

## Dairy Production in the Czech Republic 2004

### Milk purchases

The dairy processing industry purchased and processed 2.496 billion liters of milk during 2004, according to the statistics of the Czech Ministry of Agriculture. In comparison with the previous year, that represents a decline of 35.1 million liters (by 1.4%).

Average butterfat content increased year on year by 0.023 percentage points, from 3.973% in 2003 to 3.996% in 2004.

Average protein content rose from 3.39% in 2003 to 3.40%. The share of milk procured and classified in the highest ("Q") quality category grew from 39.1% to 45.0%. The share of milk in the "I" quality classification fell from 59.2% to 53.8%. Milk deliveries categorized as below standard declined from 1.7% in 2003 to 1.2% of the total.

### Prices

The average procurement price for milk during 2004 increased from the previous year's CZK 7.79 / l to CZK 8.06 (a rise of CZK 0.27). For the month of December 2004, the price was CZK 0.52 higher, at CZK 8.34 versus CZK 7.82 for the same month in 2003.

The marked rise in milk prices was driven by increased interest both among domestic processors and, after the Czech Republic joined the EU, of foreign processors.

**Table 1 Price development for selected dairy products (CZK/kg)**

Product	December 2003	December 2004	Change	index 2004/2003
Half-fat UHT milk, 1-liter carton	10.68	11.23	0.55	105.1
Skim milk UHT, 1-liter carton	10.12	10.44	0.32	103.2
Half-fat milk, 1-liter pouch	9.61	9.85	0.24	102.5
Half-fat fresh pasteurized milk, 1-liter carton	9.50	10.53	1.03	110.8
Natural yogurt up to 4.5 % fat, 150 g cup (per kg)	31.91	32.19	0.28	100.9
Fresh butter (16% moisture), 250 g foil-wrapped	89.36	96.02	6.66	107.5
Soft quark (25% dry matter), 250 g foil-wrapped (per kg)	42.89	45.00	2.11	104.9
Edam cheese, 30% FDM (per kg)	88.37	94.48	6.11	106.9
Edam cheese, 45% FDM (per kg)	97.55	93.47	-4.08	95.8

A year-on-year comparison of dairy product prices points to continuing low prices for fluid products, even though their prices increased on average by about approximately 5%.

Among other finished products, the price of quark rose by 4.9%, fresh butter prices increased by 7.5% and the price of Edam cheese blocks with 30% FDM rose by 6.9%.

### Fluid milk production

Production of fluid milk rose year on year by 5.3%, from 473.85 million liters to 499.12 million liters. This volume of output was divided into 71.1% UHT milk and 28.9% fresh pasteurized milk. These proportions did not vary between the two years.

**Table 2 Fluid milk production, by process**

Fluid milk	Production ('000 liters)		Share in %		index 2004/2003
	2003	2004	2003	2004	
Total fluid milk	473,848	499,120	100.0	100.0	105.3
of which:	137,150	144,074	28.9	28.9	105.0
fresh pasteurized					
UHT pasteurized	336,698	355,046	71.1	71.1	105.4

**Table 3 Fluid milk production, by butterfat content**

Fluid milk	Production ('000 liters)		Share in %		index 2004/2003
	2003	2004	2003	2004	
Skim/lowfat	53,998	60,296	11.4	12.1	111.7
Half-fat	401,897	415,013	84.8	83.1	103.3
Whole	17,953	23,811	3.8	4.8	132.6
Total	473,848	499,120	100.0	100.0	105.3

In a year-on-year comparison, the share of skim and lowfat milks increased from 11.4% to 12.1%. An increase was also registered in the production of whole milk, from 3.8% to 4.8%.

**Table 4 Fluid milk production, by packaging type**

Fluid milk	Production ('000 liters)		Share in %		index 2004/2003
	2003	2004	2003	2004	
UHT pasteurized	336,698	355,046	71.1	71.1	105.4
Fresh pasteurized	47,917	53,085	10.1	10.6	110.8
Other	89,233	90,989	18.8	18.3	102.0
Total	473,848	499,120	100.0	100.0	105.3

It is evident from the data in the table that the proportions of individual types of packaged milk did not change substantially.

The share of milk filled into cartons has reached 81.7 %.

## Creams

**Table 5 Production of creams, including cultured creams**

Product	Production ('000 liters)l		Share in %		index 2004/2003
	2003	2004	2003	2004	
Creams, including cultured	38,088	49,794	100.0	100.0	130.7
of which, sour cream	11,346	13,816	29.8	27.7	121.8
with min. 30% fat content	16,606	24,977	43.6	50.2	150.4

Total production of creams, including sour cream, increased during 2004 by 30.7% relative to the year earlier. The output of sour cream rose by 21.8% and that of cream with minimum 30% fat content by 50.4%. The increase in production was greatly influenced by the export of creams after the Czech Republic's accession to the European Union. During the course of last year, customs statistics point to an increase in the import of CN 0401 products containing fluid milk and cream from 51,331 tons in 2003 to 72,918 tons in 2004 (index 142.1). Exports of this group of products increased rapidly in a year-on-year comparison – from 13,698 tons to 87,346 tons (index 637.7). Raw fluid milk and creams contributed significantly to the increase in exports.

### Yogurts and other cultured fluid products

**Table 6** **Production of yogurts**

Product	Production ('000 liters)		Share in %		index 2004/2003
	2003	2004	2003	2004	
Total yogurts	86,672	91,870	100.0	100.0	106.0
of which: flavored	61,522	65,474	71.0	71.3	106.4
lowfat up to 0.5 %	11,503	12,124	13.3	13.2	105.4

Yogurt production increased by a significant 6% from the previous year's level, from 86,672 tons in 2003 to 91,870 tons in 2004. The proportion of flavored products reached 71.3%, while the share of low-fat yogurts with a fat content of up to 0.5% amounted to 13.2%.

Among the other fluid cultured products, the group of other cultured products (excluding buttermilk) showed a 5% increase in production from 24.04 million liters to 25.25 million liters. The share of flavored products within this group dropped from 43.7% to 39.0%. The production of unflavored buttermilk declined slightly, from 10.67 million liters to 10.5 million liters – for a drop of 1.6%.

Imports of CN 0403 products containing fluid cultured products (yogurt, kefir, buttermilk, sour cream) increased slightly, from 29,209 tons in 2003 to 29,705 tons in 2004 (index 101.7).

Exports of this group of items registered a different trend, rising from 6,707 tons in 2003 to 14,574 tons in 2004 (index 217.3).

### Butter production

Total butter production reached 59,352 tons in 2004, according to the Ministry of Agriculture's 6-12 statistical report, which includes production and the use of all types of butter, including butter spreads and butter with vegetable oil; the total production represents a drop of 9%, or 5,849 tons, in comparison with 2003.

**Table 7 Butter exports, production and inventories**

Product	Production in tons		Change	index 2004/2003
	2003	2004		
Beginning inventory 1 Jan.	1,801	1,762	- 39	97.8
Production	65,200	59,352	- 5,848	91.0
Domestic market sales	39,519	41,270	1 51	104.4
Exports	22,656	13,486	- 9,170	60.0
Ending inventory, Dec. 31	1,762	2,206	444	125.2

While butter production decreased in 2004 partly due to a drop in raw milk purchases, it was the use of butterfat in the increased production of other products that had the larger impact.

Butter exports registered a significant drop of 40%.

**Table 8 Butter production, by type**

Product	Production in tons		Change	index 2004/2003
	2003	2004		
Fresh	29,892	29,368	-524	98.2
Other/blocks	18,434	11,620	-6,814	63.0
Butter spreads	7,416	8,396	980	113.2

Fresh butter production dropped by 524 tons (-1.8%), while the production of butter spreads increased in comparison with the previous year, from 7,419 tons to 8,395 tons (+13.2%). The production of butter in blocks dropped by 6,814 tons, from 18,434 tons in 2003 to 11,620 tons in 2004 – for a decline of 37%.

