HOUSE OF COMMONS LIBRARY

BRIEFING PAPER

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UK Dairy Industry Statistics

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Summary

This briefing paper sets out key statistics and current trends for the UK dairy industry.

- The UK is the eleventh-largest milk producer in the world.
- Milk accounted for 16.9% of total agricultural output in the UK in 2018 and was worth £4.5bn in market prices.
- The total number of UK dairy cows has fallen from 2.6 million in 1996 to 1.9 million in 2018, a 27% reduction.
- The UK produced 15.0 billion litres of milk in 2018, the highest annual figure since 1990.
- In 2019, the UK recorded a trade surplus in volume terms for dairy for the first time since records began (1997).
- In 2018, the UK had a negative trade balance in butter and cheese, but a positive trade balance in milk and cream.
- Farm-gate milk prices for August 2019 were 28.6 pence per litre, up from a low of 21.5 ppl in August 2016. In February 2020, the farm-gate price was 28.6 ppl.
- Between 1995 and today, doorstep delivery has declined from 45% to 3% of the retail milk market.
- Supply chains were disrupted following the lockdown imposed to suppress the coronavirus outbreak in March 2020.

1. UK Dairy Herd and producers

The table below shows that the number of dairy cows in the UK declined steadily from 1996 to 2013, before seeing a slight increase in 2014 and 2015. The number declined again in 2017 and 2018. Figures for 2019 are not yet available. The total has fallen from 2.6 million in 1996 to 1.9 million in 2018, a 27% reduction.

Dairy cow numbers (thousands): UK 1996-2019

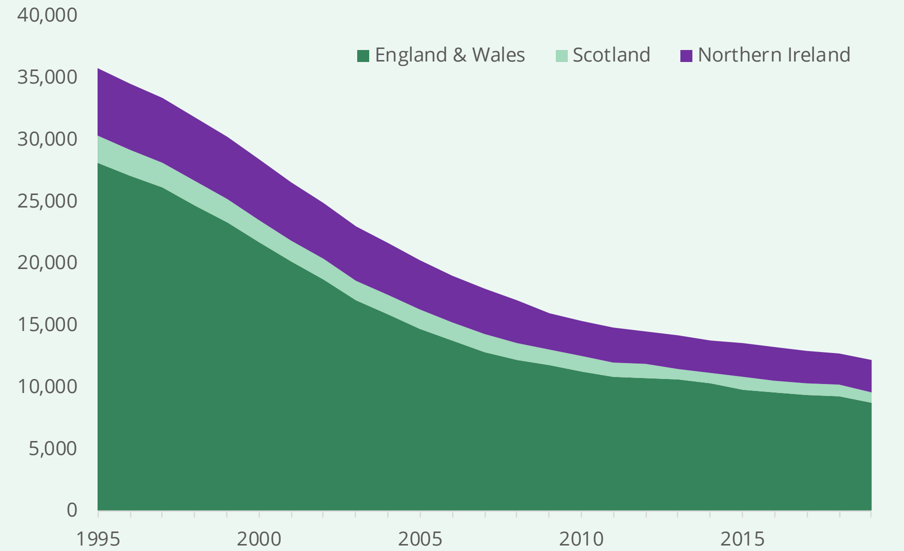
	England	Wales	Scotland	Northern Ireland	**United Kingdom**
1996	1,785	297	225	281	**2,587**
1997	1,702	281	217	279	**2,479**
1998	1,660	276	216	288	**2,439**
1999	1,661	279	214	286	**2,440**
2000	1,575	269	207	284	**2,336**
2001	1,490	270	196	295	**2,251**
2002	1,462	268	199	298	**2,227**
2003	1,435	268	198	290	**2,191**
2004	1,374	245	195	288	**2,102**
2005	1,276	238	197	291	**2,001**
2006	1,259	237	183	296	**1,974**
2007	1,236	234	181	286	**1,937**
2008	1,199	229	175	289	**1,892**
2009	1,163	221	169	285	**1,838**
2010	1,160	221	168	281	**1,830**
2011	1,129	220	164	282	**1,796**
2012	1,121	224	167	285	**1,796**
2013	1,113	223	166	279	**1,782**
2014	1,143	234	170	294	**1,841**
2015	1,162	246	176	312	**1,895**
2016	1,156	249	175	317	**1,897**
2017	1,150	251	174	316	**1,891**
2018	1,143	254	175	311	**1,883**
2019	..	252	176	314	..

