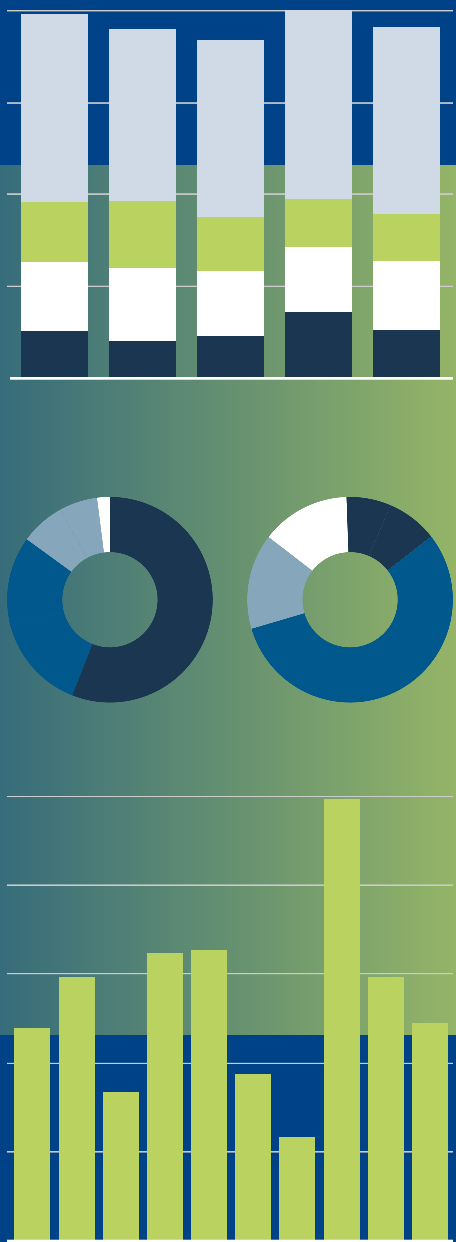


ZuivelNL
KETENORGANISATIE VAN DE ZUIVELSECTOR

Dutch dairy in figures

2019

Economic importance, Market overview, Dairy farming, Milk processing industry, Sustainability, Trade, Consumption

2019

The publication Zuivel in Cijfers (Dairy in Figures) provides an overview in figures of the key developments in the Dutch dairy sector in 2019 and is divided into eight topics:

• The Netherlands: land of dairy • Economic importance • Market overview • Dairy farming • Milk processing industry • Sustainability • Trade • Consumption

Tables with detailed statistical information can be consulted on the website of ZuivelNL (www.zuivelnl.org). The figures for the year 2019 are provisional, but will only differ slightly from the final figures.

THE NETHERLANDS: LAND OF DAIRY

Modern sector

The Netherlands is known worldwide as a dairy country. There is a long tradition of milk, butter and cheese production and consumption and the typical pasture landscape with cattle and windmills is inextricably connected with the perception of our country. Behind this image lies a modern sector, with consideration for people, animals and the environment. It is one of the largest and most vital agricultural sectors in the Netherlands and contributes significantly to the Dutch economy. The Dutch dairy sector is one of the frontrunners in the international dairy world. As a result, the sector has a strong image and good access to important (growth) markets. Greater efficiency on dairy farms and in the production locations remains necessary from a cost price perspective and in order to remain internationally competitive. Distinctive product quality, food safety, animal health, animal welfare and sustainable development are important prerequisites in that respect. The professionalism of dairy farmers, in the dairy industry and in supplying sectors is decisive for the successful development of the sector.

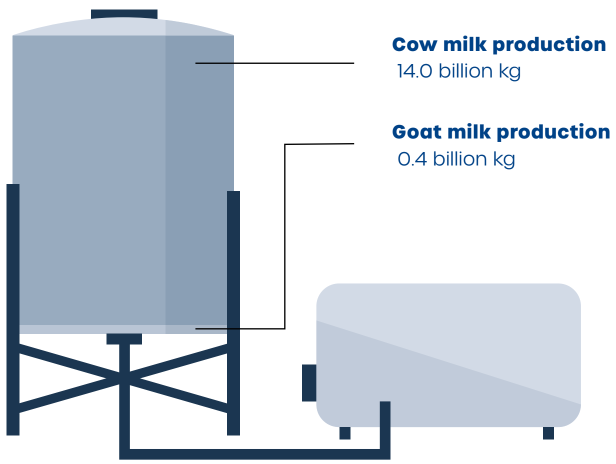
End of milk quota system has major impact

The abolition of the milk quota system at the end of March 2015 and the generally promising outlook for the global dairy market gave a boost to new investments in dairy farming and the dairy industry, aimed at capacity growth through modernisation, expansion and new construction. However, the strong growth in dairy farming, and thus an extension in the dairy herd, resulted in the phosphate production ceiling set by the European Commission for the Netherlands being exceeded in 2015 and 2016. In order to reduce phosphate production, the phosphate reduction plan came into force in 2017 and the phosphate rights system has been in effect since 1 January 2018. Under pressure from these measures, the dairy herd has now been brought back to the level of around the time the quota system was abolished, causing phosphate production to fall well below the permitted sector ceiling.

Oriented to the future through sustainable, economically responsible development

In the coming years, Dutch dairy farming will continue to focus on a healthy, balanced development within the environmental constraints, whereby further reduction in nitrogen and greenhouse gas emissions are important points for attention. Within the dairy industry as well, climate measures, relating in particular to greenhouse gas reduction and energy policy, are increasingly impacting businesses. Both the dairy industry and dairy farming sectors want to contribute in an economically responsible manner to realising the national climate objectives that follow from the global climate accord reached in Paris (2015).

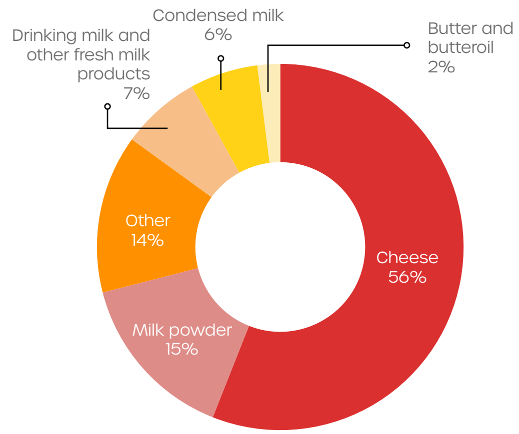
MILK PRODUCTION



Cow milk production
14.0 billion kg

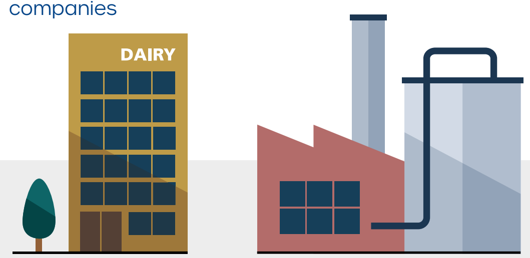
Goat milk production
0.4 billion kg

MILK PROCESSING

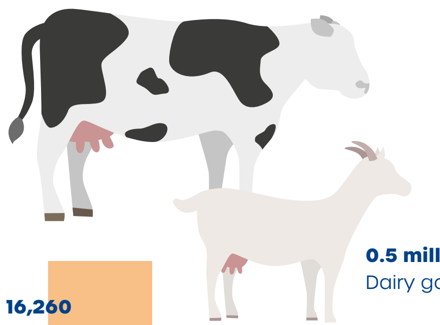


25
Milk processing companies

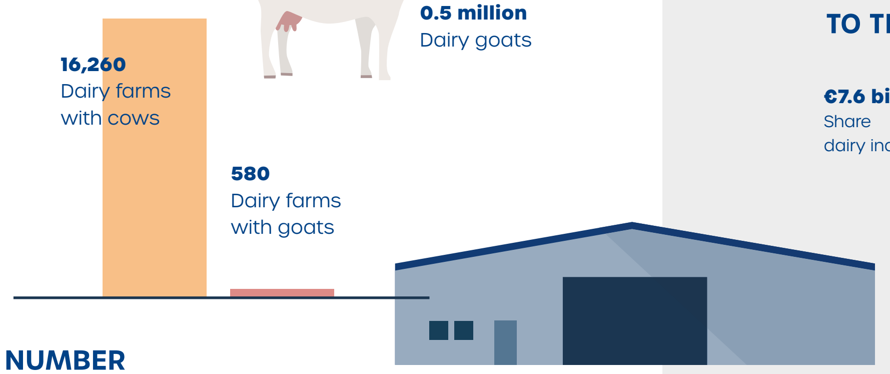
53
Dairy plants



1.6 million
Dairy cows



0.5 million
Dairy goats



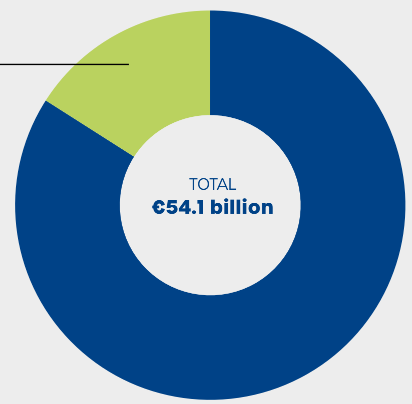
16,260
Dairy farms with cows

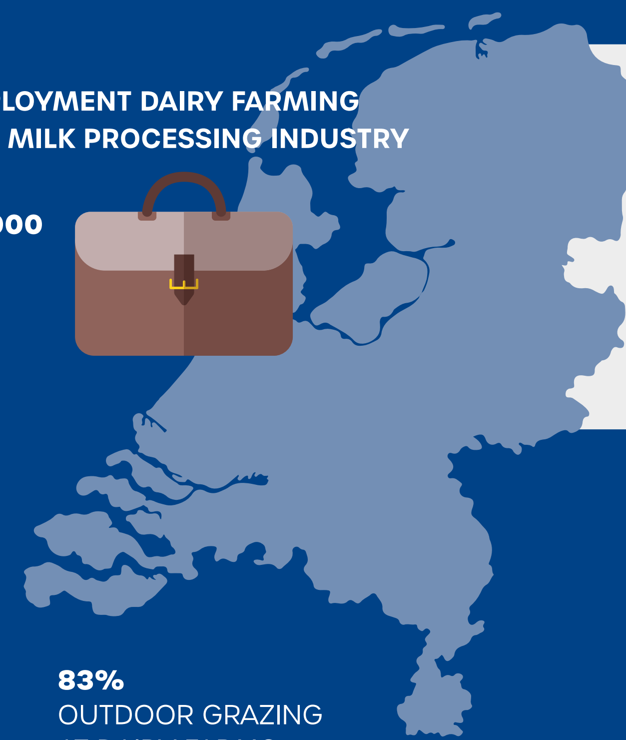
580
Dairy farms with goats

NUMBER OF DAIRY FARMS IN THE NETHERLANDS

CONTRIBUTION OF AGRO & FOOD TO THE ECONOMY

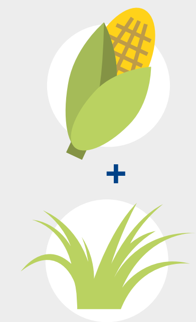
€7.6 billion
Share dairy industry





EMPLOYMENT DAIRY FARMING AND MILK PROCESSING INDUSTRY

49,000
fte



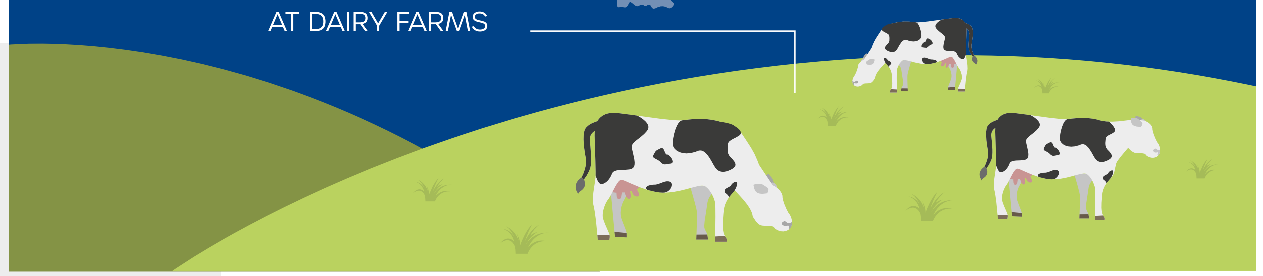
TOTAL SURFACE AREA GRASSLAND AND MAIZE
1.1 MILLION HECTARES

