	71,334	252,892	
Greece	31,855	136	407	2,016	704	415	3,678	35,534	
Spain	44,448	20	3,366	2,255	15	138	5,793	50,241	
Portugal	1,027	-	40	690	5	599	1,333	2,360	
Austria	66,822	1,874	1,042	1,217	343	5,802	10,279	77,101	
Finland	12,746	78	626	6,991	66	16,681	24,442	37,189	
Sweden	10,636	155	48	848	16	1,724	2,790	13,426	
<b>EU Fifteen</b>	<b>2,028,036</b>	<b>31,575</b>	<b>52,346</b>	<b>159,079</b>	<b>65,353</b>	<b>178,639</b>	<b>486,992</b>	<b>2,515,028</b>	

<sup>a</sup> Includes natural fresh and processed cheese.

Source: Eurostat



Table 158: EU exports of sweetened condensed milk, 2002, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	6,133	194	60	349	0	184	787	6,920	
France	3,238	3	76	155	509	5,147	5,890	9,127	
Italy	506	43	-	1	-	8	51	557	
Netherlands	52,372	30	1,728	5,215	18,080	89,304	114,357	166,728	
Belgium/Luxembourg	17,879	-	245	1	-	18	264	18,143	
United Kingdom	226	2	13	8	1	4	27	253	
Irish Republic	59	-	-	-	-	-	-	59	
Denmark	29	-	-	8	-	-	8	37	
Greece	2	27	4	1	-	0	33	35	
Spain	6,028	-	746	777	4,939	2,849	9,312	15,340	
Portugal	18	-	1	0	0	48	50	68	
Austria	2,144	-	17	-	0	-	18	2,162	
Finland	-	-	-	-	-	-	-	-	
Sweden	1	1	-	-	-	-	1	2	
<b>EU Fifteen</b>	<b>88,635</b>	<b>298</b>	<b>2,891</b>	<b>6,515</b>	<b>23,531</b>	<b>97,563</b>	<b>130,798</b>	<b>219,433</b>	

Source: Eurostat

Table 159: EU imports of unsweetened condensed milk, 2002 <sup>a</sup>, by importing EU country and source

Destination	Source Country								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	31,818	1	-	-	-	-	1	31,819	
France	60,901	-	4,629	-	-	1	4,631	65,532	
Italy	2,760	-	-	0	-	-	0	2,760	
Netherlands	178,753	-	-	1	-	-	1	178,754	
Belgium/Luxembourg	35,322	-	295	-	-	-	295	35,617	
United Kingdom	7,014	-	-	-	-	-	-	7,014	
Irish Republic	3,755	-	-	-	-	-	-	3,755	
Denmark	2,421	-	-	-	-	-	-	2,421	
Greece	83,166	-	-	-	-	-	-	83,166	
Spain	17,250	-	-	-	-	-	-	17,250	
Portugal	444	-	-	-	-	-	-	444	
Austria	1,471	-	-	-	-	-	-	1,471	
Finland	28	-	-	-	-	-	-	28	
Sweden	168	-	-	-	-	-	-	168	
<b>EU Fifteen</b>	<b>425,270</b>	<b>1</b>	<b>4,925</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>4,927</b>	<b>430,197</b>	

<sup>a</sup> Includes skimmed condensed.

Source: Eurostat

Table 160: EU exports of unsweetened condensed milk, 2002<sup>a</sup>, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	181,436	396	718	5,833	1,638	89,642	98,226	279,663	
France	71,563	2,192	519	21	461	354	3,546	75,108	
Italy	23	2	0	-	-	-	2	25	
Netherlands	52,372	30	1,728	5,215	18,080	89,304	114,357	166,728	
Belgium/Luxembourg	53,907	-	319	3	-	69	390	54,297	
United Kingdom	27,511	-	886	3	923	24	1,835	29,345	
Irish Republic	59	-	-	-	-	-	-	59	
Denmark	4,853	3	666	-	-	-	669	5,522	
Greece	14	74	356	2	-	21	453	466	
Spain	13,103	-	14	-	-	-	14	13,117	
Portugal	14	-	0	0	-	43	44	58	
Austria	451	192	1	-	1	18	211	661	
Finland	-	-	-	-	-	-	-	-	
Sweden	313	-	-	-	-	-	-	313	
<b>EU Fifteen</b>	<b>405,617</b>	<b>2,887</b>	<b>5,207</b>	<b>11,076</b>	<b>21,102</b>	<b>179,474</b>	<b>219,745</b>	<b>625,363</b>	

<sup>a</sup> Includes skimmed condensed.

Source: Eurostat

Table 161: EU imports of chocolate crumb, 2002, by importing EU country and source

Destination	Source Country								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	807	-	-	-	-	-	-	-	807
France	39	-	-	-	-	-	-	-	39
Italy	3	-	-	-	-	-	-	-	3
Netherlands	-	-	-	-	-	-	-	-	-
Belgium/Luxembourg	354	-	-	-	-	-	-	-	354
United Kingdom	33,309	-	-	-	-	-	-	-	33,309
Irish Republic	1,249	-	-	22	-	22	44	-	1,293
Denmark	-	-	-	-	-	-	-	-	-
Greece	5	-	-	-	-	-	-	-	5
Spain	55	-	-	-	-	-	-	-	55
Portugal	3	-	-	-	-	-	-	-	3
Austria	17	-	-	-	-	-	-	-	17
Finland	2	-	-	-	-	-	-	-	2
Sweden	110	-	-	-	-	-	-	-	110
<b>EU Fifteen</b>	<b>35,951</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>22</b>	<b>44</b>	<b>44</b>	<b>35,995</b>

Source: Eurostat

Table 162: EU exports of chocolate crumb, 2002, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	-	-	-	-	-	-	-	-	-
France	-	-	-	4	-	-	5	5	5
Italy	-	5	0	1	3	-	10	10	10
Netherlands	-	-	-	-	-	2,244	2,244	2,244	2,244
Belgium/Luxembourg	0	-	0	-	-	-	-	-	0
United Kingdom	20	-	43	11,335	26	3	11,406	11,406	11,426
Irish Republic	5,896	-	-	18,101	913.9	10	19,024	19,024	24,920
Denmark	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-
Spain	0	-	-	-	-	-	-	-	0
Portugal	0	-	-	-	-	0	-	-	0
Austria	-	-	-	-	-	-	-	-	-
Finland	100	32	-	-	850	-	882	882	982
Sweden	11	-	2	-	-	-	2	2	13
<b>EU Fifteen</b>	<b>6,027</b>	<b>37</b>	<b>46</b>	<b>29,441</b>	<b>1,793</b>	<b>2,257</b>	<b>33,573</b>	<b>33,573</b>	<b>39,600</b>

Source: Eurostat

Table 163: EU imports of whole milk powder, 2002<sup>a</sup>, by importing EU country and source

Destination	Source Country										Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU	tonnes			
Germany	30,558	3,290	3	2	22	-	3,317	33,875			
France	11,596	237	-	-	19	1	258	11,854			
Italy	17,142	-	-	0	-	-	0	17,143			
Netherlands	93,765	9,039	-	0	1,020	19	10,079	103,844			
Belgium/Luxembourg	47,729	43	-	-	1,251	32	1,326	49,054			
United Kingdom	9,491	-	-	-	39	-	39	9,530			
Irish Republic	1,788	-	-	-	-	52	52	1,840			
Denmark	473	-	-	-	0	-	0	473			
Greece	4,073	-	4	-	-	-	4	4,077			
Spain	13,927	75	-	-	-	1	75	14,002			
Portugal	6,156	458	-	0	-	-	458	6,614			
Austria	6,786	2,218	-	0	-	-	2,218	9,004			
Finland	30	-	-	-	-	-	-	30			
Sweden	3,328	-	0	-	-	-	0	3,328			
<b>EU Fifteen</b>	<b>246,842</b>	<b>15,359</b>	<b>7</b>	<b>2</b>	<b>2,351</b>	<b>105</b>	<b>17,825</b>	<b>264,667</b>			

<sup>a</sup> Includes semi-skimmed milk powder.

Source: Eurostat

Table 164: EU exports of whole milk powder, 2002 <sup>a</sup>, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	18,648	964	618	598	465	6,544	9,187	27,835	
France	49,454	2,134	3,217	1,500	2,352	111,813	121,015	170,470	
Italy	413	54	10	4	0	50	117	530	
Netherlands	28,104	444	2,900	20,341	11,366	116,580	151,631	179,734	
Belgium/Luxembourg	19,029	499	11	8,090	1,608	58,557	68,765	87,794	
United Kingdom	52,035	345	212	22,555	7,340	29,677	60,127	112,162	
Irish Republic	20,628	-	34	4,602	1,121	7,784	13,541	34,169	
Denmark	7,427	-	129	23,286	8,180	30,773	62,368	69,794	
Greece	2	14	15	-	-	-	29	31	
Spain	2,626	45	795	382	-	6,477	7,699	10,325	
Portugal	6,658	-	4	-	0	206	210	6,868	
Austria	9,973	369	-	-	0	11	380	10,352	
Finland	4,518	-	-	-	-	18	18	4,536	
Sweden	12	-	25	-	0	29	54	66	
<b>EU Fifteen</b>	<b>219,525</b>	<b>4,865</b>	<b>7,969</b>	<b>81,357</b>	<b>32,431</b>	<b>368,518</b>	<b>495,140</b>	<b>714,665</b>	

<sup>a</sup> Includes semi-skimmed milk powder.

Source: Eurostat

Table 165: EU imports of skimmed milk powder, 2002, by importing EU country and source

Destination	Source Country								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	20,957	19,544	5,325	31	2,857	4,119	31,875	52,832	
France	45,714	1,058	-	150	207	80	1,495	47,208	
Italy	97,975	-	-	-	-	3	3	97,977	
Netherlands	192,585	16,794	-	351	10,828	1,949	29,922	222,507	
Belgium/Luxembourg	33,737	1,367	550	509	792	250	3,468	37,205	
United Kingdom	17,484	-	-	1	2	-	3	17,487	
Irish Republic	1,387	-	-	-	-	0	0	1,387	
Denmark	5,212	-	1	0	-	-	2	5,213	
Greece	9,111	19	-	-	-	-	19	9,130	
Spain	32,821	994	-	20	1	66	1,081	33,901	
Portugal	3,880	-	-	-	-	-	-	3,880	
Austria	7,574	632	238	-	-	-	870	8,444	
Finland	402	0	-	-	-	-	0	402	
Sweden	2,186	-	0	-	0	-	0	2,187	
<b>EU Fifteen</b>	<b>471,022</b>	<b>40,408</b>	<b>6,114</b>	<b>1,062</b>	<b>14,687</b>	<b>6,467</b>	<b>68,738</b>	<b>539,760</b>	

Source: Eurostat

Table 166: EU exports of skimmed milk powder, 2002, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	125,870	463	706	4,007	6,762	11,588	23,525	149,395	
France	68,970	357	1,211	2,521	5,861	20,005	29,953	98,923	
Italy	406	30	12	30	0	134	206	612	
Netherlands	61,449	1	654	5,168	20,023	7,726	33,572	95,021	
Belgium/Luxembourg	61,502	58	68	2,568	1,940	13,907	18,540	80,042	
United Kingdom	20,357	8	247	1,978	2,998	3,505	8,736	29,093	
Irish Republic	18,990	-	257	3,182	7,501	5,220	16,160	35,150	
Denmark	8,839	-	2	68	1,021	1,439	2,530	11,369	
Greece	0	7	13	-	-	3	23	23	
Spain	11,124	1	259	396	9	7,109	7,774	18,898	
Portugal	6,085	41	0	-	200	430	671	6,756	
Austria	5,097	857	143	-	475	61	1,537	6,634	
Finland	3,727	0	-	16	4,015	6,333	10,365	14,092	
Sweden	940	-	972	504	1,455	4,701	7,632	8,572	
<b>EU Fifteen</b>	<b>393,355</b>	<b>1,822</b>	<b>4,544</b>	<b>20,437</b>	<b>52,261</b>	<b>82,161</b>	<b>161,224</b>	<b>554,579</b>	

Source: Eurostat

Table 167: EU imports of whey powder, 2002, by importing EU country and source

Destination	Source Country									Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU	tonnes		
Germany	43,681	304	10	11	67	-	391	44,073		
France	57,838	9,766	1	7	4	45	9,824	67,662		
Italy	34,903	-	-	-	-	-	-	34,903		
Netherlands	311,073	2,388	-	16	1,141	-	3,545	314,618		
Belgium/Luxembourg	61,497	-	-	31	-	-	31	61,527		
United Kingdom	22,212	-	-	1	7	17	25	22,237		
Irish Republic	12,793	-	-	4	7	-	11	12,804		
Denmark	9,792	1	-	251	-	-	252	10,044		
Greece	5,561	-	-	-	-	-	-	5,561		
Spain	47,171	-	-	-	-	-	-	47,171		
Portugal	2,706	-	-	-	-	-	-	2,706		
Austria	3,299	300	0	-	-	9	309	3,609		
Finland	1,291	-	-	1	-	-	1	1,293		
Sweden	4,512	-	-	-	-	-	-	4,512		
<b>EU Fifteen</b>	<b>618,328</b>	<b>12,759</b>	<b>11</b>	<b>322</b>	<b>1,226</b>	<b>71</b>	<b>14,390</b>	<b>632,717</b>		

Source: Eurostat

Table 168: EU exports of whey powder, 2002, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	144,716	4,747	93	413	9,434	2,968	17,655	162,370	
France	227,255	2,089	2,740	11,487	81,070	13,606	110,991	338,246	
Italy	37,906	295	16	410	360	85	1,166	39,072	
Netherlands	72,114	1,725	422	11,916	22,267	2,597	38,926	111,040	
Belgium/Luxembourg	18,156	68	25	0	7,140	337	7,570	25,725	
United Kingdom	37,602	0	512	64	413	501	1,489	39,092	
Irish Republic	39,555	1	35	275	2,280	561	3,151	42,706	
Denmark	13,925	8	-	8	-	1,859	1,876	15,801	
Greece	83	637	-	-	-	4	641	724	
Spain	4,872	-	107	1,000	-	122	1,228	6,100	
Portugal	5,511	-	-	9	-	-	9	5,520	
Austria	17,232	206	39	1	-	141	387	17,619	
Finland	9,422	308	0	885	12,669	2,704	16,566	25,988	
Sweden	31	66	21	-	300	-	387	418	
<b>EU Fifteen</b>	<b>628,378</b>	<b>10,149</b>	<b>4,008</b>	<b>26,468</b>	<b>135,931</b>	<b>25,485</b>	<b>202,041</b>	<b>830,420</b>	

Source: Eurostat

Table 169: EU imports of liquid whey, 2002, by importing EU country and source

Destination	Source Country							Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU	
	tonnes							
Germany	136,013	13,178	78	-	-	-	13,256	149,269
France	138,911	7,212	41,183	-	-	-	48,394	187,306
Italy	1,410	-	-	-	-	-	-	1,410
Netherlands	184,884	-	95	-	-	-	95	184,979
Belgium/Luxembourg	36,932	-	-	-	-	-	-	36,932
United Kingdom	279	-	9	0	-	-	9	289
Irish Republic	170	-	-	-	-	-	-	170
Denmark	6,345	-	99	-	-	-	99	6,444
Greece	172	-	-	-	-	-	-	172
Spain	741	-	-	-	-	-	0	741
Portugal	2	-	-	-	-	-	-	2
Austria	6,023	2,905	0	-	-	-	2,905	8,928
Finland	-	-	37	-	-	-	37	37
Sweden	6,749	-	33	-	-	-	33	6,781
<b>EU Fifteen</b>	<b>518,630</b>	<b>23,295</b>	<b>41,534</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>64,829</b>	<b>583,459</b>

Source: Eurostat

Table 170: EU exports of liquid whey, 2002, by exporting EU country and destination

Source Country	Destination								Total
	Intra-EU 15	Central & East European	Other European	The Americas	Far East & Australasia	All other Countries	Extra-EU		
	tonnes								
Germany	174,830	6,118	4	-	11	-	6,133	180,963	
France	1,195	-	6	-	-	48	54	1,249	
Italy	43,789	-	-	3	-	-	3	43,792	
Netherlands	38,060	9	29	-	-	-	38	38,099	
Belgium/Luxembourg	22,537	-	-	-	-	25	25	22,562	
United Kingdom	14,002	0	16	-	0	0	17	14,018	
Irish Republic	22	19	-	-	2,375	-	2,394	2,416	
Denmark	4,481	-	22	-	-	9	30	4,511	
Greece	-	312	-	-	-	16	328	344	
Spain	12	-	-	-	-	-	-	12	
Portugal	379	-	-	-	-	-	-	379	
Austria	39,946	514	14	-	-	-	528	40,474	
Finland	6,039	0	-	-	-	-	0	6,039	
Sweden	-	-	-	-	-	-	-	-	
<b>EU Fifteen</b>	<b>345,292</b>	<b>6,972</b>	<b>91</b>	<b>3</b>	<b>2,386</b>	<b>98</b>	<b>9,550</b>	<b>354,842</b>	

Source: Eurostat

Table 171: Summary of intra and extra European Union trade in dairy products <sup>a</sup>, 1997 to 2002

Product	1997	1998	1999	2000	2001	2002
	tonnes					
<b>Imports</b>						
Liquid milk	4,815,814	5,252,538	5,434,848	5,500,704	5,265,411	5,100,124
Cream	444,587	493,578	578,360	565,300	515,062	544,034
Butter and butteroil (incl. dairy spreads)	714,561	684,187	696,169	723,169	697,050	710,274
Cheese	1,793,479	1,861,614	1,994,318	2,051,957	2,293,221	2,126,365
Condensed milk	415,159	534,968	496,346	561,047	528,467	501,446
Whole milk powder (incl. semi-skimmed milk powder)	242,099	254,543	250,810	259,390	244,645	246,607
Skimmed milk powder	565,017	519,847	597,520	630,553	529,306	539,760
Powdered whey	529,250	602,723	580,808	632,627	680,653	632,718
Liquid whey	410,433	535,638	549,089	628,401	737,930	583,459
<b>Exports</b>						
Liquid milk	4,759,792	5,136,876	5,527,657	5,413,721	5,213,946	4,698,850
Cream	525,983	596,581	647,576	667,870	604,560	569,070
Butter and butteroil (incl. dairy spreads)	790,388	754,139	696,902	688,181	712,156	686,256
Cheese	2,196,135	2,251,277	2,266,611	2,398,850	2,863,933	2,527,091
Condensed milk	778,847	842,715	811,895	816,466	829,053	724,853
Whole milk powder (incl. semi-skimmed milk powder)	817,015	826,611	795,474	799,043	684,585	714,665
Skimmed milk powder	805,067	638,826	778,850	916,158	593,726	554,579
Powdered whey	720,313	728,652	740,889	864,280	899,264	830,420
Liquid whey	523,695	703,599	716,948	1,114,845	1,096,267	354,842

Source: Eurostat

<sup>a</sup> 15 countries in the EU.

Table 172: Summary of dairy product imports by European Union countries <sup>a</sup>, 1997 to 2002

Product	1997	1998	1999	2000	2001	2002
	tonnes					
<b>Intra EU</b>						
Liquid milk	4,802,365	5,236,145	5,420,275	5,490,059	5,245,925	5,086,702
Cream	443,462	492,167	576,369	563,257	512,601	539,376
Butter and butteroil (incl. dairy spreads)	626,466	589,474	591,194	619,061	582,839	594,728
Cheese	1,682,207	1,734,436	1,848,633	1,903,447	2,118,352	1,970,215
Condensed milk	415,060	534,328	495,837	560,201	521,118	495,725
Whole milk powder (incl. semi-skimmed milk powder)	235,949	246,819	242,636	251,635	225,983	228,870
Skimmed milk powder	492,513	453,889	524,691	552,120	471,870	471,022
Powdered whey	527,303	600,977	576,002	623,142	674,289	618,328
Liquid whey	383,037	503,506	514,200	577,174	666,814	518,630
<b>Extra EU</b>						
Liquid milk	13,449	16,393	14,573	10,645	19,485	13,422
Cream	1,425	1,411	1,991	2,043	2,442	4,658
Butter and butteroil (incl. dairy spreads)	88,095	94,713	104,975	104,126	114,212	115,546
Cheese	111,272	127,178	145,685	148,510	174,869	156,150
Condensed milk	99	640	509	845	7,350	5,718
Whole milk powder (incl. Semi-skimmed milk powder)	6,150	7,724	8,174	7,754	18,663	17,738
Skimmed milk powder	72,504	65,958	72,829	78,434	57,436	68,738
Powdered whey	1,947	1,746	4,086	9,485	6,364	14,390
Liquid whey	27,396	32,132	34,889	51,223	71,116	64,829

<sup>a</sup> 15 countries in the EU.

Source: Eurostat

Table 173: Summary of dairy product exports by European Union countries<sup>a</sup>, 1997 to 2002

Product	1997	1998	1999	2000	2001	2002
	tonnes					
<b>Intra EU</b>						
Liquid milk	4,566,987	5,008,034	5,422,590	5,302,012	5,101,246	4,584,314
Cream	479,405	557,772	600,586	615,719	554,923	516,738
Butter and butteroil (incl. dairy spreads)	571,437	585,835	535,767	511,818	540,264	478,640
Cheese	1,684,492	1,802,477	1,868,153	1,940,536	2,394,652	2,040,007
Condensed milk	432,415	519,333	501,419	537,016	503,467	458,959
Whole milk powder (incl. semi-skimmed milk powder)	243,855	236,838	218,911	222,978	206,656	189,555
Skimmed milk powder	522,295	463,873	506,609	558,677	451,111	393,355
Powdered whey	604,057	625,507	614,267	677,223	688,712	628,378
Liquid whey	523,519	702,857	716,027	1,112,583	1,094,214	345,292
<b>Extra EU</b>						
Liquid milk	192,805	128,842	105,067	111,709	112,700	114,536
Cream	46,578	38,809	46,990	52,151	49,637	52,332
Butter and butteroil (incl. dairy spreads)	218,951	168,304	161,135	176,363	171,893	207,616
Cheese	511,643	448,795	398,458	458,313	469,342	487,085
Condensed milk	346,432	323,382	310,476	279,450	325,585	265,894
Whole milk powder (incl. semi-skimmed milk powder)	573,160	589,773	576,563	576,065	477,929	490,120
Skimmed milk powder	282,772	174,953	272,241	357,481	142,615	161,224
Powdered whey	116,256	103,145	126,622	187,057	210,552	202,041
Liquid whey	176	742	921	2,282	2,053	9,550

<sup>a</sup> 15 countries in the EU.

Source: Eurostat

# World

## World

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Production of cow's milk, butter, skim milk powder, whole milk powder, cheese and condensed and evaporated milk

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## General

Much of the information in this section has been sourced from data gathered or estimated by the Food and Agriculture Organisation (FAO).

Data on cow's milk production relates to total production of whole milk, excluding milk suckled by young animals but including amounts fed to livestock. Figures generally relate to a January to December reporting year although some countries report data for periods other than a calendar year, notably Australia where data relates to years ending 30 June and New Zealand where data represents years ending 31 May.

FAO have access to official statistics on cow's milk production for most important milk producing countries, where they are not available FAO make estimates based on food consumption surveys and other indicators.

Tables showing dairy product output represent total production and include product manufactured in dairy factories and on farm. No data are available for some countries and those reported by other countries may be underestimated, particularly as regards farm production. The world totals therefore reflect the limited coverage of the data.

Data on cheese relate to all kinds of cheese produced, including full-fat, low-fat, hard and soft, fresh cheese and curd. Data on butter include ghee, which is liquid butter clarified by boiling.

**Table 174: World production of cow's milk  
by top forty milk producing countries, 2000 to 2002**

Country	Cow's milk production		
	2000	2001	2002
	thousand tonnes		
United States of America	76,023	74,980	77,248
India	34,000	34,400	35,300
Russian Federation	32,000	32,600	33,100
Germany	28,331	28,191	27,874
France	24,999	24,903	25,197
Brazil	20,380	21,146	22,315
United Kingdom	14,488	14,707	14,869
New Zealand	12,235	13,119	13,866
Ukraine	12,436	13,169	13,820
China	8,632	10,601	13,356
Poland	11,889	11,884	11,873
Australia	11,183	10,872	11,620
Italy	12,309	11,275	11,335
Netherlands	11,155	11,291	10,842
Mexico	9,311	9,472	9,658
Argentina	10,121	9,866	8,500
Japan	8,497	8,301	8,385
Pakistan	8,039	8,192	8,350
Canada	8,090	8,106	7,964
Turkey	8,732	8,489	7,491
Spain	6,107	6,146	6,023
Colombia	5,762	5,877	6,021
Ireland	5,160	5,382	5,368
Iran, Islamic Rep of	4,760	4,866	4,975
Belarus	4,490	4,834	4,773
Romania	4,301	4,457	4,637
Denmark	4,720	4,553	4,590
Kazakhstan	3,686	3,878	4,061
Switzerland	3,889	3,943	3,944
Uzbekistan	3,633	3,667	3,610
Belgium	3,689	3,694	3,469
Austria	3,340	3,300	3,292
Sweden	3,297	3,290	3,226
Sudan	3,120	3,168	3,216
South Africa	2,540	2,700	2,750
Czech Republic	2,789	2,783	2,729
Kenya	2,672	2,442	2,689
Korea, Republic of	2,253	2,339	2,537
Finland	2,450	2,456	2,532
Ecuador	2,007	2,431	2,433
<b>Total World</b>	<b>488,191</b>	<b>493,580</b>	<b>502,989</b>

