This article is part of a set that is taken from Eurostat’s publication Agriculture, forestry and fishery statistics - 2018 edition. It presents information and statistics on milk and milk products in the European Union (EU).

Milk production

Another rise in raw milk production to 170.1 million tonnes in 2017, 97 % of which was cows’ milk

The production of raw milk on the EU’s farms was a provisional 170.1 million tonnes in 2017, which represents a year-on-year increase of 1.9 million tonnes. The increase in 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 11.5 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 158.6 million tonnes of milk delivered to dairies, 154.8 million tonnes was cows’ milk, the rest being a combination of ewes’ milk, goats’ milk and buffalos’ milk (see Figure 1).
The average apparent milk yield per cow across the EU topped 7 000 kg in 2017.

There are a number of factors that can affect milk yields beyond the breed of dairy cow. There are a number of management factors like the feed, water supply and the frequency of milking. Disease, particularly mastitis, can affect the secretory tissues. Weather plays a role; in a hot drought, for example, grass growth, water supply and an animal’s feed intake are all reduced.

The apparent milk yield in the EU topped 7 000 kg per cow in 2017. As a national average, apparent yields were highest in Denmark (9 569 kg per cow), Estonia (9 143 kg per cow) and Finland (8 889 kg per cow) and lowest in Romania (3 231 kg per cow) and Bulgaria (3 713 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).
One fifth of all the EU’s cows’ milk collected by dairies in Germany

Traditionally, the microorganisms in milk have required that the collection of milk has been frequent and that the milk collected travels relatively short distances between farms and dairies. With technological advances and investments in cooling tanks and bigger milk tankers, the frequency of visits might begin to decline and the distance to dairies lengthened. Distinct ‘national’ markets were once the norm in the EU but now there is greater cross-border ownership of farms and processing. Nevertheless, the biggest dairy farm producing countries still remain the main dairy processing countries.

Not only was one fifth of the EU’s cows’ milk produced on farms in Germany, but one fifth (20.6 %) was processed by dairies in 2017. Indeed, just as Germany, France, the United Kingdom, the Netherlands, Poland and Italy together provided a little over two-thirds (68.6 %) of the raw cows’ milk produced on farms, so they also accounted for a little over two-thirds (69.9 %) of cows’ milk collected by dairies (see Figure 3).
Whilst cows' milk dominates the market for the milk used by dairies, there are parts of the EU where milk from other animals is collected and processed in relatively large quantities. 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 buffalos.

Whereas milk collected from these other animals was dwarfed by that from cows in most of these countries, there were some exceptions. A majority (57.1 %) of the milk delivered to dairies in Greece came from ewes and goats in 2017 (see Figure 4). Between one fifth and one quarter (22.5 %) of milk delivered to dairies in Cyprus also came from ewes and goats.
Partial rebound in real-terms price of milk after two years of falling prices

The real-terms price of milk across the EU rebounded strongly (an average +17.1 %) in 2017 after two years of strong falls. However, it still remained below the recent peak of 2014 (see Figure 5). Stronger than average price rises were recorded in some of the biggest milk producing Member States; the real-terms increase in Germany was +31.7 %, in the United Kingdom +24.0 %, in Poland +23.6 % and in the Netherlands +22.2 %. In large part this reflected the steepness of the price reductions in the preceding two years.
Milk and milk product statistics

Figure 5: Deflated price indices for milk, EU-28, 2010-2017 (index 2010 = 100)Source: Eurostat (apri_pi10_outa)

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 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.

In 2017, 156.9 million tonnes (98.9 %) of the whole milk available to the EU’s dairy sector was processed. This was 3.5 million tonnes more than in 2016.

The production of 2.4 million tonnes of butter and so-called ‘yellow products’ in 2017 required 46.0 million tonnes of whole milk (see Table 1). The production of butter and yellow products also generated 42.9 million tonnes of skimmed milk. Together with the 16.4 million tonnes generated through the fabrication of cream, this skimmed milk was used for the processing of other dairy products.

These three dimensions (quantity of products, quantities of whole and skimmed milk used) reflect the material balance of the valuable milk components, especially content of fat (in whole milk) and protein (in milk used).
Table 1: Utilisation of milk and dairy products obtained, EU-28, 2017 (million tonnes)

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<tr>
<th>Source: Eurostat (online data codes: apro_mk_pobta and apro_mk_farm)</th>
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<td><strong>Utilisation of milk and dairy products obtained, EU-28, 2017 (million tonnes)</strong></td>
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<td>Caseins</td>
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<td>Other fresh products</td>
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Indeed, 17.4 million tonnes of skimmed milk together with 58.1 million tonnes of whole milk was used to produce 10.2 million tonnes of cheese in 2017. Together, the production of cheese and butter used two-thirds (66.3 %) of all the whole milk processed by dairies (see Infographic 1).

The EU produced 30.7 million tonnes of drinking milk, 12.8 million tonnes of which was from skimmed milk and a further 17.5 million tonnes of whole milk. Drinking milk accounted for about one tenth (11.1 %) of all the whole milk processed by dairies in 2017.

A further 21.3 million tonnes of skimmed milk and 4.7 million tonnes of whole milk were processed into 3.1 million tonnes of milk powder products.
The United Kingdom produced a little more than one fifth (22.5% or 6.9 million tonnes) of the EU’s drinking milk in 2017. Among the Member States, Germany produced the most cheese (2.2 million tonnes, 21.8% of the EU total), closely followed by France (a provisional 1.9 million tonnes, 18.8% of the EU total) and with Italy producing a little less still (1.3 million tonnes, 12.4% of the EU total).

Infographic 1: Milk products, EU-28, 2017Source: Eurostat (apro_mk_pobta)
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 re-orientation towards the most productive herds.

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_mk)
  Fat contents and protein contents (cow’s milk) - annual data (apro_mk_fatprot)
  Milk collection (all milks) and dairy products obtained - annual data (apro_mk_pobta)
Dedicated section

- Agriculture

Publications

- Agriculture, forestry and fishery statistics — 2018 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

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