THIS IS **26.3%** OF THE SURFACE AREA IN THE NETHERLANDS

EXPORT REVENUES
€7.8 billion

7.1% contribution to trade surplus

83%
OUTDOOR GRAZING AT DAIRY FARMS



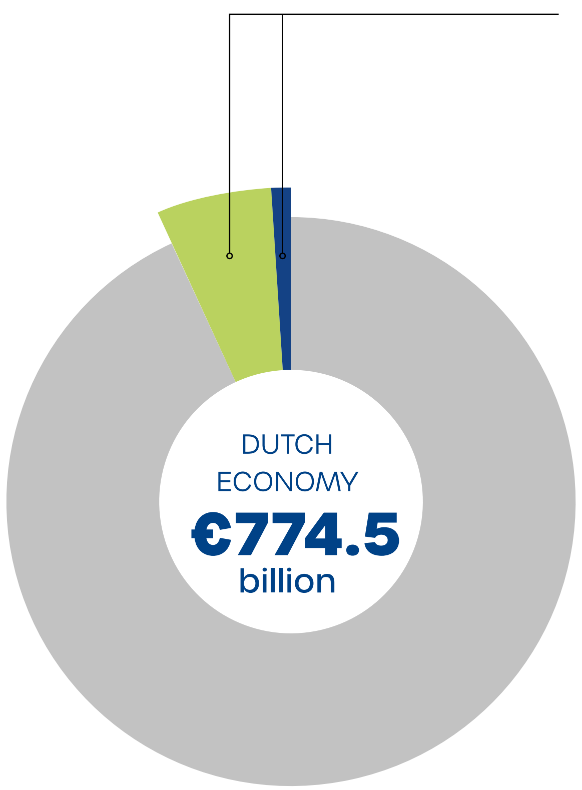
Dutch dairy at a glance

Source: Statistics Netherlands (CBS), Sustainable Dairy Chain, Wageningen University & Research, ZuivelNL

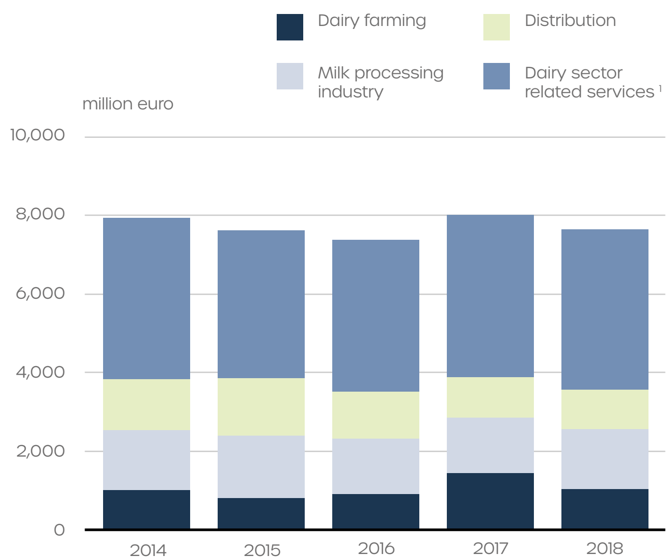
Economic importance

CONTRIBUTION OF AGRO & FOOD TO THE ECONOMY IN 2018

Agro & Food contributes **€54.1 billion (7.0%)** to the Dutch economy, of which **€7.6 billion (1.0%)** relates to dairy.



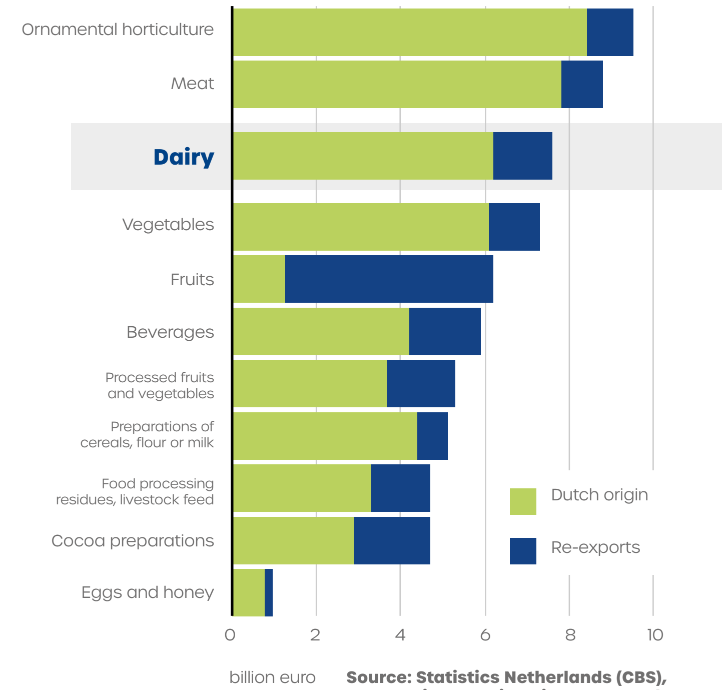
ADDED VALUE DUTCH DAIRY COMPLEX



[1] Among other agricultural and financial services, utilities and employment agencies

Source: Wageningen University & Research

EXPORT REVENUES AGRICULTURAL PRODUCTS



Source: Statistics Netherlands (CBS), Wageningen University & Research

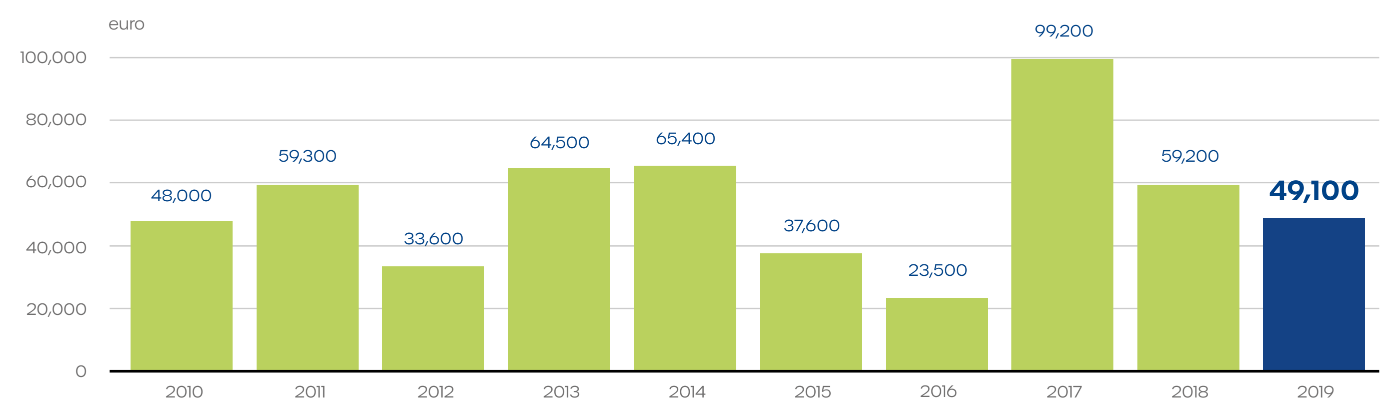
DAIRY EXPORT REVENUES

billion euro

	Dutch origin	Re-exports	Total
Milk and cream	**0.7**	**0.1**	**0.7**
Concentrated milk products	**1.2**	**0.2**	**1.4**
Fermented milk products	**0.1**	**0.0**	**0.1**
Whey products and milk protein concentrates	**0.3**	**0.1**	**0.4**
Butter and butteroil	**0.8**	**0.5**	**1.4**
Cheese	**3.1**	**0.5**	**3.7**
Total	**6.2**	**1.4**	**7.6**

Source: Statistics Netherlands (CBS)

DAIRY FARMS - INCOME DEVELOPMENT PER FARM



Source: Wageningen University & Research

MILK PRODUCTION PER COUNTRY IN 2018, IN KG PER CAPITA

Data based on the production of cow's milk and buffalo milk

NORTH AND CENTRAL AMERICA

USA	**302**
Canada	**274**
Mexico	**98**

SOUTH AMERICA

Uruguay	**705**
Argentina	**244**
Brazil	**165**
Colombia	**151**
Chile	**140**
Venezuela	**62**

EU-28

Ireland	**1,623**
Denmark	**989**
Netherlands	**826**
Lithuania	**541**
Germany	**398**
France	**386**
Poland	**374**
Belgium	**365**
United Kingdom	**230**
Italy	**207**
Other EU-28	**212**
EU-28 AVERAGE	**326**

OTHER EUROPE

Belarus	**775**
Switzerland	**459**
Ukraine	**227**
Russia	**210**

AFRICA

Kenya	**73**
South Africa	**61**
Algeria	**59**
Egypt	**59**
Nigeria	**3**

MIDDLE EAST

Turkey	**244**
Israel	**191**
Iran	**119**
Saudi Arabia	**64**
United Arab Emirates	**4**

OCEANIA

New Zealand	**4,671**
Australia	**354**

ASIA

Pakistan	**218**
India	**134**
Japan	**57**
Republic of Korea	**40**
China	**23**
Thailand	**18**
Viet Nam	**10**
Indonesia	**3**
Malaysia	**1**
Philippines	**0**

Source: ZuivelNL, IDF, UN

Per capita

New Zealand: **4,671**
Netherlands: **826**
EU-28: **326**
China: **23**
Worldwide: **109**

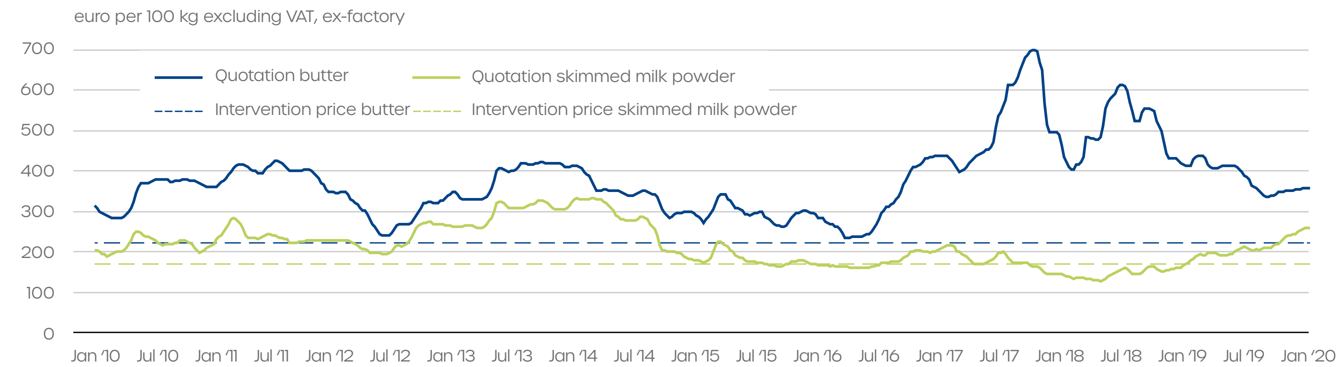
Market overview

Market prices in 2019
The dairy market was dominated in 2019 by the strong recovery in protein prices. Thanks to the complete reduction of intervention stocks, skimmed milk powder was once again subject to the normal supply and demand mechanism. The fat prices, on the other hand, were under pressure for much of the year and fell further. This price decline had already started during the second half of 2018.

The EU butter market rebounded in January, after the price decline had come to an end in December 2018. In February and March, however, the market weakened again and prices fell. This was caused by limited demand and a large supply, partly due to high stock levels. After a temporary stabilisation of the butter price in April, these factors caused the price to weaken again from mid-May onwards. Prices fell until mid-August, only to rise slightly again until mid-October. After this prices remained virtually unchanged until the end of the year, at a level just above the long-term average. The price level of European butter was well below the world market price level from March/April until November. This caused strong growth in export demand, particularly in the third and fourth quarters. The price for skimmed milk powder increased further in January and February due to good demand. Almost all the remaining EU intervention stock was sold during these months. At the end of February a small volume of intervention powder remained, which was sold in the following months. The price then stabilised in March and April. The market was quiet during these months. Thanks to a further development in demand from export markets, there was room for an upward movement in prices from the second half of April to the end of May. After a slight decline in June, the price underwent an almost uninterrupted rise from July to the end of November. This was due to unabated high demand, particularly in Asia, and limited supply due to the lagging development of the milk pool. The milk supply in the main exporting countries hardly increased in 2019 (+0.1%). In December, the price level stabilised as a result of increased competition with skimmed milk powder from the US and growing resistance among buyers to the high price level of European product.

The average price level of protein-related products in 2019 was ultimately considerably higher than in 2018. The average price for skimmed milk powder rose by more than 43%. In the case of whole milk powder, the increase in the protein component had more of an effect than the decrease in the fat component. As a result, the average price for whole milk powder increased by more than 9% in 2019. The average price of butter fell by almost 24%. In 2019, the average price of cheese rose by 2% and that of whey powder by 1%.