Source: FAO

**Table 175: World butter and ghee production  
by top forty butter producing countries, 2000 to 2002**

Country	Butter and Ghee Production		
	2000	2001	2002
	thousand tonnes		
India	1,960	2,250	2,400
United States of America	579	559	615
Pakistan	493	509	525
France	448	449	450
Germany	425	420	435
New Zealand	344	391	415
Russian Federation	267	269	295
Poland	162	179	180
Australia	170	151	164
Ireland	145	139	147
Iran, Islamic Rep of	149	152	146
United Kingdom	132	126	141
Ukraine	135	158	131
Italy	133	128	131
Belgium	125	102	120
Netherlands	126	130	119
Turkey	118	112	99
Egypt	97	97	97
China	82	84	88
Japan	88	80	83
Canada	80	85	79
Brazil	71	76	78
Czech Republic	64	65	66
Belarus	65	67	65
Korea, Republic of	55	57	61
Spain	39	32	56
Argentina	53	53	55
Finland	55	54	54
Denmark	46	47	49
Sweden	50	49	48
Switzerland	37	38	41
Austria	37	37	33
Portugal	25	25	27
Nepal	19	20	20
Colombia	18	19	19
Morocco	18	18	19
Bangladesh	17	18	18
Ethiopia	16	18	18
Lithuania	19	18	17
Sudan	16	16	16
<b>Total World</b>	<b>7,244</b>	<b>7,572</b>	<b>7,903</b>

Source: FAO

**Table 176: World skimmed milk powder production by top forty skimmed milk producing countries, 2000 to 2002**

Country	Skimmed milk powder production		
	2000	2001	2002
	thousand tonnes		
United States of America	661	645	715
France	278	246	307
Germany	322	290	306
Australia	247	244	261
New Zealand	187	251	255
Russian Federation	248	252	252
Japan	194	175	183
Poland	139	151	150
Ukraine	113	115	122
Ireland	79	86	97
Belgium	84	65	90
Canada	75	90	82
United Kingdom	83	71	71
Netherlands	69	68	63
Czech Republic	60	60	60
Korea, Republic of	46	45	45
Denmark	38	40	42
Argentina	45	44	32
Belarus	28	32	32
Sweden	41	38	30
Switzerland	24	19	27
Finland	24	20	20
Mexico	18	18	18
Uruguay	15	10	16
Slovakia	14	14	14
Spain	5	7	14
Hungary	14	14	14
Portugal	11	9	12
Estonia	7	6	12
Israel	9	10	11
Chile	10	11	10
Austria	13	8	9
Lithuania	18	14	9
Romania	6	8	8
South Africa	8	8	8
Jordan	0	0	6
Norway	5	6	5
Slovenia	4	4	4
Moldova, Republic of	3	4	3
Venezuela, Bolivia Rep of	3	3	3
<b>Total World</b>	<b>3,260</b>	<b>3,215</b>	<b>3,432</b>

Source: FAO

## World Production

**Table 177: World whole milk powder production by top forty whole milk producing countries, 2000 to 2002**

Country	Whole milk powder production		
	2000	2001	2002
	thousand tonnes		
New Zealand	449	516	540
Brazil	256	345	355
France	258	241	244
Australia	187	205	239
Argentina	202	185	180
Mexico	102	104	105
United Kingdom	105	83	105
Netherlands	96	108	100
Russian Federation	75	85	95
Denmark	97	88	81
Germany	84	83	73
Chile	59	72	69
Belgium	67	56	56
Japan	52	51	54
Poland	31	34	40
Colombia	39	39	40
Venezuela, Bolivia Rep of	35	36	36
Uruguay	18	22	34
Ireland	48	40	32
United States of America	51	19	22
Switzerland	13	18	20
Czech Republic	20	20	20
Ukraine	11	23	17
Spain	11	14	15
Belarus	14	15	14
Sri Lanka	11	16	14
Kazakhstan	13	13	13
South Africa	10	13	13
Estonia	4	11	11
Bolivia	9	7	10
Portugal	9	8	9
Hungary	7	8	7
Zimbabwe	7	7	7
Costa Rica	6	7	7
Lithuania	5	5	5
Korea, Republic of	5	5	5
Sweden	6	7	5
Panama	5	4	5
Ecuador	4	4	4
Canada	4	4	4
<b>Total World</b>	<b>2,507</b>	<b>2,636</b>	<b>2,719</b>

Source: FAO

**Table 178: World cheese production  
by top forty cheese producing countries, 2000 to 2002**

Country	Cheese production		
	2000	2001	2002
	thousand tonnes		
United States of America	4,079	4,084	4,239
France	1,722	1,770	1,783
Germany	1,656	1,743	1,746
Italy	1,078	1,084	1,134
Netherlands	671	641	637
Poland	475	510	535
Egypt	462	484	498
Russian Federation	391	435	489
Argentina	468	420	444
Australia	373	376	431
United Kingdom	<b>340</b>	<b>385</b>	<b>396</b>
Canada	351	344	359
Denmark	306	318	320
New Zealand	297	281	307
Greece	233	244	251
Iran, Islamic Rep of	220	224	228
China	206	217	225
Spain	198	204	203
Austria	145	163	169
Switzerland	173	178	166
Sudan	150	152	152
Mexico	147	154	152
Ukraine	84	123	145
Czech Republic	142	140	138
Sweden	132	130	132
Japan	126	123	123
Hungary	96	108	121
Ireland	102	127	120
Turkey	129	124	113
Israel	100	102	105
Finland	98	103	104
Venezuela, Bolivia Rep of	97	97	98
Syrian Arab Republic	87	92	91
Norway	84	83	83
Portugal	76	77	78
Belarus	53	69	62
Chile	51	57	60
Lithuania	48	58	59
Slovakia	54	58	57
Belgium	59	62	55
<b>Total World</b>	<b>16,400</b>	<b>16,793</b>	<b>17,269</b>

Source: FAO

**Table 179: World evaporated and condensed milk production by top forty producing countries, 2000 to 2002**

Country	Evaporated and condensed milk production		
	2000	2001	2002
	thousand tonnes		
Germany	550	570	503
Netherlands	274	305	273
United States of America	212	213	270
Peru	222	212	245
Russian Federation	191	200	202
Thailand	27	94	177
Mexico	112	114	116
China	76	79	83
Ukraine	49	62	70
Canada	68	67	69
Czech Republic	61	58	56
United Kingdom	<b>62</b>	<b>61</b>	<b>49</b>
South Africa	37	37	37
Japan	36	34	33
Spain	24	34	31
Panama	27	27	30
Belgium	40	45	30
France	32	36	29
Malaysia	22	22	22
Australia	28	20	20
Luxembourg	23	21	19
Kazakhstan	25	18	18
Colombia	10	13	17
Cuba	16	16	15
Poland	15	15	15
Uzbekistan	11	12	12
Portugal	9	8	11
Norway	14	11	11
Argentina	10	10	10
Denmark	9	9	9
Lithuania	7	7	8
Hungary	6	17	7
Switzerland	3	6	6
Korea, Republic of	4	4	5
Zimbabwe	4	4	4
Slovakia	4	5	4
Lebanon	3	3	4
Belarus	3	4	4
Moldova, Republic of	1	3	3
Italy	1	1	1
<b>Total World</b>	<b>2,332</b>	<b>2,482</b>	<b>2,533</b>

Source: FAO

Table 180: World trade in dairy products, 2000

Country	Imports			Exports		
	Butter <sup>a</sup>	Cheese	Milk powder	Butter <sup>a</sup>	Cheese	Milk powder
	thousand tonnes					
European Union <sup>b</sup>	111.4	157.4	94.8	174.4	435.2	930.4
<b>Other EEC</b>						
Iceland	0.0	0.2	0.0	0.2	0.0	0.1
Norway	0.2	3.2	0.0	3.8	19.4	1.1
Switzerland	7.4	30.8	1.5	0.0	53.9	13.0
<b>Total EEC</b>	<b>119.0</b>	<b>191.5</b>	<b>96.3</b>	<b>178.5</b>	<b>508.5</b>	<b>944.6</b>
<b>Eastern Europe</b>						
Czech Republic	0.7	10.9	1.0	22.2	18.1	28.8
Estonia	1.6	2.2	10.1	5.4	4.6	32.8
Hungary	0.6	9.7	1.3	0.7	18.1	1.6
Latvia	1.1	1.9	1.3	2.6	2.6	4.1
Lithuania	0.8	0.2	30.8	11.7	32.2	35.9
Poland	12.2	6.3	16.2	2.9	27.1	85.9
Slovakia	0.4	4.1	10.1	2.2	10.4	8.4
Slovenia	0.5	4.7	2.1	2.2	10.5	5.0
Other Eastern European	7.7	14.3	23.3	17.9	10.0	36.6
<b>Total Eastern Europe</b>	<b>25.6</b>	<b>54.3</b>	<b>96.2</b>	<b>67.8</b>	<b>133.6</b>	<b>239.1</b>
<b>North America</b>						
Canada	14.5	26.1	18.0	6.7	17.2	30.8
USA	15.1	160.5	17.1	2.2	49.9	130.9
Other North American	0.3	0.8	0.5	0.0	0.0	0.0
<b>Total North America</b>	<b>29.9</b>	<b>187.5</b>	<b>35.6</b>	<b>8.9</b>	<b>67.1</b>	<b>161.7</b>
<b>South America</b>						
Argentina	0.1	8.0	0.2	6.0	25.0	119.7
Brazil	10.4	11.0	139.0	0.1	0.0	0.2
Chile	2.0	6.6	16.1	0.2	1.6	2.5
Peru	5.1	0.9	27.1	0.0	0.0	0.0
Uruguay	0.0	0.2	0.1	5.2	16.3	26.3
Other South American	1.2	14.9	96.2	0.2	1.0	11.3
<b>Total South America</b>	<b>18.8</b>	<b>41.6</b>	<b>278.6</b>	<b>11.7</b>	<b>43.9</b>	<b>160.0</b>
<b>Oceania</b>						
Australia	10.7	38.8	4.7	114.8	232.7	423.2
New Zealand	0.7	2.0	1.5	358.5	237.6	591.6
Other Oceania	6.9	2.5	11.7	0.0	0.0	0.0
<b>Total Oceania</b>	<b>18.3</b>	<b>43.3</b>	<b>18.0</b>	<b>473.4</b>	<b>470.4</b>	<b>1,014.8</b>
<b>Other Countries</b>						
Russian Federation	53.9	35.5	34.2	5.0	2.7	49.7
India	0.0	0.2	0.5	0.0	0.1	7.7
Japan	0.4	200.5	52.3	0.0	0.0	3.0
African countries	93.9	58.3	178.8	2.7	4.4	4.7
Rest of the World	326.9	956.7	1,637.8	65.7	58.0	242.7
<b>Total World</b>	<b>686.7</b>	<b>1,769.4</b>	<b>2,428.3</b>	<b>813.7</b>	<b>1,288.7</b>	<b>2,828.0</b>
EU as % of Total <sup>b</sup>	16.2	8.9	3.9	21.4	33.8	32.9

<sup>a</sup> Includes butter concentrates (butteroil, ghee etc).

<sup>b</sup> Excluding intra-EU trade.

Source: FAO



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# Appendices

## Appendix 1

### Weights and measures

#### The Metric and Imperial Systems

#### The Metric system

1 litre	=	1,000 millilitres
1 milligram	=	1,000 micrograms
1 gram	=	1,000 milligrams
1 kilogram	=	1,000 grams
1 tonne	=	1,000 kilograms
1 hectare	=	10,000 sq metres
1 sq kilometre	=	100 hectares
1 centimetre	=	10 millimetres
1 metre	=	100 centimetres
1 kilometre	=	1,000 metres

#### The Imperial system

1 pint	=	20 fluid ounces
1 gallon	=	8 pints
1 pound	=	16 ounces
1 hundredweight	=	112 pounds
1 long ton	=	20 hundredweight
1 acre	=	4,840 sq yards
1 square mile	=	640 acres
1 foot	=	12 inches
1 yard	=	3 feet
1 mile	=	1,760 yards

#### Units

#### Abbreviations

litre	=	l
Gram	=	g
hectare	=	ha
metre	=	m
millimetre	=	mm
milligram	=	mg
microgram	=	µg

millilitre	=	ml
tonne	=	t
centimetre	=	cm
kilometre	=	km
ounces	=	oz
pound	=	lb
hundredweight	=	cwt

#### Weight and Volume

**1 litre of distilled water at 4°C weighs 1 kilogram exactly**

1 litre of whole milk weighs 1.02969 kilograms

1 kilogram of whole milk has a volume of 0.97116 litres

**1 gallon of distilled water at 62°F weighs 10 pounds exactly**

1 pint of whole milk weighs 20.64 ounces

1 gallon of whole milk weighs 10.32 pounds

1 long ton of whole milk has a volume of 217.05 gallons

*Note: The density of a liquid depends on the temperature, normally decreasing as the temperature rises. The volume occupied by a given weight of the liquid will therefore depend on the temperature. In the case of milk, the volume will also depend on the composition of the milk, in particular its fat content. The metric values shown here are commonly accepted as standard conversion factors and have generally been adopted in calculation of data for this book. However the actual factor used by contributors outside The Milk Development Council may differ from those shown in that a lesser or greater number of digits after the decimal point may have been used. This in turn will affect any factors which are derived from the initial calculations.*

# Appendices

## Appendix 2

### Conversion factors

#### Metric - Imperial

Metric to Imperial	
--------------------	--

#### Volume

1 millilitre	= 0.035195 fluid ounces
1 litre	= 35.1950 fluid ounces 1.75975 pints 0.21997 gallons

Imperial to Metric	
--------------------	--

1 fluid ounce	= 28.4131 millilitres
1 pint	= 0.56825 litres
1 gallon	= 4.54609 litres

#### Weight

1 gram	= 0.035274 ounces
1 kilogram	= 35.2740 ounces 2.20462262 pounds
1 tonne	= 2204.62 pounds 0.98421 long ton

1 ounce	= 28.3495 grams
1 pound	= 453.59 grams
1 long ton	= 1.01604691 tons

#### Area

1 sq metre	= 10.7639 sq feet 1.19599 sq yards
1 hectare	= 2.471 acres

1 sq foot	= 0.092903 sq. metres
1 sq yard	= 0.836127 sq. metres
1 acre	= 0.404686 hectares
1 sq mile	= 258.999 hectares 2.58999 sq kilometres

#### Length

1 millimetre	= 0.039370 inches
1 centimetre	= 0.393701 inches
1 metre	= 3.2808 feet 1.09361 yards
1 kilometre	= 0.621371 miles

1 inch	= 25.4 millimetres
1 foot	= 0.3048 metres
1 yard	= 0.9144 metres
1 mile	= 1.60934 kilometres

#### Weight – Volume relationship (Milk) <sup>a</sup>

1 kilogram	= 1.70901 pints = 0.21363 gallons
1 tonne	= 213.63 gallons

1 pint	= 0.58514 kilograms
1 gallon	= 4.6811 kilograms

<sup>a</sup> See note to Appendix 1.

# Appendices

## Appendix 3

### UK dairy industry organisations

#### **Dairy Council for Northern Ireland**

456 Antrim Road, Belfast BT15 5GB.

Tel: 02890 770 113 Fax: 02890 781 224

E-mail: [mike.johnston@dairycouncil.co.uk](mailto:mike.johnston@dairycouncil.co.uk)

---

#### **Dairy Industry Association Ltd**

93 Baker Street, London W1U 6RL

Tel: 020 7486 7244 Fax: 020 7487 4734

E-mail: [mailbox1@dia-ltd.org.uk](mailto:mailbox1@dia-ltd.org.uk)

---

#### **Milk Development Council**

Stroud Road, Cirencester, Gloucestershire GL7 6JN

Tel: 01285 646 500 Fax: 01285 646 501

E-mail: [info@mdc.org.uk](mailto:info@mdc.org.uk)

---

#### **Northern Ireland Dairy Association**

Quay Gate House, Quay Gate Business Park, 15 Scrabo Street, Belfast BT5 4BD

Tel: 02890 452 292 Fax: 02890 453 373

E-mail: [mail@nida.co.uk](mailto:mail@nida.co.uk)

---

#### **Scottish Dairy Association**

4 Torphichen Street, Edinburgh EH3 8JQ

Tel: 0131 221 0109 Fax: 0131 221 0220

E-mail: [sda@scotdairy.org.uk](mailto:sda@scotdairy.org.uk)

---

#### **Specialist Cheesemakers Association**

c/o Provision Trade Federation, 17 Clerkenwell Green, London EC1R 0DP

Tel: 020 7253 2114 Fax: 020 7608 1645

E-mail [info@provtrade.co.uk](mailto:info@provtrade.co.uk)

---

#### **The Dairy Council**

164 Shaftesbury Avenue, London WC2H 8HL

Tel: 020 7395 4030 Fax: 020 7420 9679

E-mail: [info@dairycouncil.org.uk](mailto:info@dairycouncil.org.uk)

Website [www.milk.co.uk](http://www.milk.co.uk)