Source: AHDB Dairy, UK cow numbers dataset

Notes: Grey cells indicate numbers recorded using old calculation systems. England, Wales and Scotland switched to the new Cattle Tracing System (CTS) and Northern Ireland switched to the new Animal and Public Health Information System (APHIS) in the mid-2000s. This should be taken into consideration when comparing data prior to these changes.

The decline in the size of the dairy herd has been accompanied by a similar fall in the number of dairy producers. The number of registered dairy producers in the UK fell from 35,741 in 1995 to 12,209 in 2019, a 66% reduction. The chart below shows that the drop in dairy farmers has been especially pronounced in England and Wales.

Number of registered dairy production holdings, June: 1995-2019



Source: AHDB Dairy, Producer numbers

Notes: From 2005 figures for Northern Ireland include farms on which dairy cows account for more than two-thirds of the total standard output.
Scotland has changed its typology in 2013 which is now based on 11 farm types and uses the cattle tracing scheme, figures have been revised from 2012 onwards, resulting in a significant fall in the number of holdings compared with 2011.
For England and Wales, all premises where milk is produced are referred to as 'Production Holdings'; this includes holdings with sheep, goats and buffalo

The table below shows that the average herd size has risen, as those holdings with smaller herds have left the industry. In 2018 the average number of cows per UK herd was 148 compared to 115 in 2004 (up 29%), and 75 in 1996 (up 97%). Data for 2019 is not yet available.

Average dairy herd size: UK, 2008-2018

	2008	2009	2010	2011	2012†	2013	2014	2015†	2016	2017	2018
England	119	121	125	126	127	128	136	145	148	150	151
Wales	105	105	112	115	117	118	126	137	142	146	147
Scotland	129	130	133	138	162	164	171	176	180	190	194
Northern Ireland	97	96	101	103	107	104	111	114	118	120	122
United Kingdom	115	116	121	123	125	125	132	140	143	146	148

Source: AHDB Dairy, Average size of dairy herd in UK by country

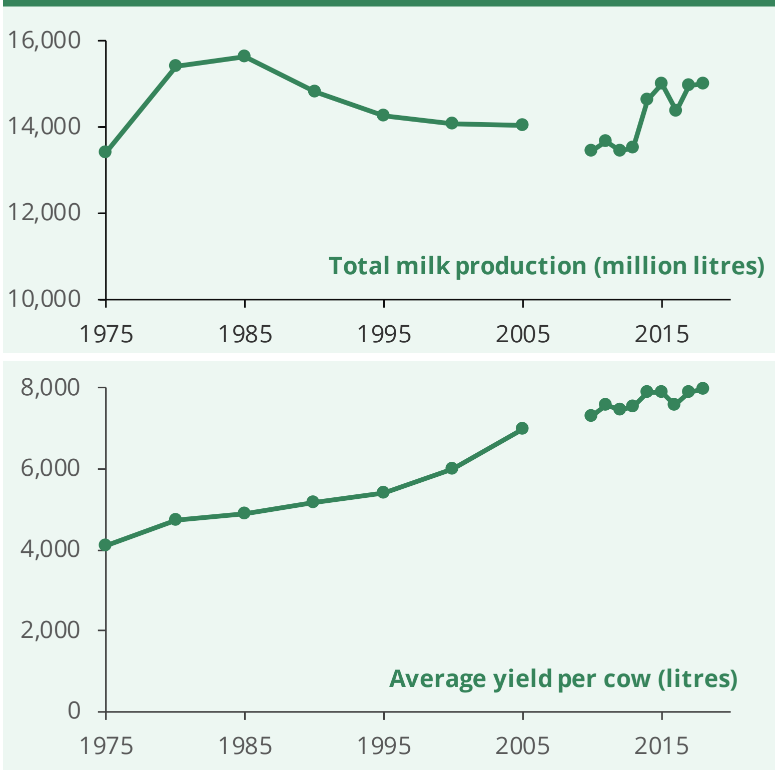
Note: † changes in methodology in 2012 and 2015 mean figures are not comparable year on year