DUTCH QUOTATION FOR BUTTER AND SKIMMED MILK POWDER



Source: ZuivelNL

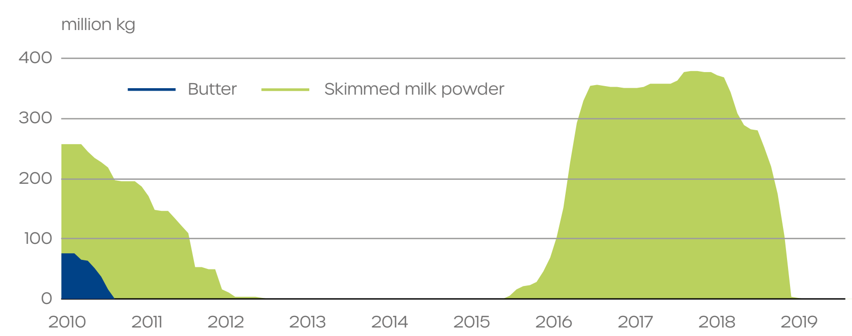
DEVELOPMENT MILK DELIVERIES IN IMPORTANT EXPORTING COUNTRIES

Argentina, Australia, Brazil, Canada, Chile, EU-28, New Zealand, Turkey, Uruguay and USA

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Milk deliveries (x billion kg)	301	310	316	318	331	337	336	342	346	347
Relative development compared to previous year	**2.2%**	**3.1%**	**2.2%**	**0.4%**	**4.2%**	**1.8%**	**-0.3%**	**1.8%**	**1.4%**	**0.1%**

Source: Eurostat, RVO.nl, national statistics

EU-28 INTERVENTION STOCKS



Source: EU Milk Market Observatory

INTERNATIONAL MILK PRICE COMPARISON

euro per 100 kg

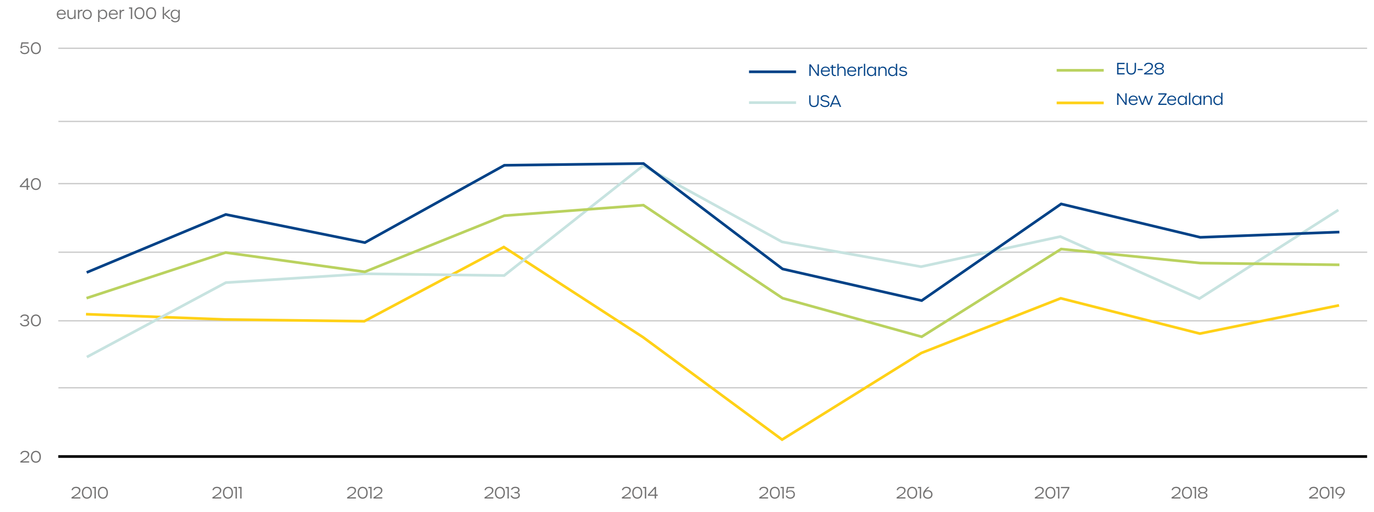
COMPANY	COUNTRY	2018	2019	2019/2018
Granarolo (North)	Italy	38.37	39.24	2.3%
FrieslandCampina	Netherlands	36.07	36.49	1.2%
Valio	Finland	36.74	36.46	-0.8%
Sodiaal (Pas de Calais)	France	34.89	35.50	1.8%
Savencia (Basse Normandie)	France	33.69	35.17	4.4%
Danone (Pas de Calais)	France	34.55	35.04	1.4%
Lactalis (Pays de la Loire)	France	33.98	34.89	2.7%
Hochwald Milch eG	Germany	34.41	34.37	-0.1%
Arla Foods DK	Denmark	35.50	34.02	-4.2%
Müller (Leppersdorf)	Germany	33.02	33.46	1.3%
Saputo Dairy UK	United Kingdom	32.66	32.92	0.8%
Milcobel	Belgium	32.75	32.36	-1.2%
DMK Deutsches Milchkontor eG	Germany	32.96	32.33	-1.9%
Kerry Agribusiness	Ireland	32.51	31.04	-4.5%
Dairygold	Ireland	32.76	30.89	-5.7%
Glanbia	Ireland	32.59	30.76	-5.6%
AVERAGE MILK PRICE		**34.22**	**34.06**	**-0.5%**
Capsa Food	Spain	-	31.14	-
Emmi	Switzerland	48.23	51.60	7.0%
Fonterra	New Zealand	29.01	31.19	7.5%
USA class III	USA	31.49	38.16	21.2%

Note: prices for standard milk with 4.2% fat and 3.4% protein with an annual delivery of 1,000,000 kg milk (excluding VAT, including supplementary payments and excluding premiums for special milk flows)

Source: LTO

Milk prices
The Dutch advance milk prices showed a slight downward trend during most of the year. The positive effect of the sharp rise in protein prices was completely cancelled out by the sharp fall in fat prices. The milk price reached its lowest point in October but then showed an increase in the last two months. This was due to the recovery in fat prices from August onwards and the continuing rise in protein prices.

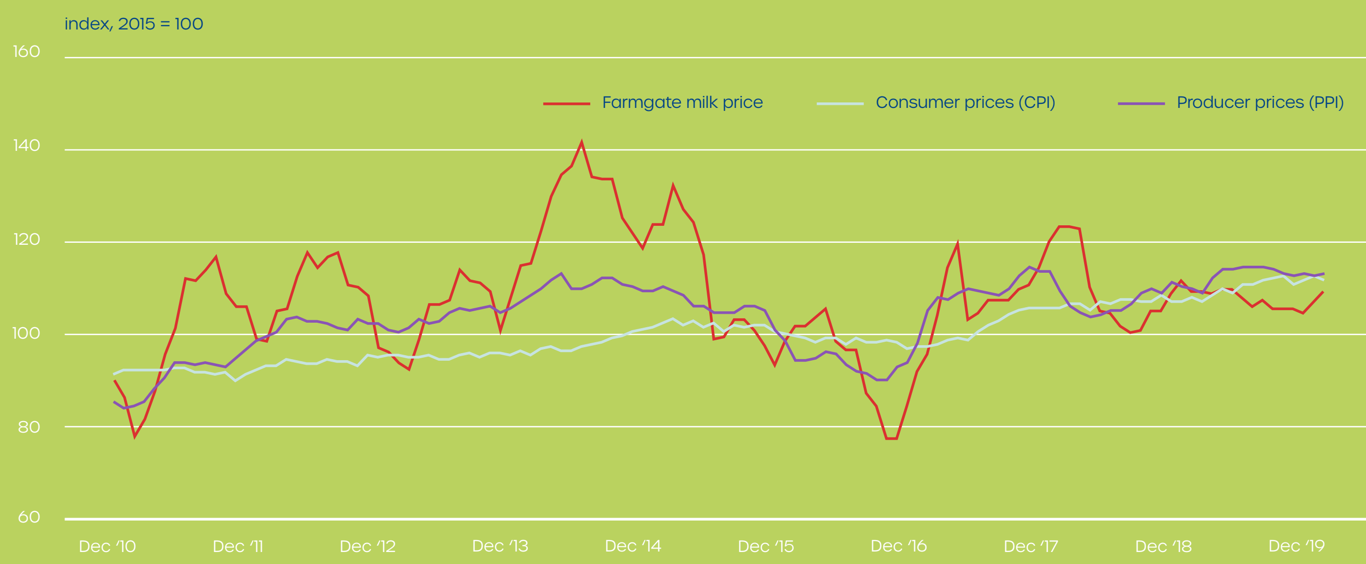
DUTCH MILK PRICE COMPARED TO EU, NEW ZEALAND AND USA



Prices for standard milk with 4.2% fat and 3.4% protein with an annual delivery of 1,000,000 kg milk

Source: LTO

PRICE DEVELOPMENT DAIRY PER LINK IN THE CHAIN



Source: Statistics Netherlands (CBS), Wageningen University & Research

Dairy farming

Milk production

Dutch milk production fell by 0.7% in 2019 to a volume of just under 14 billion kg. The decrease was less drastic than in 2018 because Dutch dairy farmers started milking more from August onwards. This marked the end of a period of contraction that had lasted a year and a half. This growth in the second half of 2019 was no more than a partial recovery from the sharp decline that took place the previous year as a result of the phosphate regulations and the after-effects of the major drought during the summer period. The dairy herd shrank for the third consecutive year. According to Statistics Netherlands (CBS), at the beginning of April 2019 there were 1.58 million dairy cows and cows in calf in the Netherlands, 44 thousand fewer (-3%) than in 2018. Dutch dairy farmers limited the fall in milk production by further increasing the milk yield per cow. In 2019 this came to 8,870 kg per cow, more than 2% higher than in 2018.

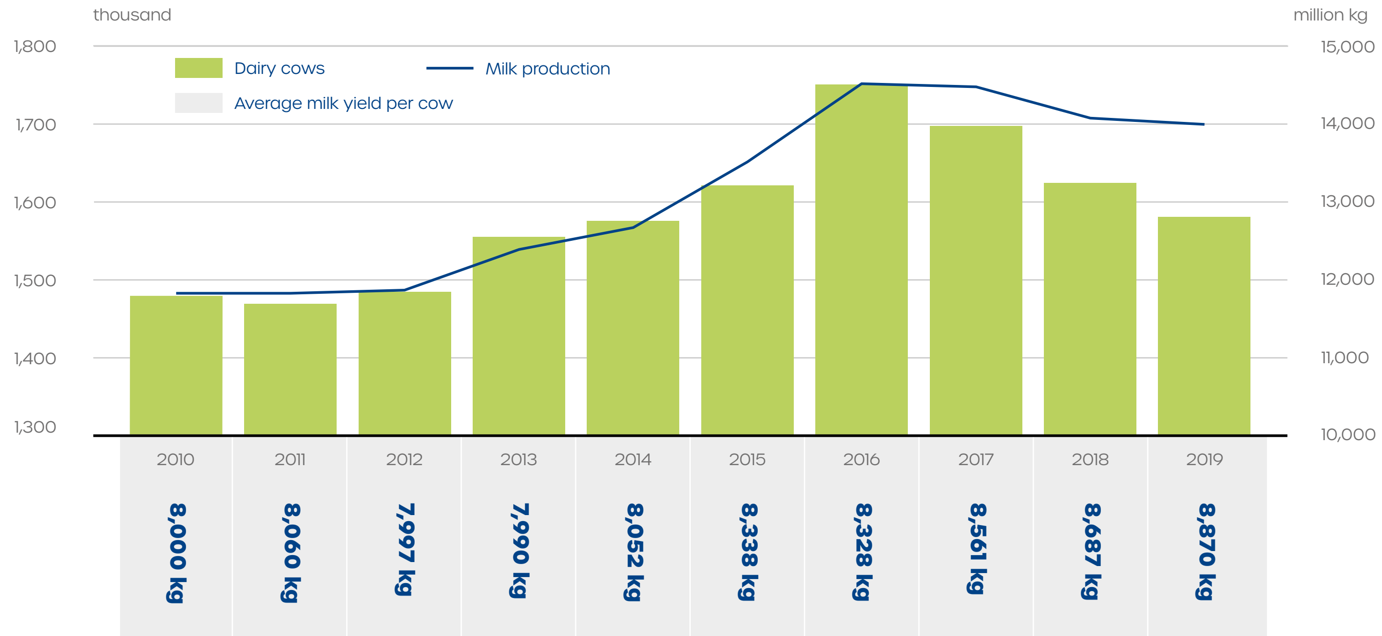
Scale

The structural development in the dairy farming sector has been characterised for decades by a declining number of dairy farms. In the period from 2010 onwards, on average more than 2% of businesses stopped each year. Because of the phosphate legislation, the percentage of businesses stopping over the past several years was higher than in the years in which the quota system was in effect. According to Statistics Netherlands, in 2019 the number of dairy farmers fell by more than 4% to 16,260.

As a result of the phosphate legislation, dairy farms have had hardly any room for growth since 2017. This is also evident from the development in the number of dairy farmers with more than 100 dairy cows and cows in calf. Until 2016, there was a structural increase in the number of businesses in this size category. From 2017, however, a decrease was noticeable due to the imposed contraction of the dairy herd. In 2019 the Netherlands had 6,200 dairy farmers with more than 100 dairy cows, over 800 fewer (-12%) than in 2016.

An average dairy farm in 2019 produced almost 861 thousand kg of milk with 97 dairy cows and cows in calf. This means that the average farm size in terms of head of cattle is once again the same as in 2016, when there was no phosphate legislation. Compared to that same year, more milk is produced per farm. This is due to the increase in the average milk production per cow.

