

THE PRICE OF SOME DAIRY PRODUCTS IN ROMANIA (2014-2018)

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ABSTRACT

In the recovery circuit, the milk of cow, sheep, goat and buffalo is taken over. The largest share belongs to cow's and sheep's milk. The food functions of milk are complex being one of the most complete foods. For this reason, milk is considered a strategic product of the agri-food market, which is used as such in its fresh state or is processed.

At present, food technologies use milk in the following forms: as such, in the fresh state, a situation in which the conditioning of fresh milk for consumption takes place or is transformed into concentrated milk and powdered milk; by processing in the form of dietary dairy products and cheeses, by selective extraction of the resulting components cream, butter, skim milk and others; in combination with other materials, food, ice cream, etc. are prepared.

Positioning of processed products in relation to raw material prices (fresh cheese and Telemea cheese from cow's milk compared to cow's milk; Telemea cheese compared to sheep's milk). Compared to the reference levels, the processed products achieved: advances from 7.03 to 8.28 times for fresh cow's milk cheese, with an average advance of 7.32 times; exceeding 9.84 times in the case of matured cow's milk cheese - the average of the period, with limits of 9.45 and 11.16 times in the case of 2017 and 2018, respectively; advances from 5.18 to 7.06 times (2016 and 2014, respectively) for sheep's cheese matured (5.57 times the excess recorded for the average of the period).

INTRODUCTION

The milk market has the following characteristics: uniform demand throughout the year; consumption of milk and dairy products below the level considered normal; the existence of large urban centers that attract significant consumption; different levels of consumption in urban and rural areas; generalization of self-consumption at the level of individual producers; atomicity and territorial dispersion of supply, with large zonal differentiations and seasonal fluctuations; the high degree of perishability of dairy products which requires ensuring increased protection throughout the supply chain; very low market shares held by the vast majority of operators in the sector; the existence of increased and direct competition; the low share of the quantities of milk raw

material delivered to the processing sector; non-use of the entire productive capacity for milk processing; lack of professional organization of dairy farmers; the internal demand-supply imbalance, which facilitated the external supply of milk and dairy products; lack of organization of milk supply chains, being predominant the problems of milk collection raw material and distribution of dairy products; practicing a price system that disadvantages producers; low investment financial availabilities of producers who have difficulties in accessing credit; lack of coherent guidance and support policies and strategies (especially of a financial nature).

The milk supply is conditioned by: technical factors (number and breed of cows, their yield, breeding and feeding system, disease prevention, etc.); economic factors (with reference to the

ratio between the price of milk and feed, the conditions of remuneration of the staff working in the milk production sector and outside this sector, the changes and the production structure of the agricultural units producing milk, etc.).

There is still a low quality of the milk supply, which is mainly determined by the quality of the feed and the lack of an orientation towards quality and hygiene on the farms. Milk quality is also negatively affected by the lack of cooling facilities on farms and collection points.

METHOD AND MATERIAL

For the work - present - the average annual purchase price (lei / l, lei / kg) was used.

The analysis refers to the time period between 2014 and 2018, to which was added the average of the period,

thus constituting a dynamic series consisting of 6 terms.

The analysis was performed at national level (cow's milk, sheep's milk, fresh cow's milk cheese, matured cow's milk cheese and matured sheep's milk cheese), showing the positioning of each processed product in relation to the price level of the raw material used, the absolute variations of the indicator (lei / l, lei / kg) and the dynamics of the indicator.

The elaboration of this study called for the method of comparison in time and space.

RESULTS AND DISCUSSIONS

Table 1 presents the data related to the price of milk and processed products, as well as the positioning of the processed products in relation to the main raw material used.

Table 1.