Butter imports fell from 5,008 tons in 2003 to 4,386 tons in 2004 (index 87.6).

### Quark and quark specialties

Total production in this product category increased slightly (by 2.2%) from the previous year, rising from 47,187 tons to 48,212 tons.

**Table 9 Production of quark and quark specialties**

Product	Production in tons		Change	index 2004/2003
	2003	2004		
Quarks	32,706	34,368	1,662	105.1
Crèmes	10,183	10,356	173	101.7
Quark desserts	4,298	3,488	-810	81.2
Total	47,187	48,212	1,025	102.2

Quarks, which registered growth of 1,662 tons – from 32,706 tons to 34,368 tons (+5.1%) – played a big part in the increased production. The production of crèmes increased by 1.7%, while quark dessert production fell by 18.8% from 4,298 tons to 3,488 tons.

A 1% drop in production was registered for soft quark, the biggest single item in the quark product category, as output fell from 22,481 tons to 22,265 tons. A decrease was recorded for hard quarks as well – and that by 5.9% from 1,438 tons to 1,353 tons. A significant increase in interest was seen in fine fat quarks, production of which increased by 29.2% from 5,638 tons to 7,287 tons. Growth in production was registered for industrial quarks – and that by 10.0%, from 3,148 tons to 3,463 tons.

### Cheeses

In total, cheese production stagnated during 2004. Production of natural cheeses totaled 94,367 tons (index 100.0). Production of processed cheeses did not increase, either, and their output totaled 19,913 tons (index 100).

**Table 10** Development in cheese production, total

Product	Production in tons		Change	index 2004/2003
	2003	2004		
Natural cheeses	94,393	94,367	26	100.0
Processed cheeses	19,918	19,913	-5	100.0
Total cheeses	114,311	114,280	-31	100.0

An overview of natural cheese production, itemized by traditional product ranges, is presented in the following table.

**Table 11** Production of natural cheeses

Product	Production in tons		Change	index 2004/2003
	2003	2004		
Fresh unripened	7,605	8,029	424	105.6
Soft ripened	x	x	x	x
Brined cheeses	10,192	8,191	-2,001	80.4
Mold cheeses	12,015	14,040	2,025	-116.9
Selected semihard	47,957	52,366	4,409	109.2
Hard and extra hard	11,152	5,672	5,480	50.9
Other	x	x	x	x

The group of selected hard cheeses, primarily Edam, Gouda and Madeland, accounts for the greatest share in total natural cheese production. The production of cheeses in this category grew year on year by 9.2%, from 47,957 tons to 52,366 tons. The greatest increase was achieved among mold cheeses – by 16.9 % to 14,040 tons. The most profound drop was recorded in hard and extra hard cheeses, whose production volume declined by about one-half – from 11,152 tons to 5,672 tons (index 50.9). A sharp drop occurred also in the production of brined cheeses – by 19.6 %, from 10,192 tons to 8,191 tons – as a result of reduced exports. Sales of domestic natural cheeses essentially stagnated, as did their production, slipping year on year by 257 tons, from 76,744 tons to 76,440 tons (-0.4 %).

Within the CN 0406 customs category, which includes cheeses and quarks, imports increased significantly. Unfortunately, the data made public to date on the import of products in this group is obviously incorrect; hence, we opted to use data from the first eleven months of 2004. During this period between January and November 2004, imports of cheeses and quarks

increased by 6,231 tons, from 20,345 tons in 2003 to 26,876 tons (index 132.1).

Exports of this product group decreased slightly, dropping by 344 tons from 18,431 tons in 2003 to 18,107 tons in 2004 (index 98.2).