2. Production

Whilst the number of UK dairy cows has decreased, the yield per cow has increased by 94% since 1975, up from 4,099 to 7,959 litres in 2018. As a result, total domestic milk production has increased by 12% over this period, from 13,407 million litres to 15,008 million litres in 2018 (see the charts below). Data for 2019 is not yet available.

Total production had been steadily falling from a high of 16.7 billion litres in 1983 to a low of 13.1 billion litres in 2009, before beginning to rise again.

UK milk production



Source: Defra, Agriculture in the UK, various years

Notes: Total milk production is based on all milk produced on farm, including milk consumed in farm households, milk fed to livestock and farm waste. Suckled milk is excluded.

Only 6% of all UK produced milk was exported in 2018, with the rest used domestically. The table below shows how consumption patterns have changed over the last 20 years.

UK milk usage, 1998 & 2018 (million litres)			
	1998	2018	Change
Liquid consumption	6,768	6 676	-1.4%
Butter	281	315	+12.3%
Cheese	3,270	4 438	+35.7%
Cream	235	281	+19.6%
Yoghurt		385	
Condensed milk	643	323	-49.7%
Milk powder	1,910	871	-54.4%
Other manufacture	469	488	+4.0%

Source: *Defra, Agriculture in the UK 2018, table 8.6*

The largest declines since 1998 have been in the quantities of milk used for producing milk powder and condensed milk. Prior to 1988, more milk was used to manufacture milk powder than cheese.

In 2018, the UK was the 11th largest milk producer in the world. It used to be the third-largest milk producer in the EU, after Germany and France. Milk accounted for 16.9% of total agricultural output in the UK in 2018 and was worth £4.5bn in market prices.[1]

The table below shows milk production between 1992 and 2018 (most recent data) in the top fifteen milk-producing countries in 2018. Milk production in the UK increased in 2018 after a decline in 2007 and 2012.

Production in China, Pakistan, India, New Zealand, Turkey and Brazil has increased considerably over the period. Note that since the Defra figures and UN figures are gathered and reported on a different basis, the production figures for the national dataset do not precisely match the international dataset.

Cow's milk production in the top 15 milk-producing countries in the world: 1992-2018 (million tonnes)

	1992	1997	2002	2007	2012	2018	*Change 1992-2018*	*Change 2002-2018*
United States of America	68.4	70.8	77.1	84.2	90.9	98.7	+44.2%	+27.9%
India	24.3	29.1	34.6	46.8	54.0	89.8	+269.8%	+159.5%
Brazil	16.3	19.2	22.3	26.1	32.3	33.8	+107.9%	+51.6%
Germany	28.0	28.7	27.9	28.4	30.5	33.1	+18.1%	+18.6%
China	5.3	6.3	13.4	35.6	37.8	31.2	+490.4%	+133.3%
Russian Federation	47.0	33.8	33.2	31.9	31.6	30.3	-35.5%	-8.6%
France	25.7	24.9	25.2	24.4	24.0	25.5	-0.8%	+1.4%
New Zealand	8.1	11.1	13.9	15.6	20.1	21.4	+165.7%	+54.3%
Turkey	8.7	8.9	7.5	11.3	16.0	20.0	+129.9%	+167.5%
Pakistan	3.8	7.6	8.4	11.1	13.4	16.7	+341.4%	+100.3%
United Kingdom	14.8	14.8	14.9	14.0	13.9	15.3	+3.6%	+3.0%
Poland	13.2	12.1	11.9	12.1	12.7	14.2	+7.7%	+19.4%
Mexico	7.0	7.8	9.7	10.3	10.9	12.0	+72.3%	+24.3%
Italy	10.9	11.8	11.3	10.6	10.6	11.9	+9.6%	+5.7%
Netherlands	11.9	10.9	10.7	11.1	11.7	10.6	-10.7%	-0.4%