MILK PRODUCTION AND DAIRY CATTLE



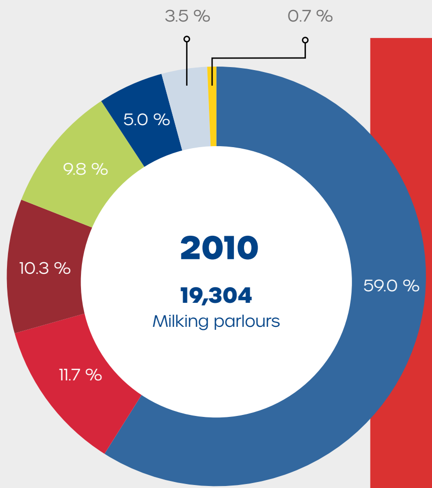
Source: Statistics Netherlands (CBS), RVO.nl, ZuivelNL

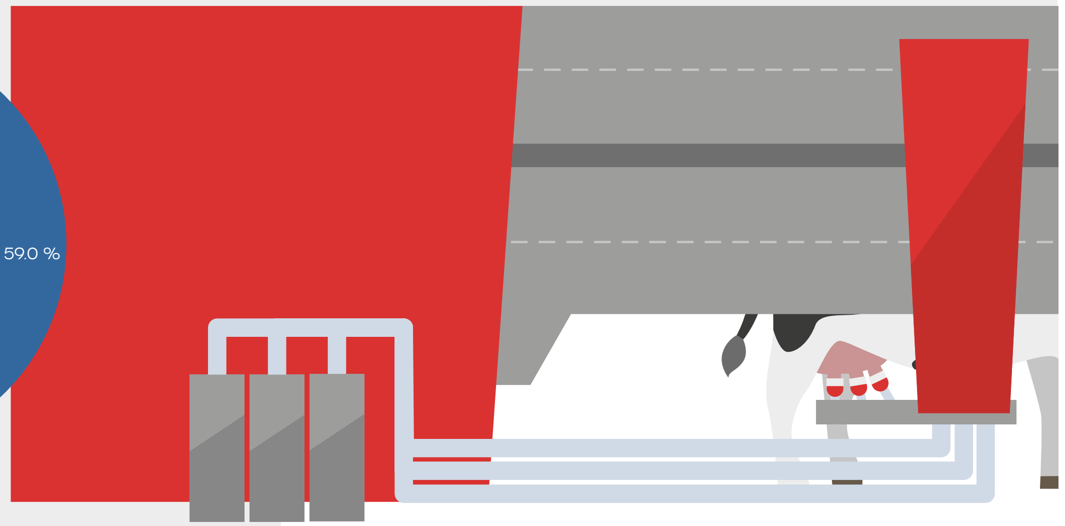
DAIRY FARMS: CLASSIFIED ACCORDING TO THE NUMBER OF DAIRY COWS PER FARM

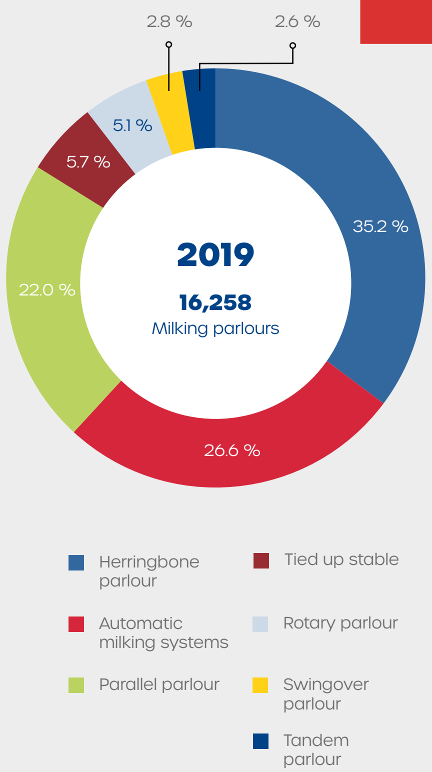
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Less than 100 dairy cows	15,545	14,914	13,980	13,266	12,943	12,248	10,886	11,404	10,639	10,060
Percentage of total	*78%*	*77%*	*75%*	*71%*	*70%*	*67%*	*61%*	*63%*	*63%*	*62%*
100 dairy cows, and more	4,260	4,333	4,702	5,399	5,638	6,017	7,024	6,658	6,324	6,200
Percentage of total	*22%*	*23%*	*25%*	*29%*	*30%*	*33%*	*39%*	*37%*	*37%*	*38%*
TOTAL	19,805	19,247	18,682	18,665	18,581	18,265	17,910	18,062	16,963	16,260

Source: Statistics Netherlands (CBS)

MILKING PARLOUR TYPES

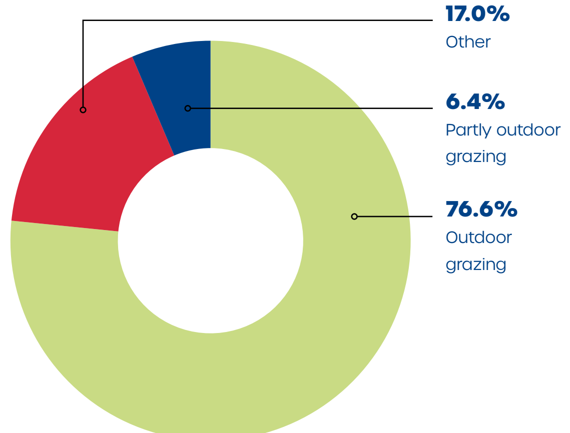






Source: Foundation for Quality and Maintenance of Milking Installations

OUTDOOR GRAZING IN THE NETHERLANDS



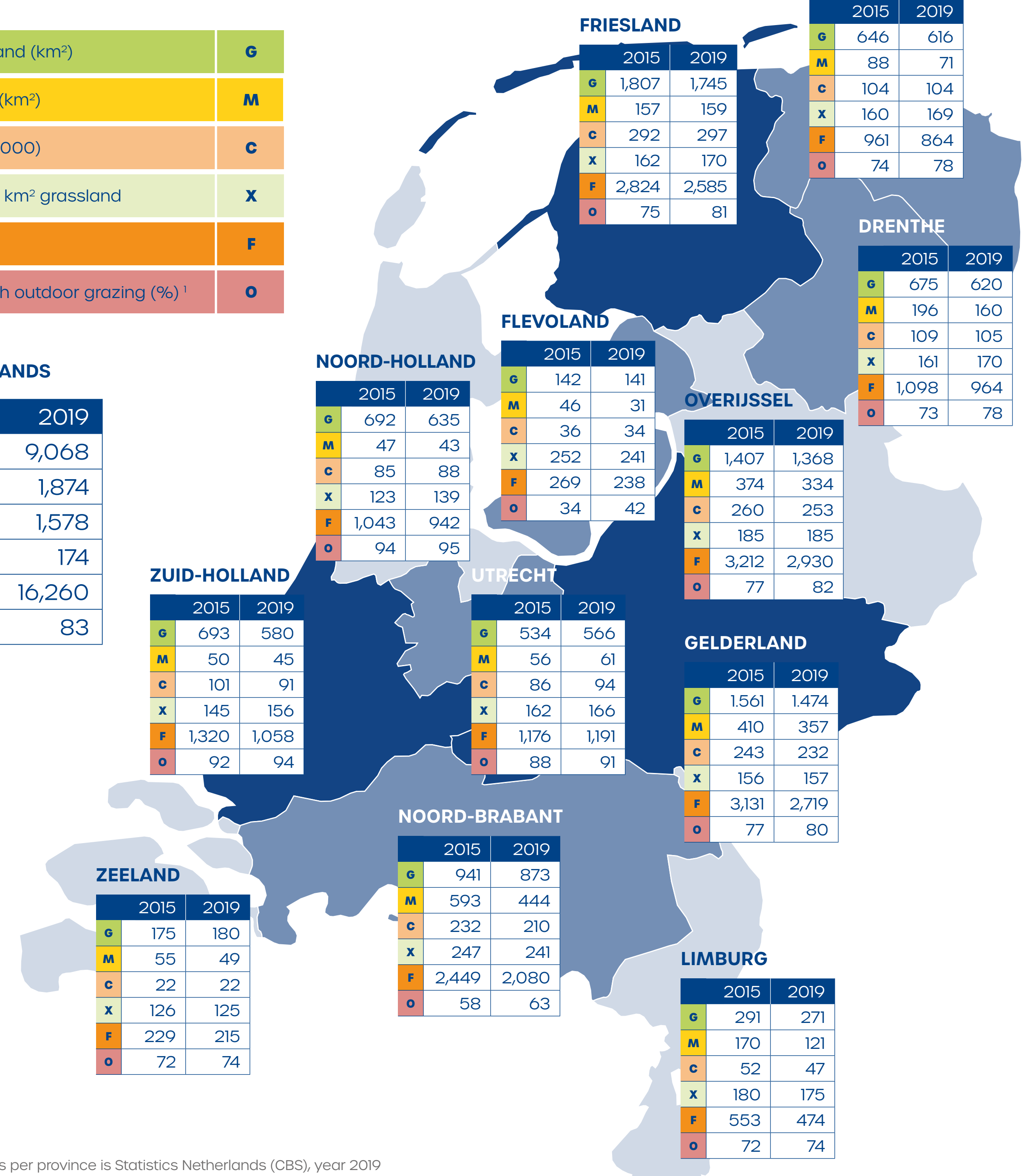
Bron: Sustainable Dairy Chain, ZuivelNL

KEY FIGURES DAIRY FARMING PER PROVINCE

Surface grassland (km²)	G
Surface maize (km²)	M
Dairy cows (x 1,000)	C
Dairy cows per km² grassland	X
Dairy farms	F
Dairy farms with outdoor grazing (%) [1]	O

TOTAL NETHERLANDS

	2015	2019
G	9,563	9,068
M	2,242	1,874
C	1,622	1,578
X	170	174
F	18,265	16,260
O	78	83



GRONINGEN

	2015	2019
G	646	616
M	88	71
C	104	104
X	160	169
F	961	864
O	74	78

FRIESLAND

	2015	2019
G	1,807	1,745
M	157	159
C	292	297
X	162	170
F	2,824	2,585
O	75	81

DRENTHE

	2015	2019
G	675	620
M	196	160
C	109	105
X	161	170
F	1,098	964
O	73	78

FLEVOLAND

	2015	2019
G	142	141
M	46	31
C	36	34
X	252	241
F	269	238
O	34	42

NOORD-HOLLAND

	2015	2019
G	692	635
M	47	43
C	85	88
X	123	139
F	1,043	942
O	94	95

OVERIJSSEL

	2015	2019
G	1,407	1,368
M	374	334
C	260	253
X	185	185
F	3,212	2,930
O	77	82

ZUID-HOLLAND

	2015	2019
G	693	580
M	50	45
C	101	91
X	145	156
F	1,320	1,058
O	92	94

UTRECHT

	2015	2019
G	534	566
M	56	61
C	86	94
X	162	166
F	1,176	1,191
O	88	91

GELDERLAND

	2015	2019
G	1.561	1.474
M	410	357
C	243	232
X	156	157
F	3,131	2,719
O	77	80

NOORD-BRABANT

	2015	2019
G	941	873
M	593	444
C	232	210
X	247	241
F	2,449	2,080
O	58	63

ZEELAND

	2015	2019
G	175	180
M	55	49
C	22	22
X	126	125
F	229	215
O	72	74

LIMBURG

	2015	2019
G	291	271
M	170	121
C	52	47
X	180	175
F	553	474
O	72	74

[1] Source of the figures per province is Statistics Netherlands (CBS), year 2019 refers to the year 2018. Source of the figures for total Netherlands is ZuivelNL.

Source: Statistics Netherlands (CBS), ZuivelNL

Milk processing Industry

Milk supply
The milk supply in the main dairy-exporting countries remained virtually the same in 2019 as the year previous (+0.1%). There was a decrease in volume in the first half of 2019. The second half of the year saw growth. Milk supply in the EU increased by 0.6% in 2019. The first two months of the year still saw the volume decreasing, after which the supply mainly showed slight growth of around 1%. Ireland, Poland and the United Kingdom recorded the largest absolute increases, although Irish milk supply fell sharply in the last quarter. The German and French milk supply remained at virtually the same level as in 2018. The Netherlands recorded a decrease of almost 1%, still as a result of the introduction of the phosphate legislation. The US showed modest growth (+0.4%) in 2019, caused by dairy herd shrinkage in the first half of the year and lower growth in the average milk yield per cow. Milk production stagnated until the end of August, after which there was slight growth from September onwards.

The New Zealand milk supply showed an unstable picture throughout the year, which was partly due to drought and therefore disappointing grass growth. This resulted in a decrease of 0.7% for the whole of 2019. Australia continued along the path of strong contraction (-6.6%) as a result of persistent drought. It was not until December that there was some light at the end of the tunnel, when there was stabilisation for the first time in eighteen months.