### Dried milk production

**Table 12 Production, exports and inventories of dried milk (less infant formulas)**

Product/ton	2003	2004	change	index 2004/2003
Beginning inventory 1 Jan.	9,399	7,307	-2,092	77.7
of which – NFDM	8,176	6,002	-2,174	73.4
– WMP	1,223	1,305	82	106.7
Total production	63,548	53,160	-10,388	83.7
of which – NFDM	39,257	32,832	-6,425	83.6
– WMP	24,291	20,328	-3,963	83.7
Total exports	60,515	42,596	-17,919	70.4
of which – NFDM	37,487	28,605	-8,882	76.3
– WMP	23,028	13,991	-9,037	60.8
Ending inventory, Dec. 31	7,307	3,692	-3,615	50.5
of which – NFDM	6,002	2,298	-3,704	38.3
– WMP	1,305	1,393	88	106.7

Inventories of dried milk (totaling 7,307 tons) were relatively high at the beginning of 2004 because they had been held back from export in 2003. On the basis of an extraordinary measure before the country's accession to the EU, these were reduced by 30 April through the use of export subsidies.

As can be seen from the data in the table, total production of dried milk dropped year on year by 10,388 tons – from 63,548 tons to 53,160 tons (index 83.7). The decline in nonfat dry milk alone was by 6,425 tons – from 39,257 tons to 32,832 tons (index 83.6). During the past year, 42,596 tons of dried milk were exported (index 70.4). That included 28,605 tons of NFDM (index 76.3) and 13,991 tons of whole milk powder (index 60.8).

### Foreign trade

**Table 13 Foreign trade in Czech dairy products (CZK '000)**

Indicator/year	2003	2004	change	index 2004/2003
Export of milk and dairy products	5,715,738	7,511,838	1,796,100	131.4
Import of milk and dairy products	3,719,486	4,950,672	1,231,186	133.1
Balance	1,996,252	2,561,166	564,914	128.3

*Data from customs statistics.*

The value of dairy product imports increased by 1.23 billion Czech crowns in 2004 in

comparison with 2003, reaching 4.95 billion crowns (index 133.1).

Also increasing was the value of exports – and that by 1.8 billion crowns to a total 7.51 billion crowns (index 131.4). The total export balance thereby increased from 1.996 billion crowns in 2003 to 2.56 billion crowns in 2004 (index 128.3).

### **Conclusion**

The volume of milk purchases in 2004, a year that marked a turning point for the Czech Republic with the country becoming part of an expanded European Union, decreased by 1.4% year on year to almost 2.5 billion liters. Meanwhile, the average procurement price for milk, influenced by the changing external conditions mentioned above, increased significantly – from 7.99 crowns per liter in May to 8.34 crowns per liter in December, with upward pressure continuing.

The production of dairy products in the group of products including fluid milk, yogurts and quarks increased by 5 – 6%, while the total production of cheeses, including both natural and processed cheeses, stagnated and registered an index of 100.

The production of commodity products decreased significantly, with a 16.3% drop reported for dried milk and a 9% decrease for butter. Attractive dairy product prices on foreign markets had a positive influence on the Czech trade balance in this area.

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### Appendix

## Production of dairy products in 2004

<b>Product</b>	<b>Unit</b>	<b>2003 production</b>	<b>2004 production</b>	<b>index 2004/2003</b>
Raw milk purchases	mil. l	2,531	2,496	98.6
Average butterfat content	%	3.973	3.996	+0.023
Average protein content	%	3.39	3.40	+0.01
Average procurement price	CZK/l.	7.79	8.06	103.5
Fluid milk, total	'000s l.	473,848	499,120	105.3
Creams, including cultured	'000s l.	38,088	49,794	130.7
Yogurts, total	tons	86,682	91,871	106.0
Quarks, total	tons	32,706	34,368	105.1
Crèmes	tons	10,183	10,356	101.7
Quark desserts	tons	4,298	3,488	81.2
Butter, total	tons	65,200	59,352	91.0
Natural cheeses	tons	94,393	94,367	100.0
Processed cheeses	tons	19,918	19,913	100.0
Dried milk (less infant formulas), total	tons	63,548	53,160	83.7
of which – nonfat dry milk	tons	39,257	32,832	83.6

*Source: Statistical survey of the Ministry of Agriculture of the Czech Republic*

Prague, 8 February 2005

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