Dairy products - Sale prices

Specification	Year										Average**	
	2014		2015		2016		2017		2018		Ef.	% compared to the raw material
	Ef.*	% compared to the raw material**	Ef.*	% compared to the raw material**	Ef.*	% compared to the raw material**	Ef.*	% compared to the raw material**	Ef.*	% compared to the raw material**		
Fresh cow's milk (lei/l)	2.09	-	2.05	-	2.04	-	2.13	-	1.89	-	2.04	-
Fresh sheep's milk (lei/l)	1.75	-	2.35	-	2.35	-	2.38	-	2.37	-	2.24	-
Fresh cow's milk cheese (lei/kg)	15.04	7.20 times	14.55	7.10	14.44	7.08	14.97	7.03	15.65	8.28	14.93	7.32
Matured cow's milk cheese (lei/kg)	19.80	9.47	19.63	9.58	19.76	9.69	20.13	9.45	21.09	11.16	20.08	9.84
Matured sheep's milk cheese (lei/kg)	12.35	7.06	12.27	5.22	12.18	5.18	12.53	5.26	13.10	5.53	12.49	5.57 times

[http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table \(20.02.2020\)](http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table (20.02.2020))

**own calculation

Cow's milk is characterized by price variation limits of 1.89 lei / l for 2018 and 2.13 lei / l for 2017, respectively, while the average for the period reached 2.04 lei / l. It is found that only in 2018, the price level did not reach 2 lei / l (fig. 1.).

For sheep's milk, the average price was 2.24 lei / l, compared to both supra-unit values and sub-unit levels. Thus, the

year 2014 is characterized by subunit levels: 1.75 lei / l.

The supra-unitary levels reached 2015, 2016, 2017 and 2018, as follows: 2.35 lei/l for 2015 and 2016, 2.38 lei/l at 2017 level and 2.37 lei/l for 2018 (fig. 1.).

In the case of fresh cow's milk cheese, it is noted that the price ranged from 14.44 lei/kg in 2016 to 15.65 lei/kg for 2018 and the average level was 14.93

lei/kg. Only 2015 is characterized by the recording of a subunit value, compared to the period average term (14.55 lei/kg). In the remaining years the average period was exceeded (15.04, 14.97 lei/kg in 2014 and 2017 respectively – fig. 2.).

If we refer to the specific situation of matured cow's milk cheese, an average price of 20.08 lei/kg is found, against which the dynamic series years have been positioned as follows: 19.63, 19.76 and 19.80 lei/kg in 2015, 2017 and 2014 (values lower than average); 20.13 and 21.09 lei/kg in 2017 and 2018 respectively (values higher than the period average – fig. 2.).

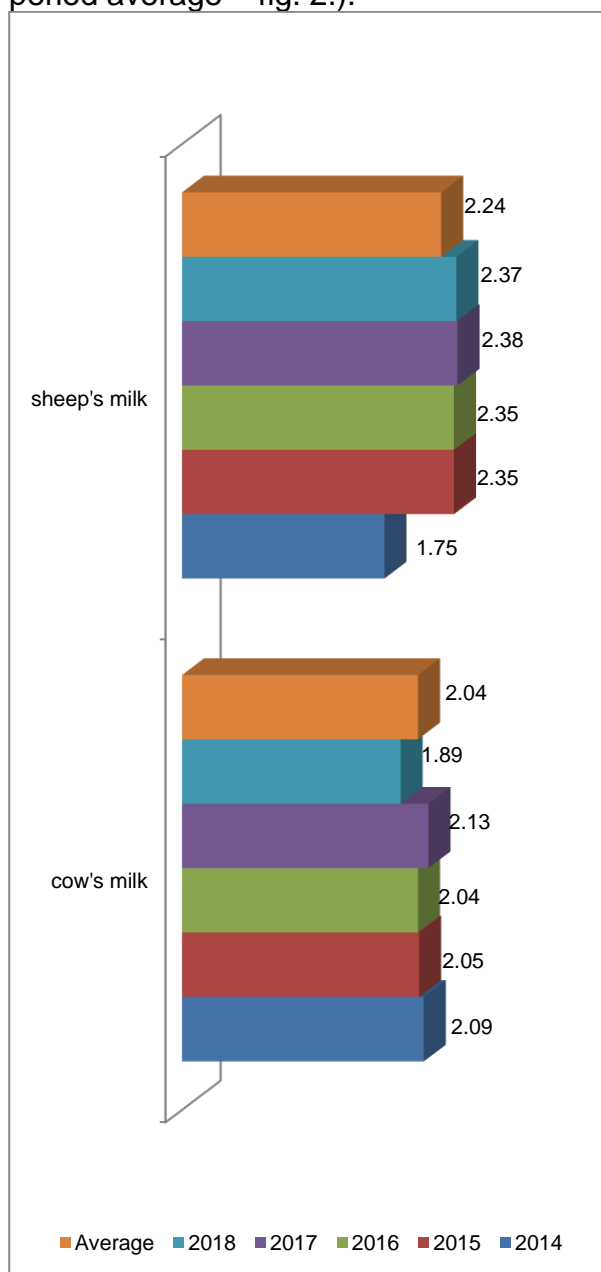


Fig. 1. Price for cow's and sheep's milk (lei/l)

For sheep's milk cheese there was an average level of 12.49 lei/kg of the selling price, with limits of 12.18 lei/kg in 2016 and 13.10 lei/kg in the case of 2018. Below the average are the years 2015 and 2014 with 12.27 and 12.35 lei/kg respectively. 2017 exceeded the comparison base: 12.53 lei/kg (fig. 2.).

Based on the annual statements, presented above, it was determined to position the processed products compared to the prices of the raw material (fresh cheese and cheese matured from cow's milk compared to milk from cows; cheese matured compared to sheep's milk).

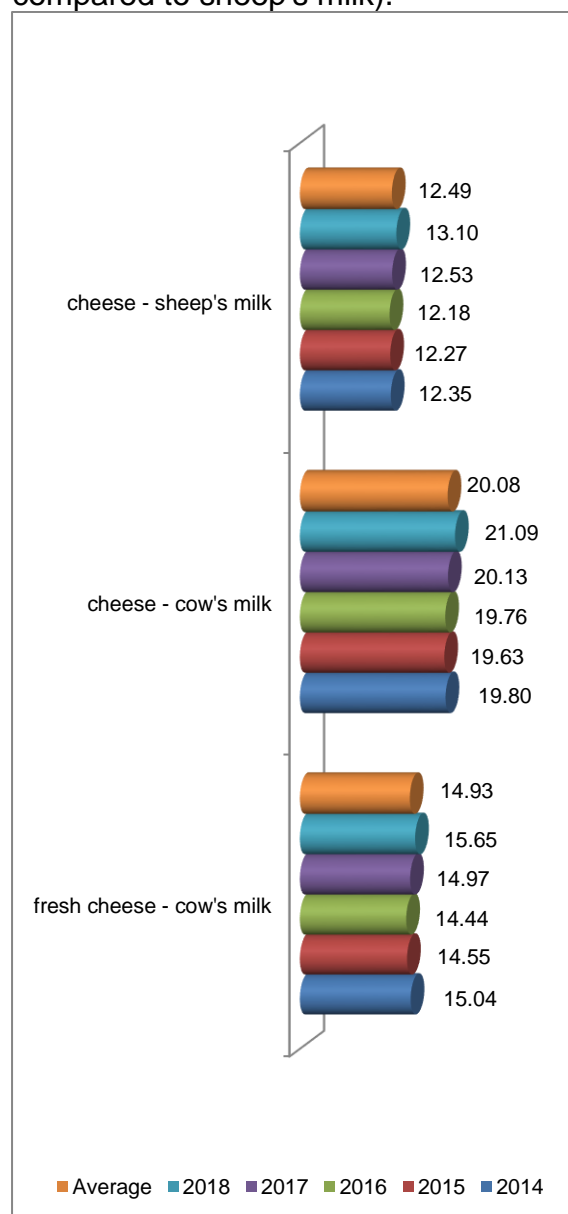


Fig. 2. Price of processed dairy products (lei/kg)

Compared to the reference levels, the processed products were positioned as follows (fig. 3.): advances from 7.03 to 8.28 times on fresh cow's milk cheese, with an average advance of 7.32 times; exceeding 9.84 times in the case of cow's milk cheese – the average period, with limits of 9.45 and 11.16 times in the case of 2017 and 2018 respectively; outstrips from 5.18 to 7.06 times (2016 and 2014 respectively) for matured sheep's milk cheese (5.57 times the advance recorded for the average period).

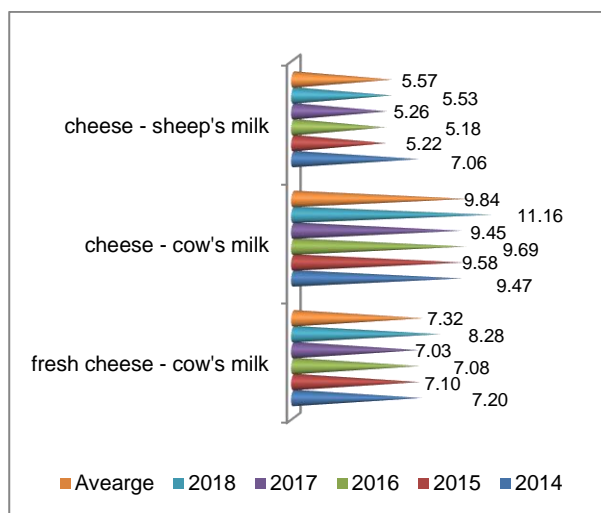


Fig. 3. Positioning processed products

in relation to the price of raw materials (nr. times)

Table 2 shows price dynamics (%) at the level of the products under observation.

Indicator dynamics, for cow's milk, is an uneven one characterized by decreases in 2015 and 2016 (98.09, 97.61 and 99.51%), increases in 2017 (advances of 1.01 and 1.04 times of reporting bases) and decreases in 2018 (-9.57 and -11.27% respectively compared to the terms of reference). The average period is lower than the first term of the dynamic series, but outpaces the second comparison term (97.61 and 107.94% respectively).

Table 2.

Dairy Products - Sales Price Dynamics (%)*

Specification	Year										Average	
	2014		2015		2016		2017		2018			
	lbf	lbn	lbf	lbn	lbf	lbn	lbf	lbn	lbf	lbn	lbf	lbn
Fresh cow's milk (lei/l)	100	100	98.09	98.09	97.61	99.51	101.91	104.41	90.43	88.73	97.61	107.94
Fresh sheep's milk (lei/l)	100	100	134.29	134.29	134.29	100.0	136.0	101.28	135.43	99.58	128.0	94.51
Fresh cow's milk cheese (lei/kg)	100	100	96.74	96.74	96.01	99.24	99.53	103.67	104.06	104.54	99.27	95.40
Matured cow's milk cheese (lei/kg)	100	100	99.14	99.14	99.80	100.66	101.67	101.87	106.52	104.77	101.41	95.21
Matured sheep's milk cheese (lei/kg)	100	100	99.35	99.35	98.62	99.27	101.46	102.87	106.07	104.55	101.13	95.34

*my calculation

Sheep's milk is characterized by strictly supra-unitary levels of fixed-base

indices (from 128.0% for the period average to 136.0% at 2017 level). Mobile

base indices were subunits in 2018 and for the period average (99.58 and 94.51%), equal for 2016 and super-unitary for the remaining components of the dynamic series (101.28% for 2017 and 134.29% for 2015).

In the case of fresh cow's milk cheese, strictly subunit levels appear in 2015, 2016 and for the average period, 2017 is lower than the first and higher base of comparison than the second, and 2018 exceeds both comparison terms.

The situation specific to cow's milk cheese shows that both reporting bases have been exceeded in 2017 and 2018 (exceeding by 1.67 and 1.87% in 2017, 6.52 and 4.77% for 2018), strictly subunit levels in 2015 (99.14%), and in the case of 2016 and for the average period indices are variable (99.80 and 100.66% respectively 101.41 and 95.21% those with fixed base and those with mobile base).

Mature sheep's milk cheese is characterized by the existence of two subunit sequences (years 2015 and 2016 – 99.35% and 98.62 and 99.27% respectively). and two strictly supra-unitary sequences (years 2017 and 2018 – outstrips of the terms of comparison of 1.01 and 1.02 times in the first case respectively 1.06 and 1.04 times in the second case). The average period exceeds by 1.13% the first term of the dynamic series, but is 4.66% lower than the previous term.

cow's milk cheese), while for raw materials there is a variation acceptable for cow's milk (15.14%) and an accentuated one for sheep's milk (36.0%).

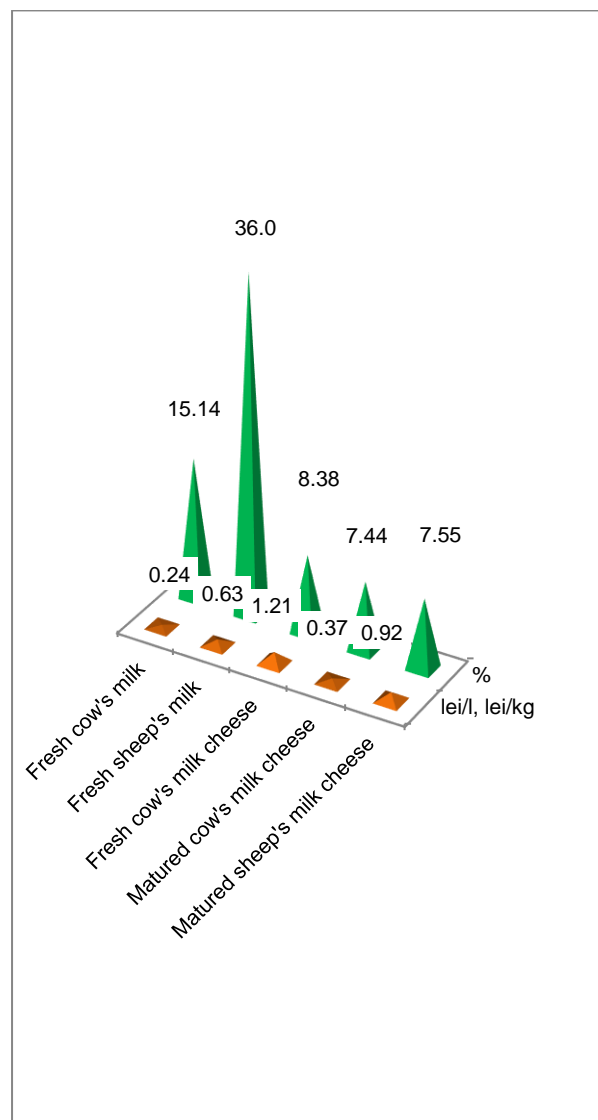


Fig. 4. Sequential price variation amplitude (lei/l)

CONCLUSIONS

Regarding the annual amplitudes of variation of the indicator (fig. 4) they were of: total amplitude of variation of the price for the five products was the following: 0.24 lei / l for cow's milk, 0.37 lei / kg for matured cow's milk cheese, 0.63 lei / l for sheep's milk, 0.92 lei / kg for matured sheep's milk cheese, 1.21 lei / kg for fresh cheese from sheep's milk; the relative variations were below 10% for the processed products (7.44, 7.55 and 8.38% for matured cow's milk cheese, matured goat's milk cheese and fresh

At national level, the evolution of the indicator is uneven for all products. It is customized sheep's milk, where a uniform trend is observed between 2015 and 2016.

For Romania, there is a need to implement, in the territory, appropriate sequential policies to support milk-producing units in order to obtain advantageous marketing prices, by involving competent decision-makers. This can also be induced by the

disadvantage of agricultural producers compared to processors and distributors for which the largest share of the final retail price is recorded (about 60%).

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