Milk processing
The Dutch dairy industry processed an estimated 13.85 billion kg of milk in 2019, slightly more than in 2018. More milk went to the production of cheese and non-skimmed milk powder. Cheese production increased by more than 1% in 2019 to a volume of 891 thousand tonnes. The Netherlands consequently accounts for approximately 4% of global cheese production. The production of non-skimmed milk powder increased by almost 10% to a volume of 177 thousand tonnes, recovering from the sharp decline in 2018. Less milk was processed into butter and butter oil and skimmed milk powder. Butter and butter oil production decreased by more than 1% in 2019 to a volume of 231 thousand tonnes. The production volume of skimmed milk powder fell by almost 6% to 61 thousand tonnes.

Structure
At the end of 2019, the Dutch dairy industry consisted of 25 companies with a total of 53 production locations. Five of these companies are cooperatives. They process the milk at 27 production locations. On balance, the number of companies and production locations has remained unchanged for a number of years. The production value of the Dutch dairy industry increased by more than 1% in 2019 to an estimated €7.6 billion. This increase reflects the higher revenues on the dairy market. The prices of milk powder in particular, but also those of cheese were on average higher in 2019. In contrast, the production value of butter and butter oil fell sharply as a result of the sharp fall in prices. Per 100 kg of processed milk, the production value ended up at a level of €54.87, almost 1% higher than in 2018.

INTERNATIONAL MILK DELIVERIES

Milk deliveries in the leading exporting countries of the world

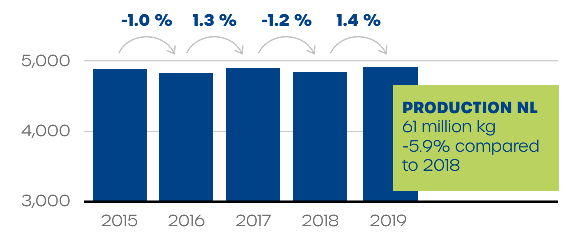
	VOLUME 2019	ABSOLUTE GROWTH COMPARED TO 2018	RELATIVE GROWTH COMPARED TO 2018
	billion kg	*billion kg*	%
EU-28	**157.6**	**1.0**	**0.6%**
Ireland	8.2	0.4	**5.3%**
United Kingdom	15.4	0.2	**1.6%**
Poland	12.2	0.2	**1.9%**
Belgium	4.2	0.1	**2.7%**
Germany	31.7	0.0	**0.1%**
Denmark	5.6	0.0	**0.0%**
France	24.5	0.0	**-0.1%**
Netherlands	13.8	-0.1	**-0.7%**
Italy	12.0	-0.1	**-0.9%**
Other EU-28	30.0	0.2	**0.6%**
Brazil	25.8	0.6	**2.3%**
USA	98.6	0.4	**0.4%**
Canada	9.5	0.0	**-0.1%**
Chile	2.4	0.0	**-1.1%**
Uruguay	2.0	-0.1	**-4.5%**
New Zealand	21.8	-0.2	**-0.7%**
Argentina	10.6	-0.2	**-1.8%**
Turkey	9.6	-0.5	**-4.7%**
Australia	8.8	-0.6	**-6.6%**

Source: Eurostat, RVO.nl, national statistics

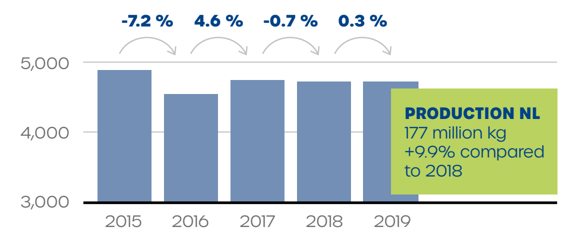
GLOBAL PRODUCTION OF A NUMBER OF DAIRY PRODUCTS

million kg

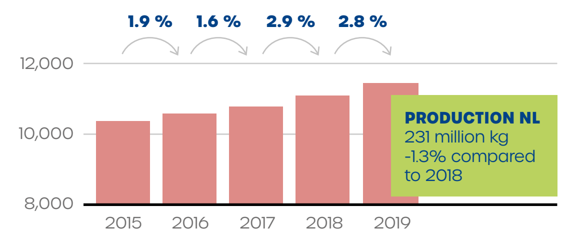
SKIMMED MILK POWDER



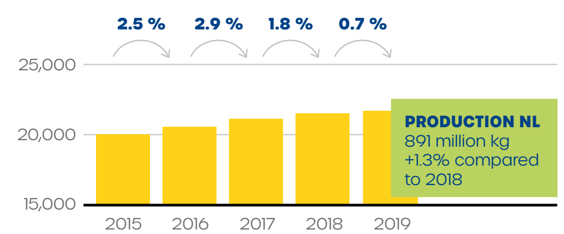
NON-SKIMMED MILK POWDER



BUTTER AND BUTTEROIL



CHEESE



Source: Eurostat, IDF, RVO.nl, USDA, ZMB, ZuivelNL, national statistics

GEOGRAPHICAL SPREAD OF MILK PROCESSING INDUSTRY

Situation from 31-12-2019

- FrieslandCampina (21)
- Ausnutria (2)
- A-ware (2)
- Bel Leerdammer (2)
- DOC Kaas (2)
- Kaasmakerij Henri Willig (2)
- Danone/Nutricia (2)
- Rouveen Kaasspecialiteiten (2)
- Vreugdenhil Dairy Foods (2)
- Arla Foods NIJKERK
- CONO Kaasmakers WESTBEEMSTER
- De Graafstroom BLESKENSGRAAF
- Den Eelder WELL
- DV Nutrition [1] HOOGEVEEN
- Eijssen Dairy BEEK
- Farm Dairy LELYSTAD
- Fonterra HEERENVEEN
- Globemilk BOXMEER
- Hochwald Foods BOLSWARD
- Kaasmakerij Özgazi ETTEN-LEUR
- Nestlé NUNSPEET
- Trouw Nutrition SLOTEN
- Vecozuivel ZEEWOLDE
- VIV Buisman ZELHEM
- Zuivelhoeve HENGELO OV

KEY STATISTICS NETHERLANDS

	2017	2018	2019
Companies [2]	25	25	25
Number of dairy plants	53	53	53
Cooperative	*27*	*27*	*27*
Non-cooperative	*26*	*26*	*26*
Milk processed (million euro)	14,143	13,749	13,850
Production value (million euro)	7,725	7,500	7,600

[1] From January 1, 2020 DMK Group
[2] which process more than 10 million kg of raw milk, cream and/or whey)

Source: RVO.nl, ZuivelNL

TOP-20 LARGEST DAIRY COMPANIES

Turnover in 2018 + mergers and acquisitions between 1 January and 30 June 2019

	COMPANY	COUNTRY	TURNOVER (billion euro)
1	**Nestlé**	Switzerland	20.6
2	**Lactalis**	France	17.6
3	**Danone**	France	15.2
4	**Fonterra**	New Zealand	12.1
5	**FrieslandCampina**	Netherlands	11.6
6	**Dairy Farmers of America**	USA	11.5
7	**Arla Foods**	Denmark/Sweden	10.5
8	**Yili**	China	9.5
9	**Saputo**	Canada	9.3
10	**Mengniu**	China	8.7
11	**Dean Foods**	USA	6.3
12	**Unilever**	Netherlands/UK	5.7*
13	**DMK**	Germany	5.6
14	**Kraft Heinz**	USA	5.1
15	**Sodiaal**	France	5.0
16	**Meiji**	Japan	4.9
17	**Savencia**	France	4.9
18	**Agropur**	Canada	4.4
19	**Schreiber Foods**	USA	4.3*
20	**Müller**	Germany	4.3*

* Estimate

Source: Rabobank

STRUCTURE DAIRY INDUSTRY PER PRODUCT

Number of companies, specified per product in a number of EU Member States in 2018.

DRINKING MILK	TOTAL	< 100,000 tons	> 100,000 tons
Germany	64	48	16
France	61	52	9
Ireland	38	37	1
Poland	90	87	3
Netherlands	9	6	3
United Kingdom	40	31	9
EU-28	1,017		

BUTTER	TOTAL	< 10,000 tons	> 10,000 tons
Germany	69	55	14
France	141	129	12
Ireland	38	30	8
Poland	105	100	5
Netherlands	6	4	2
United Kingdom	26	21	5
EU-28	1,286		

CHEESE	TOTAL	< 10,000 tons	> 10,000 tons
Germany	106	62	44
France	516	474	42
Ireland	38	34	4
Poland	156	133	23
Netherlands	19	11	8
United Kingdom	51	38	13
EU-28	5,331		

PRODUCTS IN POWDER FORM	TOTAL	< 20,000 tons	> 20,000 tons
Germany	38	27	11
France	34	26	8
Ireland	38	32	6
Poland	37	35	2
Netherlands	8	6	2
United Kingdom	4	3	1
EU-28	252		

Source: Eurostat (3-yearly survey)

Sustainability

PRODUCT CARBON FOOTPRINT DAIRY FARMING

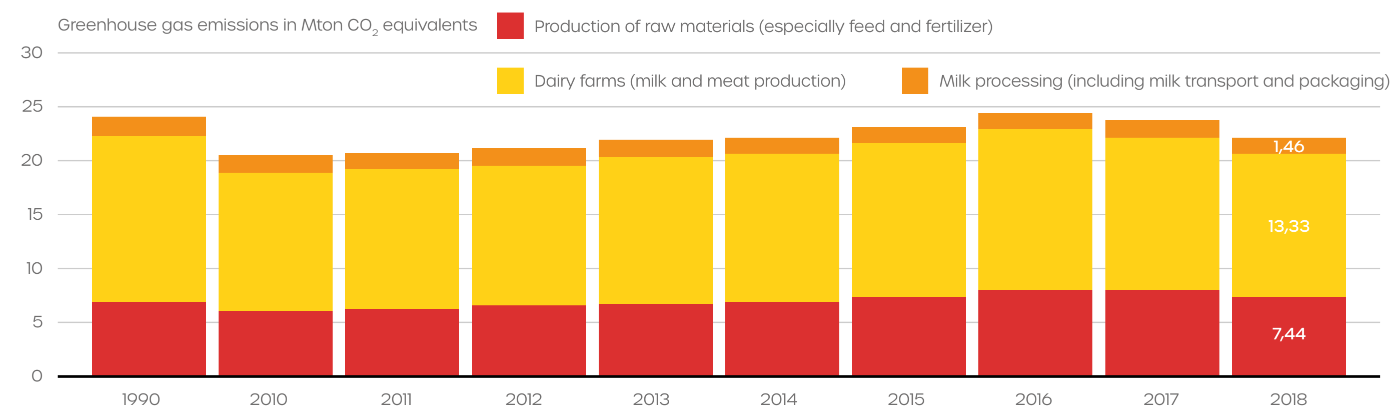
grams of CO_2 equivalents per kg of measuring milk delivered by source

	2010	2011	2012	2013	2014	2015	2016	2017	2018
On the dairy farm									
Rumen fermentation and digestion (methane)	538	540	548	549	541	541	523	483	480
Manure (methane) a)	150	148	152	154	151	155	147	139	137
Manure and soil (nitrous oxide) b)	153	156	158	157	159	143	133	124	121
Energy use (CO_2) c)	31	33	34	31	33	31	30	29	28
Total on the dairy farm	872	877	892	892	884	871	833	775	767
In production of raw materials									
Concentrated feed (CO_2)	295	307	327	335	326	347	342	336	315
Roughage and by-products (CO_2)	24	27	32	34	36	34	33	29	33
Fertilizer (CO_2)	39	38	40	39	40	37	34	34	30
Energy (CO_2) d)	37	20	21	22	20	19	19	19	18
Other (CO_2) e)	32	36	34	29	30	29	26	29	33
Total production raw materials	426	428	455	459	452	467	454	447	428
Total dairy farming	1,298	1,304	1,347	1,352	1,336	1,338	1,287	1,222	1,195

(a) animal manure emissions from fermentation processes in an anaerobic environment;
(b) emissions from nitrification and denitrification processes in the storage of animal manure and in the soil, and the indirect emission after atmospheric deposition of N-compounds and by washout of N from agricultural soils;
c) direct fossil fuel emissions (assuming that 80% of the total fossil fuel emissions occur during combustion on dairy farm), including contract work and cultivation work;
d) emissions that occur during the production of electricity (100%) and fossil fuels (assuming that 20% of the total emissions of fossil fuels occur during production);
e) emissions from the production of other raw materials supplied, for example agricultural plastics and pesticides.

