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THE QUOTA SYSTEM ON THE ROMANIAN MILK MARKET IN THE FIRST YEAR AFTER THE ACCESSION TO THE EUROPEAN UNION

ABSTRACT

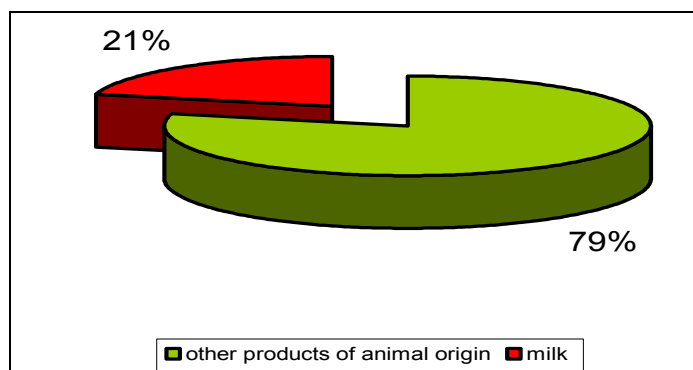
The paper investigates the evolution of the milk and dairy market in the context of the quota system implementation in Romania: supply and demand for each representative dairy category; prices – correlated with quality; processing and commercialization, as well as new product policy elements.

Key words: milk quota, milk producers/buyers.

JEL Classification: Q13.

1. INTRODUCTION

The milk production in Romanian agriculture is on the second place as importance after the meat production, accounting for 21% of the livestock production value and 8% of the agricultural production value in the year 2006. Milk is an extremely perishable product, which imposes the existence of a logistic system along the chain, capable of bringing the products to the consumer in the shortest time possible, under an adequate form and at high quality parameters (Figure 1).

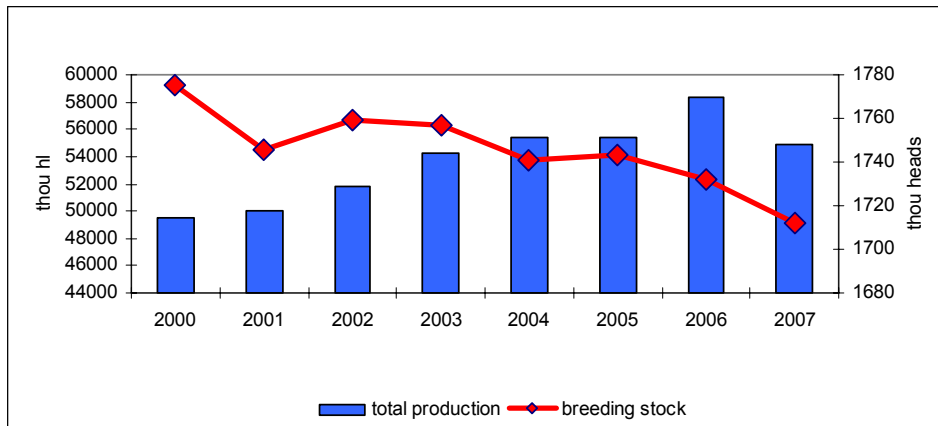


Source: calculations based on data supplied by The Ministry of Agriculture and Rural Development.

Figure 1. The share of milk production in total livestock production.

2. MILK PRODUCTION

The prolonged drought in the year 2007 resulted in the decrease of the livestock number and of milk production, together with a steady increase of the milk price.¹ (Figure 2).



Source: The National Institute for Statistics, