Milk and milk product statistics

Data extracted in November 2019.
Planned article update: January 2021.
What is the milk in the EU used for?

Fabrication of:

- Cheese: 37.7%
- Butter: 29.4%
- Cream: 11.9%
- Drinking milk: 11.0%
- Acidified milk: 4.3%
- Powder products: 2.9%
- Other products: 2.7%

Milk refers to whole milk which is processed (98.1% of the available milk). The remains (1.9%) is non-processed milk, which is delivered to the national non-dairy industry (agri-food, feedstuff industries etc.), returned to farms or lost.

Data for 2018.

Milk products, EU-28, 2018
Source: Eurostat (apro_mk_pobta)

This article is part of a set that is taken from Eurostat’s publication [Agriculture, forestry and fishery statistics - 2019 edition](http://ec.europa.eu/eurostat). It presents information and statistics on milk and milk products in the European Union (EU).
Milk production

Another rise in raw milk production to 172.2 million tonnes in 2018, 97 % of which was cows’ milk

The production of raw milk on the EU’s farms was a provisional 172.2 million tonnes in 2018, which represents a year-on-year increase of 1.6 million tonnes. This higher level of production can be put in some context by looking at production levels in the run-up to the abolition of quotas; EU farms produced 164.8 million tonnes of raw milk in 2014 and 159.0 million tonnes in 2013.

The vast majority of raw milk is delivered to dairies; only 12.2 million tonnes was used on farms, either being consumed by the farmer and his family, sold directly to consumers, used as feed or processed directly. Of the 160.0 million tonnes of milk delivered to dairies, 156.0 million tonnes was cows’ milk, the rest being a combination of ewes’ milk, goats’ milk and buffalos’ milk (see Figure 1).

**Production and use of milk, EU-28, 2018**

(million tonnes)

<table>
<thead>
<tr>
<th>Milk produced on farms</th>
<th>172.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cows’ milk</td>
<td>156.0</td>
</tr>
<tr>
<td>Ewes’ milk</td>
<td>2.8</td>
</tr>
<tr>
<td>Goats’ milk</td>
<td>2.3</td>
</tr>
<tr>
<td>Buffalos’ milk</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Milk delivered to dairies: 160.0

Milk used by the dairies: 156.0

Raw milk imported: 6.4

Products obtained: 158.4

- Fresh products: 117.4
  - Drinking milk: 38.1
  - Other fresh products: 157

- Manufactured products: 41.0
  - Cheese: 10.3
  - Butter: 2.4
  - Milk Powder: 3.0
  - Other manufactured products: 2.0
  - Whey: 54.8

(*) Includes other yellow fat dairy products, expressed in butter equivalent.

(1) In liquid whey equivalent.

(2) In whole milk equivalent.

Source: Eurostat (online data codes: apro_mk_pobta and apro_mk_farm)

Figure 1: Production and use of milk, EU-28, 2018 (million tonnes) Source: Eurostat (apro_mk_pobta) and (apro_mk_farm)

The average apparent milk yield per cow across the EU still rising

There are a number of factors that can affect individual milk yields but the apparent milk yield results from the structure of the dairy herd. In the EU, the apparent milk yield continued to rise in 2018, reaching 7 280 kg per dairy cow. As a national average, apparent yields were highest in Denmark (9 851 kg per cow), Estonia (9 353 kg per cow) and Finland (9 095 kg per cow) and lowest in Romania (3 279 kg per cow) and Bulgaria (3 678 kg per cow). Among the main cows’ milk producing Member States, apparent yields were well-above the EU average in Germany, the United Kingdom and the Netherlands (see Figure 2) but below average in France, Poland and Italy.
One fifth of all the EU’s cows’ milk was collected by dairies in Germany

Traditionally, hygiene rules have required that the collection of milk has been frequent and moved over a short distance between farms and dairies. The development of cooling tanks on farms and of bigger milk tankers have made this sanitary issue less critical. Meanwhile, the removal of national milk quotas has contributed to cross-border milk flows between farms and between dairies. Nevertheless, this is relatively limited. In 2018, one-fifth of the EU’s cows’ milk was produced by farms in Germany and a similar proportion (20.8 %) was processed by German dairies. Indeed, just as Germany, France, the United Kingdom, the Netherlands, Poland and Italy together provided a little over two-thirds (68.5 %) of the raw cows’ milk produced, so they also accounted for a little over two-thirds (69.7 %) of cows’ milk collected by dairies (see Figure 3).
Whilst cows' milk is the major milk used by EU dairies, in several Member States other milks contribute significantly to milk production. In 2018, Spain produced 1.0 million tonnes of milk from ewes and goats, with Greece and France both producing 0.8 million tonnes. Italy also produced 0.7 million tonnes of milk from animals other than cows and this included almost all of the EU’s production of milk from buffaloes. Whereas the collection of these other milks was dwarfed by that from cows in most countries, there were some exceptions. A majority (57.1%) of the milk delivered to dairies in Greece came from ewes and goats in 2018 (see Figure 4). A little over one fifth (22.5%) of milk delivered to dairies in Cyprus also came from ewes and goats.
Moderate decline in real-terms price of milk after strong rebound in 2017

The average real-terms price of milk has fluctuated sharply in recent years (see Figure 5): strong declines in 2015 and 2016 were followed by a strong rebound in 2017. Relative to these changes, the decline in the real-terms price in 2018 was moderate (-3.7 % on average). Among the principal milk-producing Member States, there were notably stronger than average declines in the real-terms price of milk in 2018 in Germany (-6.3 %), the Netherlands (-7.8 %) and Ireland (-6.6 %) but lower than average declines in France (-1.1 %), the United Kingdom (-0.4 %) and Italy (-1.8 %).
Milk products

Two thirds of all EU’s milk delivered to dairies used to make cheese and butter

The milk delivered to dairies is processed into a number of fresh and manufactured products. Dairy products are recorded in terms of their weight. It is thus difficult to compare the quantities of various products (for example, tonnes of fresh milk and of milk powder). The volume of whole or skimmed milk used in dairy processes provides more comparable figures1.

In 2018, 156.8 million tonnes (98.9 %) of the whole milk available to the EU’s dairy sector was processed. This was 0.2 million tonnes less than in 2017.

The production of 2.4 million tonnes of butter and so-called ‘yellow products’ in 2018 required 46.1 million tonnes of whole milk (see Table 1). The production of butter and yellow products also generated 43.0 million tonnes of skimmed milk. Together with the 15.4 million tonnes generated through the fabrication of cream, this skimmed milk was used for the processing of other dairy products.

1These two dimensions (quantities of whole and skimmed milk used) reflect the material balance of the valuable milk components, especially fat (in whole milk only) and protein (in total milk used).
**Table 1: Utilisation of milk and dairy products obtained, EU-28, 2018**

(million tonnes)

<table>
<thead>
<tr>
<th>Sub-total of processes generating skimmed milk</th>
<th>Utilisation of milk</th>
<th>Product obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2.0</td>
<td>156.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-total of processes consuming skimmed milk</th>
<th>Utilisation of milk</th>
<th>Product obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking milk</td>
<td>12.6</td>
<td>17.3</td>
</tr>
<tr>
<td>Powder products</td>
<td>21.3</td>
<td>4.6</td>
</tr>
<tr>
<td>Concentrated milk</td>
<td>1.1</td>
<td>1.6</td>
</tr>
<tr>
<td>Acidified milk</td>
<td>1.4</td>
<td>6.8</td>
</tr>
<tr>
<td>Buttermilk</td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Cheese</td>
<td>17.0</td>
<td>59.1</td>
</tr>
<tr>
<td>Milk based drinks</td>
<td>1.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Caseins</td>
<td>5.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Other fresh products</td>
<td>-0.2</td>
<td>1.9</td>
</tr>
</tbody>
</table>

*Source: Eurostat (online data codes: apro_mk_pobta and apro_mk_farm)*

Indeed, 17.0 million tonnes of skimmed milk together with 59.1 million tonnes of whole milk were used to produce 10.3 million tonnes of cheese in 2018. Together, the production of cheese and butter used two-thirds (67.1 %) of all the whole milk available to dairies (see Infographic 1).

The EU also produced 30.1 million tonnes of drinking milk, 12.6 million tonnes of which was from skimmed milk and a further 17.3 million tonnes of which was from whole milk. Drinking milk accounted for about one-tenth (11.0 %) of all the whole milk used by dairies in 2018.

A further 21.3 million tonnes of raw milk were dried into 3.0 million tonnes of dairy powders.
The United Kingdom produced 6.8 million tonnes of drinking milk in 2018, by far the largest quantity among Member States, accounting for a little over one fifth (22.5 %) of the EU total. Germany produced the most cheese among Member States (2.2 million tonnes, 21.8 % of the EU total), closely followed by France (a provi-
sional 1.9 million tonnes, 18.5% of the EU total), with Italy the next highest (1.3 million tonnes, 12.7% of the EU total).

Source data for tables and graphs

- Milk and milk product statistics: tables and figures

Data sources

Milk and milk product statistics are collected under Decision 1997/80/EC and implementing Directive 1996/16/EC. They cover farm production and the utilisation of milk, as well as the description (structure), collection and production activity of dairies. Due to the small number of dairy enterprises, national data are often subject to statistical confidentiality. Thus, providing EU totals in this context is a challenge and some of the information presented in the analysis is based on partial data for the Member States (which may exclude several countries).

On the one hand, statistics from these few enterprises provide early estimates on trends. On the other, a complete overview of the dairy sector requires detailed information from farms and this means that the final figures on milk production are only available at an EU level about one year after the reference year. Dairy products are recorded in terms of weight. It is thus difficult to compare the various products (for example, fresh milk and milk powder). The volume of whole or skimmed milk used in the dairy processes provides more comparable figures.

Context

Until 1st April 2015, the EU dairy sector had operated within a framework of milk quotas that were introduced in 1984 to address the problem of surplus production. The abolition of quotas resulted in a restructuring and further modernisation of the sector, including a reorientation towards the most productive herds.

There is no ‘typical’ European dairy cow breed, though the Friesian-Holstein is the most prevalent.

Other articles

- Agricultural production - livestock and meat
- Agricultural production - livestock and meat
- Agricultural production - crops
- Agricultural production - orchards

Tables

- Agriculture (t_agri), see:

Agricultural production (t_apro)

Milk and milk products (t_apro_mk)
Database

- Agriculture (agri), see:

Agricultural production (apro)
- Milk and milk products (apro_milk)
  - Fat contents and protein contents (cow’s milk) - annual data (apro_milk_fatprot)
  - Milk collection (all milks) and dairy products obtained - annual data (apro_milk_pobta)
  - Cows’ milk collection and products obtained - annual data (apro_milk_cola)
  - Cows’ milk collection and products obtained - monthly data (apro_milk_colm)
  - Production and utilization of milk on the farm - annual data (apro_milk_farm)
  - Dairies structure - triennial (apro_milk_str)

Dedicated section

- Agriculture

Publications

- Agriculture, forestry and fishery statistics — 2019 edition (Statistical book)
- Portrait of the EU milk production sector - Statistics in focus 17/2013

Methodology

- Animal production (ESMS metadata file — apro_anip_esms)

Legislation

- Directive 1996/16/EC of 19 March 1996 on statistical surveys of milk and milk products
- Summaries of EU Legislation: Statistical surveys of dairy products

Visualisations

- Eurostat Statistical Atlas (Chapter 11: Agriculture)
- Regional Statistics Illustrated - Agriculture

External links

- European Commission - Agriculture and rural development
- European Commission - Agriculture and rural development – milk and milk products