Source: Sustainable Dairy Chain, 2018 Report

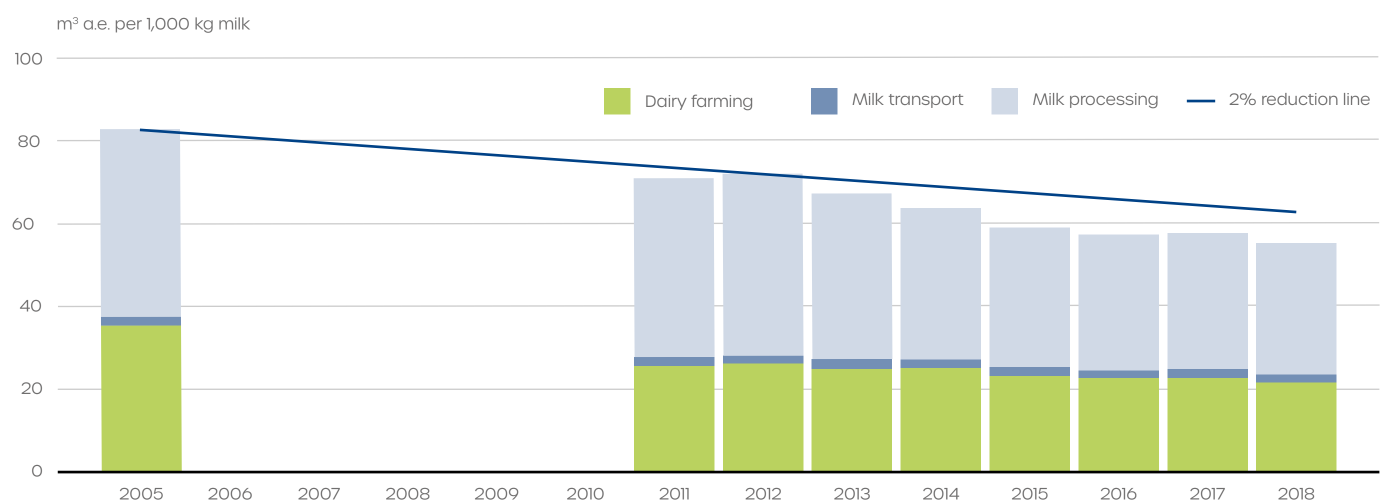
SECTOR CARBON FOOTPRINT FROM THE DAIRY CHAIN



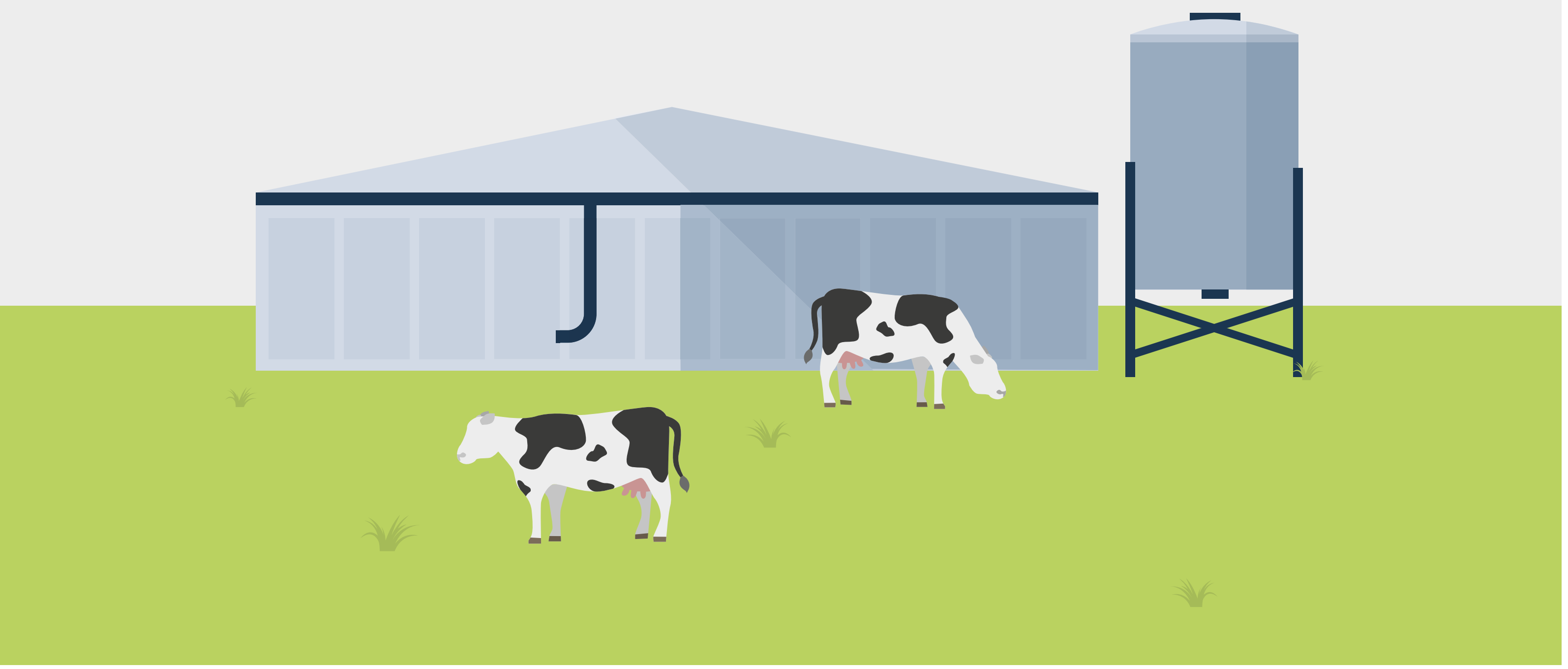
Source: Sustainable Dairy Chain, 2018 Report

PROGRESS IN ENERGY EFFICIENCY IN THE DAIRY CHAIN

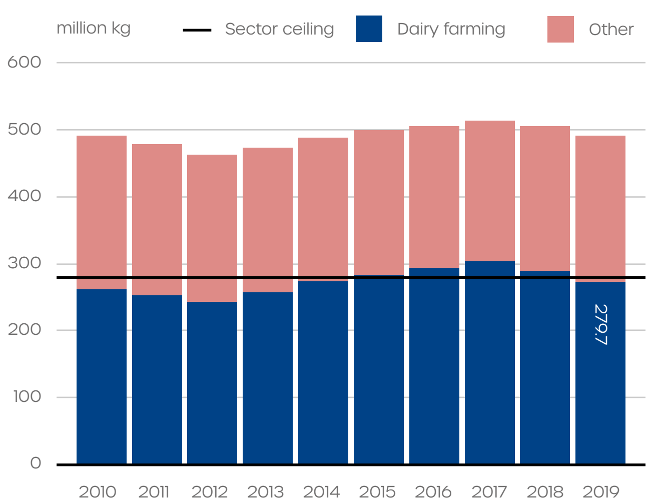
(objective: annual reduction of 2% compared to reference year 2005)



Source: Sustainable Dairy Chain, 2018 Report

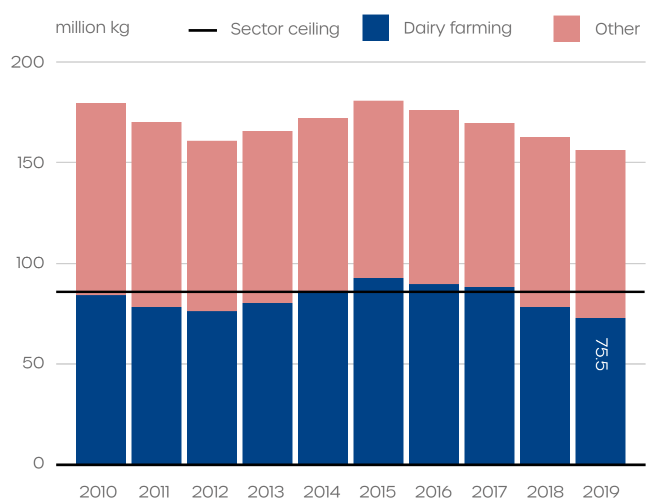


NITROGEN PRODUCTION IN ANIMAL MANURE



Sector ceiling dairy farming 281.8 million kg

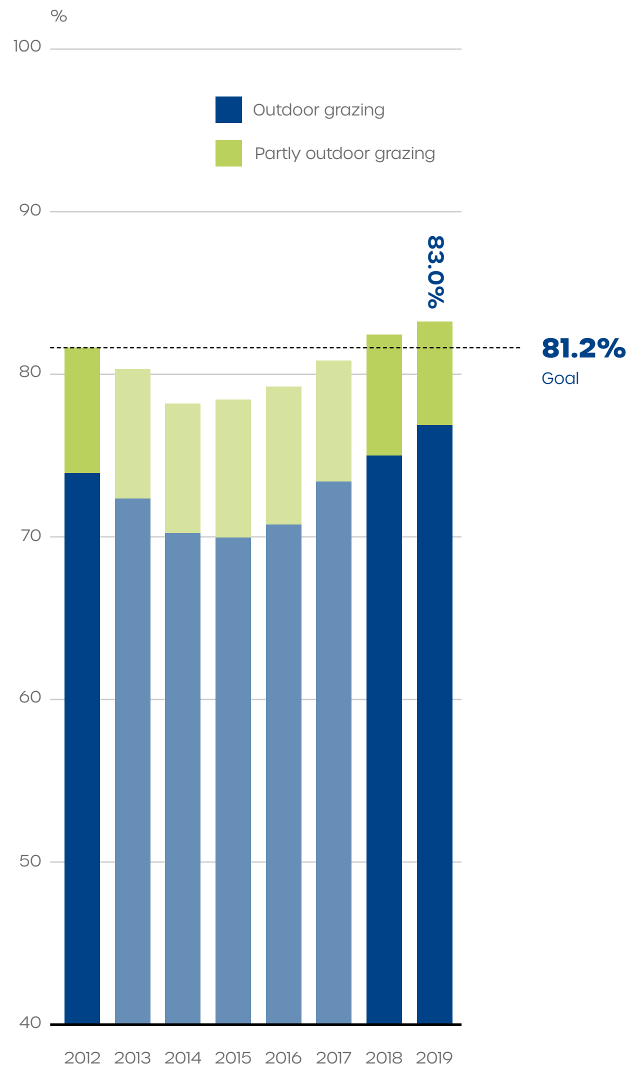
PHOSPHATE PRODUCTION IN ANIMAL MANURE



Sector ceiling dairy farming 84.9 million kg

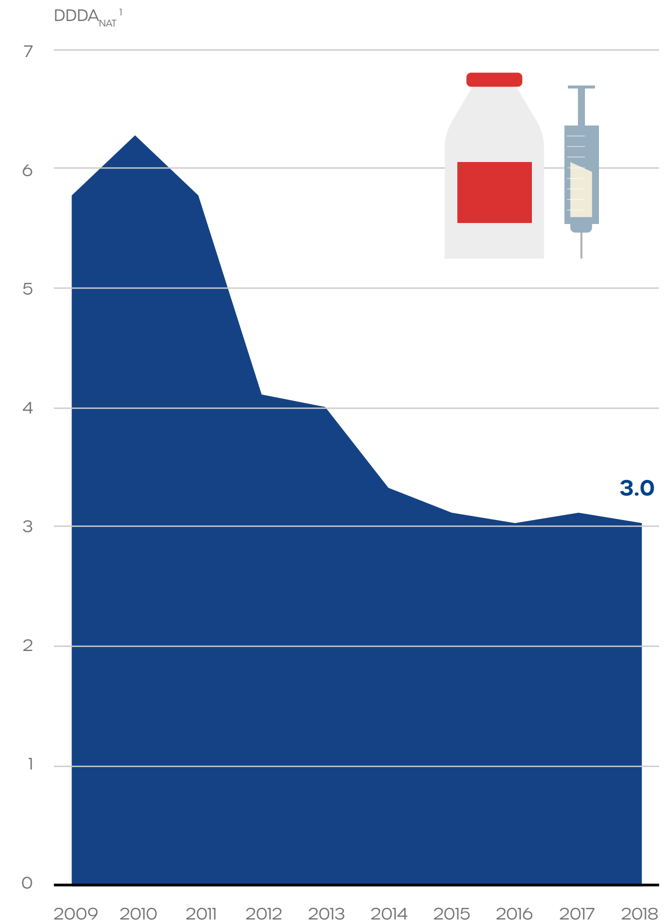
Source: Statistics Netherlands (CBS)

OUTDOOR GRAZING



Source: Sustainable Dairy Chain, ZuivelNL

DEVELOPMENT OF AVERAGE ANTIBIOTIC USE BY DAIRY FARMS ACCORDING TO THE NETHERLANDS VETERINARY MEDICINES INSTITUTE



[1] Defined Daily Dose Animal, National

Source: Sustainable Dairy Chain, 2018 Report

Trade

Export
The total export value increased by more than 2% in 2019 to more than of €7.8 billion. This increase is mainly attributable to the cheese product group, where an increase of over €200 million (+6%) was realised. The export value of skimmed milk powder also rose sharply, by almost €67 million (+25%). After increasing by almost 5% in 2018, the export value of butter and butter oil fell by more than 9% in 2019. In the case of non-skimmed milk powder, a shrinkage (-2%) was realised in the value of exports.

The increase in the export value of cheese was the result of both higher prices and an increase in the quantity exported. The latter amounted to almost 911 thousand tonnes, more than 4% more than in 2018. A significant part of the increase was due to trade with EU Member States. There were more sales especially in Germany, Belgium, France and Spain. The export to destinations outside the EU borders increased slightly. The decrease in the export value of butter and butter oil was price-related, as the volume increased by 6%. In contrast to cheese, the growth in the export volume of butter and butter oil was largely achieved outside the European Union. Third-country exports increased by no less than 34% in 2019.

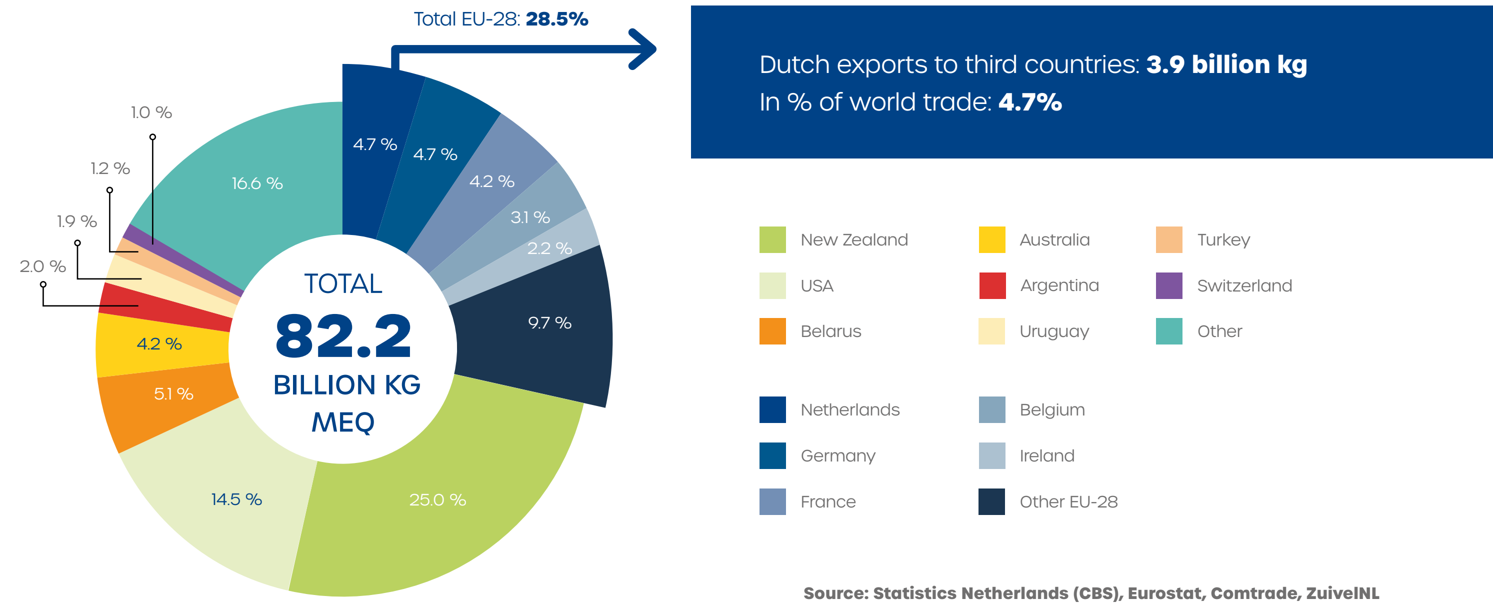
In the case of non-skimmed milk powder, the fall in export value was entirely due to a decrease in volume (-9%). An increase in the average price level partially offset this. The sharp rise in the export value of skimmed milk powder was caused both by the significantly higher average price level and by the substantial increase in the volume of exports (+10%). The increase in volume was achieved almost entirely within the EU.

The EU is structurally the most important sales region for Dutch dairy products. In 2019, intra-trade accounted for more than €5.6 billion, almost three-quarters of the total export value. With a joint share of over 70%, Belgium, Germany and France are the most important sales markets. In addition, of all EU member states, the Netherlands is the most active on the world market. The Dutch share in the world trade, which amounted to 82.2 billion kg of milk equivalents in 2019, was almost 5%. This puts the Netherlands among the world's top five largest dairy exporters, together with New Zealand, the United States, Belarus and Germany.

The top five destinations for Dutch dairy exports outside the EU were, as in 2018, all in Asia, namely China (including Hong Kong), United Arab Emirates, Saudi Arabia, South Korea and Japan.

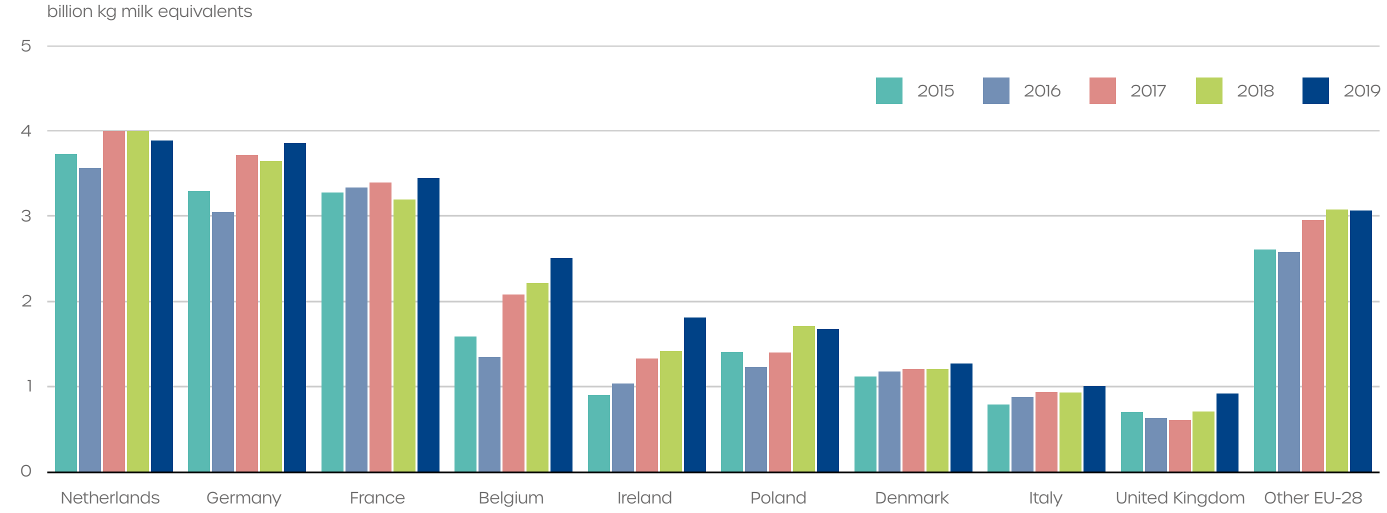
POSITION OF DUTCH DAIRY EXPORTS ON THE WORLD MARKET

Export shares of the most important dairy exporting countries (in % of total world trade, expressed in milk equivalents)



Source: Statistics Netherlands (CBS), Eurostat, Comtrade, ZuivelNL

OVERVIEW OF EU DAIRY EXPORTS TO THIRD COUNTRIES



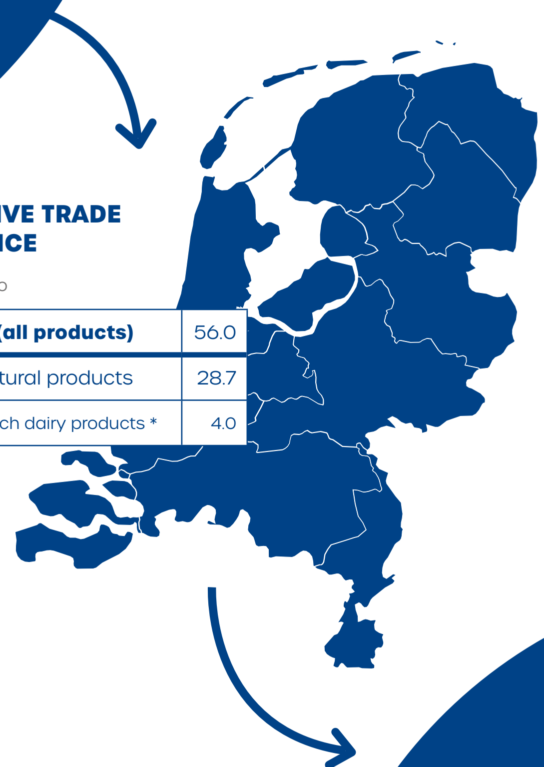
Source: Statistics Netherlands (CBS), Eurostat

IMPORTS

billion euro

TOTAL (all products)	460.0
Agricultural products	63.1
*Of which dairy products **	*3.8*

TRADE BALANCE 2019



POSITIVE TRADE BALANCE

billion euro

TOTAL (all products)	56.0
Agricultural products	28.7
Of which dairy products *	4.0

EXPORTS

billion euro

TOTAL (all products)	516.0
Agricultural products	91.8
*Of which dairy products **	*7.8*

*) Cheese, butter and butteroil, fermented products, concentrated milk, milk and cream, whey and whey products and products with milk constituents (HS-codes 0401-0406 and 17021)

Source: Statistics Netherlands (CBS), Eurostat

TOP-5 DESTINATIONS DUTCH EXPORTS IN VALUE

million euro

CHEESE

DESTINATION	VALUE	%
EU-28	3,059.6	83.7%
of which: Germany	1,197.1	32.8%
Belgium	476.0	13.0%
France	372.8	10.2%
Spain	224.3	6.1%
Italy	130.8	3.6%
Japan	97.7	2.7%
USA	81.7	2.2%
Mexico	38.0	1.0%
Egypt	33.4	0.9%
Other	344.4	9.4%
Total	**3,654.8**	**100.0%**

BUTTER AND BUTTEROIL

DESTINATION	VALUE	%
EU-28	1,183.1	86.9%
of which: Germany	407.5	29.9%
France	309.0	22.7%
Belgium	179.7	13.2%
Italy	71.3	5.2%
United Kingdom	66.9	4.9%
Indonesia	21.2	1.6%
Japan	20.1	1.5%
Singapore	16.8	1.2%
Syria	8.8	0.6%
Other	110.7	8.1%
Total	**1,360.7**	**100.0%**

NON-SKIMMED MILK POWDER

DESTINATION	VALUE	%
EU-28	153.2	26.2%
of which: Germany	38.4	6.6%
Belgium	35.0	6.0%
France	25.1	4.3%
United Kingdom	15.5	2.7%
Italy	13.2	2.3%
Kuwait	69.4	11.9%
China (incl. Hong Kong)	44.7	7.6%
Nigeria	33.0	5.6%
Angola	30.5	5.2%
Other	254.0	43.4%
Total	**584.8**	**100.0%**

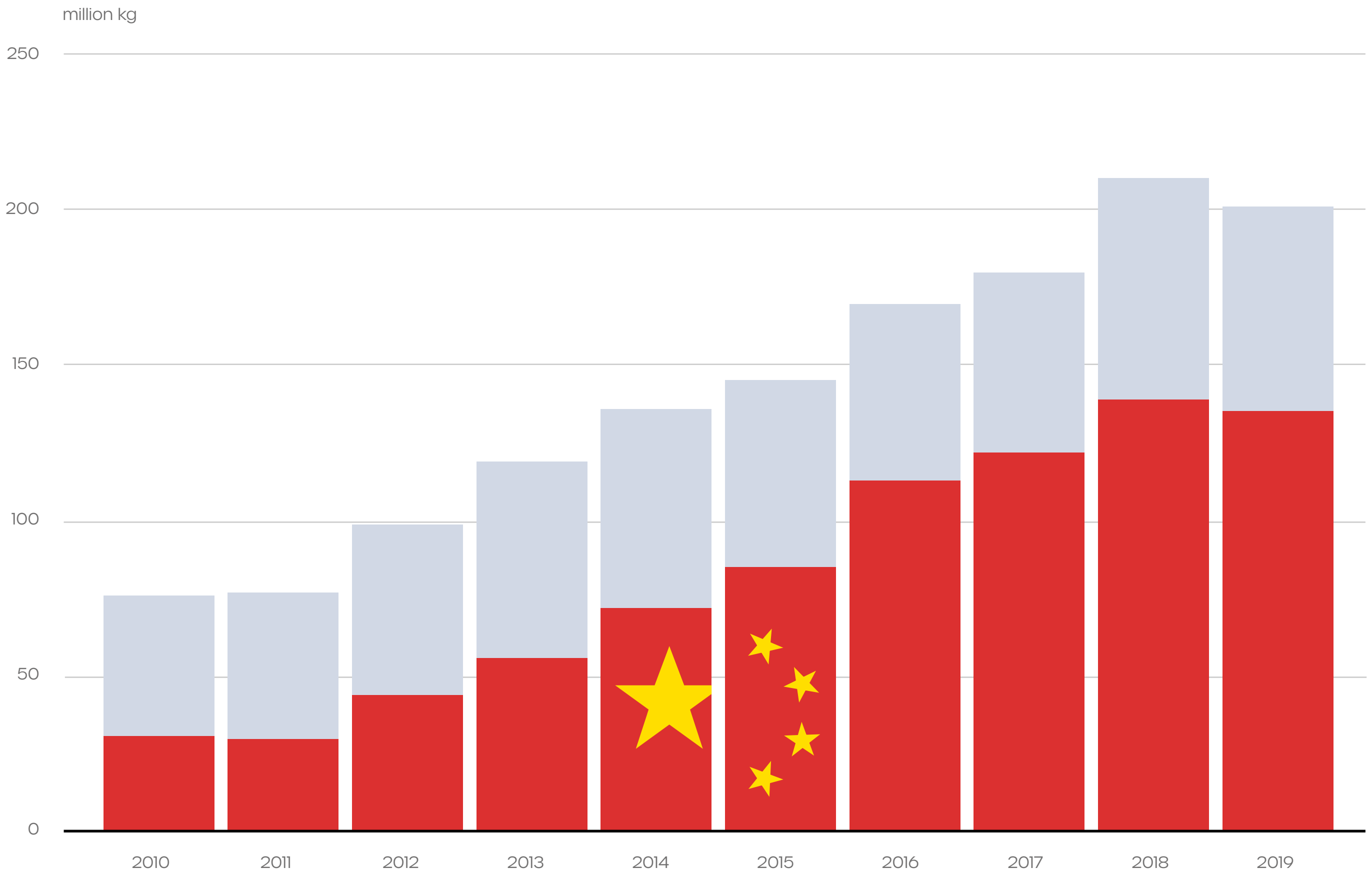
SKIMMED MILK POWDER

DESTINATION	VALUE	%
EU-28	121.5	36.6%
of which: Belgium	29.1	8.7%
Germany	27.5	8.3%
Italy	19.5	5.9%
France	14.0	4.2%
Spain	10.6	3.2%
Philippines	21.6	6.5%
Saudi Arabia	20.5	6.2%
China (incl. Hong Kong)	20.3	6.1%
Indonesia	17.2	5.2%
Other	131.3	39.5%
Total	**332.3**	**100.0%**

Source: Statistics Netherlands (CBS), Eurostat

DUTCH EXPORTS INFANT FORMULA

Excluding intra trade, HS-code 190110



Source: Eurostat

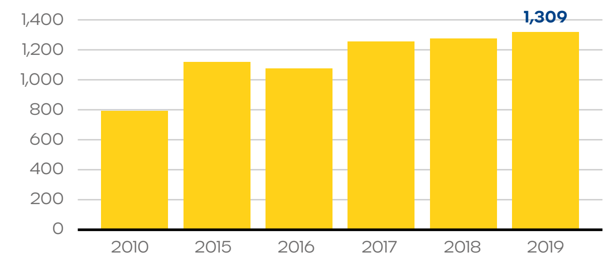
In addition to the export of regular dairy products, the Netherlands also exports many products with a high dairy content, including infant nutrition. What is striking in this context is that over the years, China (including Hong Kong) has been by far the most important export destination for the Netherlands. Dutch export of infant nutrition to this country represented a value of almost €1.7 billion in 2019.

DEVELOPMENT DUTCH IMPORTS

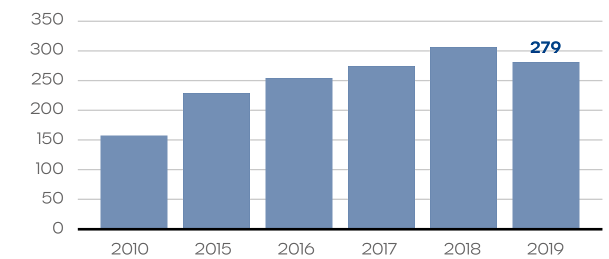
(including intra trade)

million euro

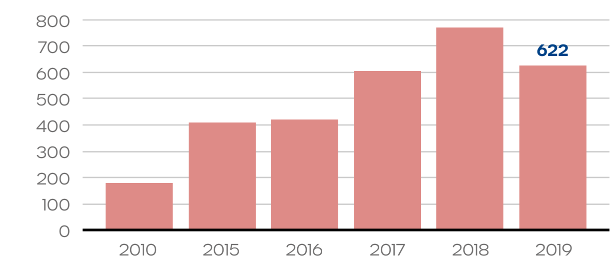
CHEESE



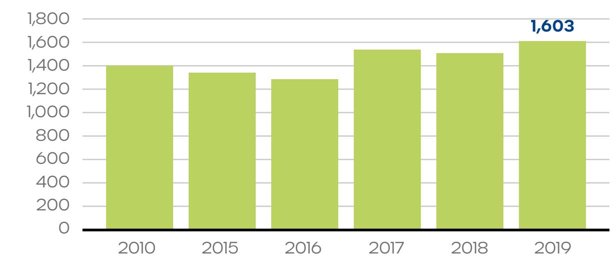
MILK AND CREAM*



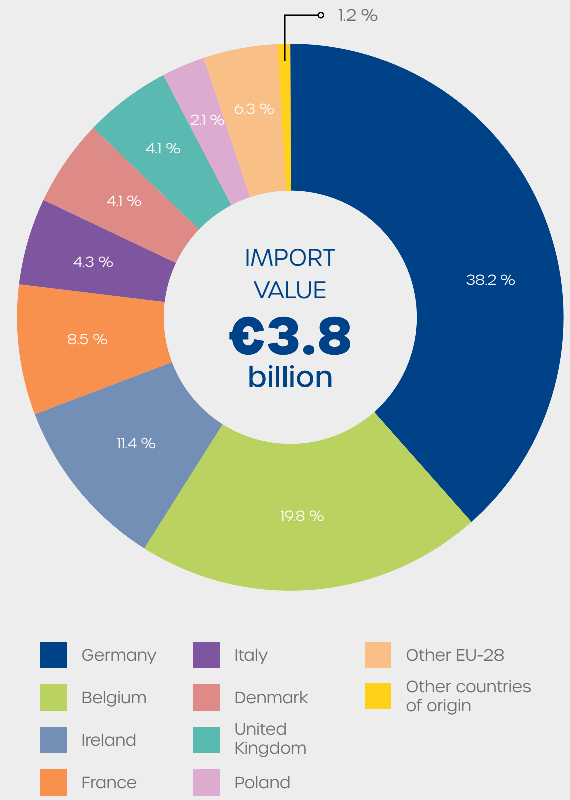
BUTTER AND BUTTEROIL



OTHER**



COUNTRIES OF ORIGIN OF DUTCH IMPORTS



Source: Statistics Netherlands (CBS), Eurostat

* In small packages for consumers
** Milk powder, condensed milk, fermented products, whey and whey products, milk and cream (in bulk)

Source: Statistics Netherlands (CBS), Eurostat

Consumption

The Netherlands has a long tradition of dairy consumption. Milk, cheese, yoghurt and dairy desserts are part of the daily diet of many Dutch people. The fact that dairy also contributes to people's health is shown by the fact that dairy has a place in the Netherlands Nutrition Centre's 'Schijf van Vijf', its equivalent to the food pyramid. This is an information model to promote good, safe and more sustainable food choices.

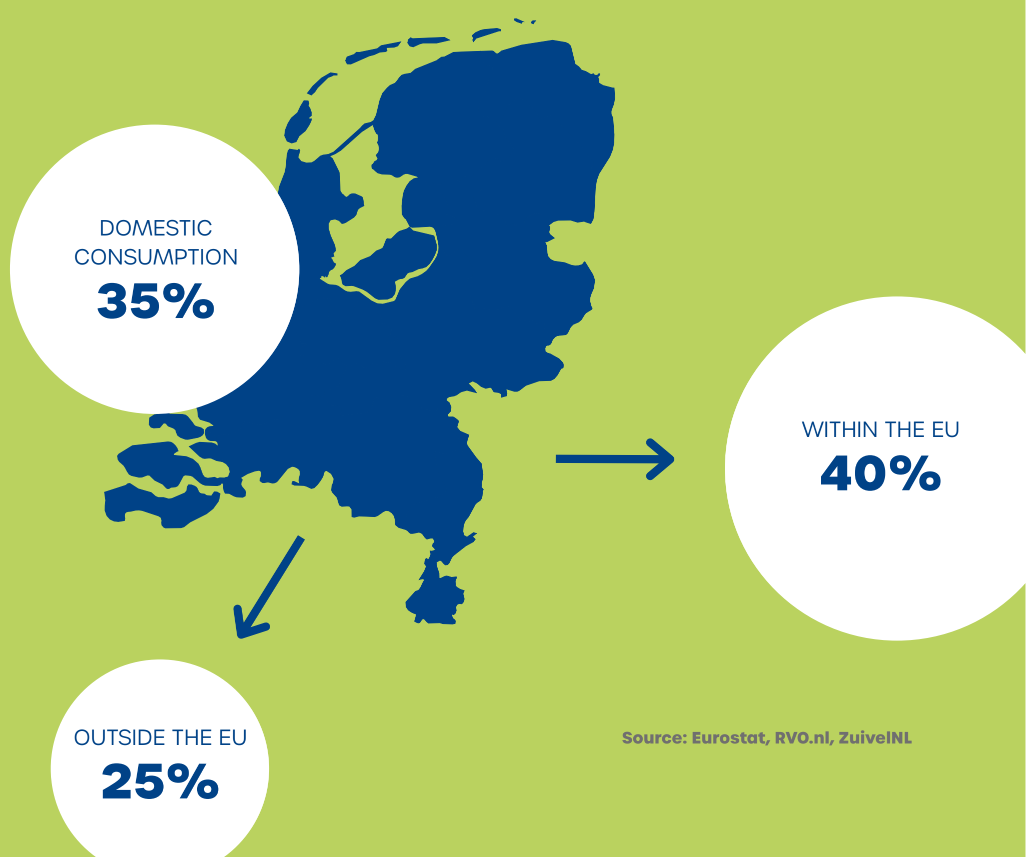
The share of dairy products in the consumption expenditure of Dutch households on food and non-alcoholic drinks has been more or less stable for years, at over 14%. In 2018 this amounted to €5.5 billion, or 1.6% of total consumer spending.

Of the dairy available in the Netherlands (expressed in milk equivalents), which consists of national milk production and imports, approximately 35% is consumed in the Netherlands. The remaining 65% is exported. Cheese is an important part of the Dutch dairy consumption. Dutch per capita cheese consumption has been above the European average for years. Dutch people eat about 20 kg of cheese per person a year.

DESTINATION OF AVAILABLE DAIRY PRODUCTS IN THE NETHERLANDS

Based on production, imports and exports

in % milk equivalent



Source: Eurostat, RVO.nl, ZuivelNL

CONSUMPTION SPENDING OF DUTCH HOUSEHOLDS

billion euro

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Potatoes, vegetables and fruit	5.8	5.9	6.0	6.3	6.4	6.8	7.1	7.5	7.8
Bread and bakery products	6.4	6.5	6.9	7.0	7.0	7.1	7.1	7.3	7.6
Meat and meat products	6.1	6.3	6.5	6.6	6.5	6.7	6.9	7.1	7.4
Dairy, eggs, oils and fats	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.3	5.5
Sugar, confectionery and ice	2.3	2.4	2.4	2.4	2.5	2.6	2.6	2.7	2.8
Mineral water, soft drinks, etc.	1.7	1.9	2.0	2.0	2.0	1.9	2.0	1.9	2.0
Fish	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.3
Coffee, tea and cocoa	0.9	1.0	1.1	1.0	1.0	1.1	1.1	1.2	1.2
Other foods	2.1	2.2	2.3	2.5	2.6	2.6	2.7	2.8	2.9
Total food and non-alcoholic beverages	**30.7**	**31.8**	**33.0**	**33.6**	**33.8**	**34.9**	**35.6**	**37.0**	**38.4**
Total consumption spending	**290.5**	**296.8**	**297.2**	**300.4**	**304.2**	**310.8**	**316.0**	**327.3**	**341.5**
Share of dairy products in:									
Total food and non-alcoholic beverages	14.3%	14.3%	14.0%	13.9%	14.3%	14.1%	14.0%	14.3%	14.3%
Total consumption spending	1.5%	1.5%	1.6%	1.5%	1.6%	1.6%	1.6%	1.6%	1.6%

Source: Statistics Netherlands (CBS)

Dutch dairy in figures 2019 is a publication of ZuivelNL. It provides an overview in figures of the key developments in the Dutch Dairy Sector.

ZuivelNL is the chain organisation of the Dutch dairy sector and is active in areas where cooperation between the links in the dairy chain creates added value. Activities include financing and initiating research & innovation in the dairy farming and dairy chain, financing and facilitating development and programme management in the field of sustainability and animal health & welfare. Examples include the Sustainable Dairy Chain, the KringloopWijzer and KoeMonitor. In the context of food safety, ZuivelNL finances the research programme Gemeenschappelijk Research Zuivel. ZuivelNL publishes market information on the international dairy market and Dutch dairy farming and facilitates the export of dairy products. ZuivelNL focuses with educational programmes on dairy farmers, employees in the dairy industry and on education through educational programmes.

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