Source: FAOSTAT, Food and Agriculture Organisation of the United Nations

1 Defra, *Agriculture in the United Kingdom 2018*, Table 4.1; 8.6

3. International Trade

There is little overseas trade in liquid milk, but considerable trade in processed products. In 2019, the UK recorded a trade surplus in volume terms for dairy for the first time since records began (1997). This is partially driven by reduced imports of skim milk and buttermilk, and higher exports and lower imports of both cream and butter.[2]

The table below shows that in 2018, the UK had a negative trade balance in butter and cheese, but a positive trade balance in milk and cream.

UK trade balance in dairy products, 2009, 2014 & 2018
Thousand tonnes

	Imports			Exports			Trade balance		
	2009	2014	2018	2009	2014	2018	2009	2014	2018
Cheese	419	469	517	105	134	190	-314	-335	-327
Milk & Cream	158	221	266	539	654	881	381	433	615
Butter	96	95	84	27	51	62	-70	-44	-22

2018 figures are provisional.

Source: Defra, Agriculture in the UK 2018, table 13.3

Imports make up a very small proportion of total supply of liquid milk in the UK. 1% of milk available to UK dairies was imported in 2014. However, milk imports have risen from 75 million litres in 2009 to 107 million litres (provisional) in 2014.[3]

4. Consumption

In 1995, doorstep delivery accounted for 45% of household purchases of milk in England and Wales.[4] Nowadays, Dairy UK, the trade body for the UK dairy industry, estimates the proportion in Great Britain to be around 3%.

This decline has been accompanied by a growing price differential between milk from retailers and from doorstep delivery. In the UK in 1995, a pint of milk cost an average of 37.9p on the doorstep and 23.9p from retailers. [5] In March 2020, a pint cost 81p on the doorstep and 28.3p from retailers.[6]

2 AHDB, UK dairy trade balance
3 Defra, *Agriculture in the United Kingdom 2018,* Table 8.6
4 Agriculture and Horticulture Development Board, *The Brief*, 2000
5 Agriculture and Horticulture Development Board, *The Brief*, 2000
6 AHDB Dairy, *UK Retail Prices*

5. Farm-gate Prices

Farm-gate prices are those received by milk producers. They are monitored monthly and represent the average price per litre, net of delivery charges.

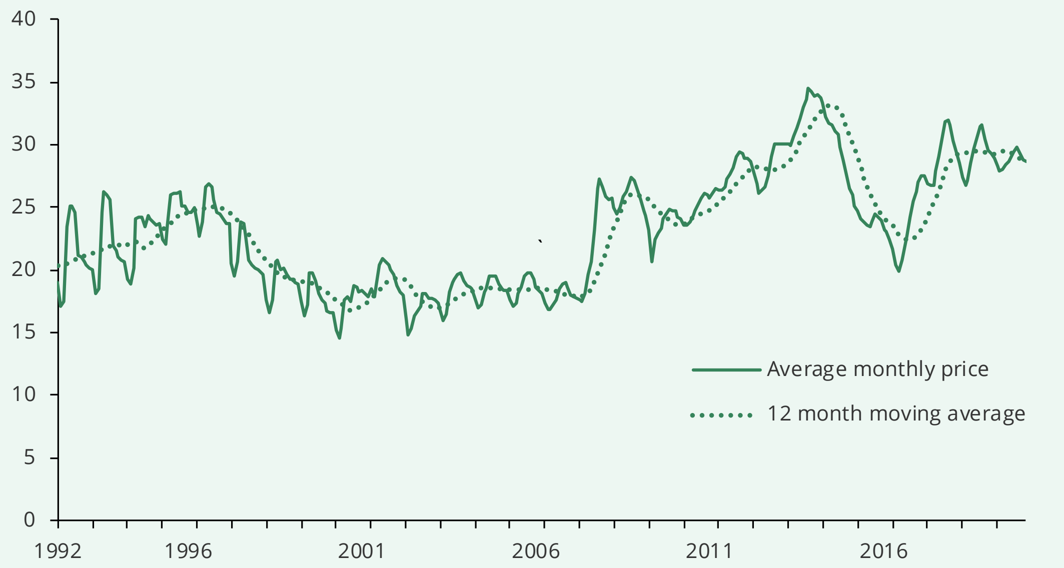
The chart below shows that farm-gate prices had been in decline, from around 25 pence per litre (ppl) in 1997 to 18 ppl in November 2007. There was a sharp upturn in prices in late 2007 and a sustained rise from 2010 onwards. Prices peaked in November 2013 and fell by 30% in the two years to November 2015. Prices have been rising again since 2017.