---

# Appendices

## Appendix 4

### Other useful telephone numbers

Agra Europe	01892 533 813
Association of Unpasteurised Milk Producers & Consumers	0118 984 2955
Ayrshire Cattle Society	01292 267 123
British Cheese Board Information Line	0117 921 1744
British Goat Society	01626 833 168
British Grassland Society	01189 318 189
British Sheep Dairying Association	01684 892 661
Cattle Information Service	0141 848 0404
Central Bureau voor de Statistiek, Netherlands	(00) 31 703 373 800
Central Statistics Office, Republic of Ireland	(00) 353 214 535 000
Country Landowners' Association	020 7235 0511
Customs and Excise	0845 010 9000
Dairy Hygiene Inspectorate	01823 285 540
Danmarks Statistik, Denmark	(00) 45 3917 3917
DARD	02890 520 100
DEFRA (formerly MAFF), farming statistics	01904 455 332
DEFRA (formerly MAFF), milk and dairy products statistics	01904 455 092
DEFRA (formerly MAFF), milk, pigs, eggs and poultry	020 7270 8207
Department of Trade and Industry	020 7215 5000
English Guernsey Cattle Society	01923 695 204
European Commission, Brussels	(00) 32 2299 1111
European Commission, London	020 7973 1992
Eurostat Datashop	(00) 352 433 52251
Farmers Union of Wales	01970 820 820
Farming and Countryside Education	02476 535 707
Fertiliser Manufacturers Association	01780 781 360

## Appendices Appendix 4: Other useful telephone numbers

Food and Drink Federation	020 7836 2460
Food from Britain	020 7233 5111
Food Standards Agency	020 7276 8829
<hr/>	
Genus	01270 536 536
Goat Advisory Bureau	01278 732 397
<hr/>	
Herdcare	0131 445 6294
Holstein UK	01923 695 200
Home Grown Cereals Authority	020 7520 3900
<hr/>	
Ice Cream Alliance	01159 858 505
Ice Cream Federation	020 7629 0738
Institut National de la Statistique et des Études Économiques, France	(00) 33 1 4117 5050
Institut National de Statistique, Belgium	(00) 32 2 548 6211
Instituto Nacional de Estadística, Spain	(00) 34 91 583 9100
Instituto Nacional de Estatística, Portugal	900) 351 21 842 6100
International Dairy Federation, Brussels	(00) 32 2 733 9888
Isle of Man Creameries	01624 632 000
Istituto Nazionale di Statistica, Italy	(00) 39 06 46731
<hr/>	
Jersey Cattle Society	01923 695 203
<hr/>	
Meat and Livestock Commission	01908 677 577
<hr/>	
National Assembly for Wales	02920 825 052
National Farmers Union	020 7331 7200
National Farmers Union of Scotland	0131 472 4000
National Food Survey	020 7270 8563
National Milk Records	01249 462 000
National Statistical Service of Greece	(00) 301 32 49 862

## Appendices Appendix 4: Other useful telephone numbers

OECD, Paris	(00) 33 1 4524 9505
Office for National Statistics	0845 601 3034
Organic Advisory Service	01488 657 600
Organic Conversion Information Service Helpline	0117 922 7707
Organic Farming Soil Association	0117 929 0661
Royal Agricultural Society	02476 696 969
Royal Association of British Dairy Farmers	01926 887 477
Rural Payments Agency (formerly IBEA)	01189 583 626
Scottish Executive	0131 244 6420
Service Central de la Statistique et des Études Économiques, Luxembourg	(00) 352 478 4252
Shorthorn Cattle Society	02476 696 549
Society of Dairy Technology	01869 345 838
Statistisches Bundesamt, Germany	(00) 49 611 751
Statistics Austria	(00) 43 1 711 28
Statistics Finland	(00) 358 917 342 220
Statistics Sweden	(00) 46 8 5069 4000
Stilton Cheesemakers' Association (Information Bureau)	08457 413 321
United Dairy Farmers, Northern Ireland	02890 372 237
United Kingdom Dairy Association	020 7659 7307
Welfare Food Scheme (reimbursement unit)	020 7887 1212
Women's Food and Farming Union	02476 693 171
World Trade Organisation	(00) 4122 739 5111

# Appendices

## Appendix 5

### Internet sites for sourcing agricultural information

**British Cheese Board:**

<http://www.cheeseboard.co.uk>

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**Canadian Dairy Information Centre:**

<http://www.dairyinfo.agr.ca/>

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**Department for Environment, Food and Rural Affairs (DEFRA formerly MAFF):**

<http://www.defra.gov.uk>

---

**Department of Agriculture and Rural Development (DARD, formerly DANI):**

<http://www.dardni.gov.uk>

---

**European Commission - Agricultural Directorate:**

[http://www.europa.eu.int/comm/dgs/agriculture/index\\_en.htm](http://www.europa.eu.int/comm/dgs/agriculture/index_en.htm)

---

**Eurostat (Statistical Office of the European Union):**

<http://europa.eu.int/comm/eurostat/>

---

**Fonterra Co-operative Group (incorporating New Zealand Dairy Board):**

<http://www.fonterra.com>

---

**Food and Agriculture Organisation (FAO):**

**World Agricultural Information Centre**

<http://www.fao.org>

---

**FAOSTAT Database**

<http://apps.fao.org>

---

**Food from Britain:**

<http://www.foodfrombritain.com>

---

**International Dairy Federation (IDF):**

<http://www.fil-idf.org>

---

**Japan Dairy Council:**

<http://jdc.lin.go.jp/eng/eng02.htm>

---

**Milk Development Council:**

<http://www.mdc.org.uk>

<http://www.mdcdatum.org.uk>

---

**National Farmers Union:**

<http://www.nfu.org.uk>

---

**New Zealand Dairy Board - see Fonterra**

---

**Office for National Statistics (ONS):**

<http://www.statistics.gov.uk/>

---

**Organisation for Economic Co-operation and Development (OECD):**

<http://www.oecd.org/>

---

**Food, Agriculture and Fisheries**

<http://www.oecd.org/agr/index.htm>

---

**Rural Payments Agency (RPA formerly IBEA):**

<http://www.rpa.gov.uk>

---

**Scottish Executive:**

<http://www.scotland.gov.uk>

---

**Statistics Canada:**

<http://www.statcan.ca/start.html>

---

**The Dairy Council:**

<http://www.milk.co.uk>

---

**United States Department of Agriculture (USDA),  
Economics and Statistics System at Mann Library, Cornell University:**

<http://usda.mannlib.cornell.edu/usda/usda.html>

---

**World Trade Organisation:**

<http://www.wto.org/>

---



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**Eden Publishing**

**Veronica Harrington**

The Thatched House, The Street, Framingham Pigot, Norfolk, NR14 7QJ

Tel: 01508 494418

Fax: 01508 494419

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**Malcolm Bridges**

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Fax: 01438 71630

E-mail: [malcolm.bridges@btinternet.com](mailto:malcolm.bridges@btinternet.com)



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