Monthly milk prices are seasonal and tend to be lower in the summer. In 2016, the price in August was 21.5 ppl, the lowest monthly figure since August 2009. In 2019, the August price was 28.6 ppl.

Some of the downward pressure on prices during the 2015 dairy crisis was explained by international developments; the dairy arm of the Agriculture and Horticulture Development Board (AHDB Dairy) said that key importing countries had built up stock, reducing demand, and milk production was strong in the major exporting countries, increasing supply.[7] Defra also pointed to international changes:

> High domestic production across the year combined with the ban on dairy imports to Russia and falling returns from global commodity markets had a large impact on the industry. In consequence, the majority of UK milk processors reduced the payments to farmers for raw liquid milk.[8]

UK farm-gate milk prices 1992-2020, excluding bonus payments
Pence per litre



Source: AHDB Dairy, UK farmgate milk prices

[7] AHDB Dairy, *Dairy Statistics, an Insider's Guide 2015*
[8] Defra, *Agriculture in the UK 2015*

5.1 Coronavirus crisis: milk prices

The lockdown imposed by the Government in response to the outbreak of COVID-19 in March 2020 resulted in the disruption of supply chains for dairy farms. Severely reduced demand from the hospitality industry meant some farmers were unable to sell their milk and saw no option but to dispose of it. Farm-gate prices went down (although they have since recovered somewhat).[9] The National Farmers Union estimated in early April that at least 2,000 dairy farmers were in financial difficulty.[10]

The AHDB said on 29 April that more than 5,200 of the estimated 9,200 dairy farmers in Great Britain had experienced a milk price reduction in spring 2020, while nearly 500 had milk collections cancelled, 500 had payments deferred, 2,200 have been asked to reduce milk output and 700 have had the volume they get paid a full price on reduced (these groups may overlap). See the AHDB's online post for information about the financial impact on dairy farmers.[11] The AHDB has also analysed the potential financial impact of reductions in milk prices and/or production levels for a period of time (see AHDB, The financial impact of COVID-19 market disruption and production reduction measures on dairy farms, 28 April 2020).

In a PQ answered on 29 April, Defra Minister Victoria Prentis stated that between 5-10% of milk produced is sold to the hospitality industry and that "the vast majority of dairy farmers continue to supply their contracts at the usual price." She also said that dairy farms can apply for support available to all businesses and that the Government has "eased some elements of competition law" to benefit the dairy sector. According to the press statement accompanying this measure, this would enable the industry to "work together to address current market challenges, avoiding waste and maintaining productive capacity to meet future demand."[12]

[9] Macrotrends, Milk futures trend, year to date
[10] National Farmers' Union, 'Coronavirus: NFU seeks crisis meeting with Defra secretary to save UK's iconic dairy industry'
[11] AHDB, The financial impact of Coronavirus on dairy farmers, 30 April 2020
[12] GOV.UK, 'Dairy industry to join together to manage milk supply', Press release, 17 April 2020

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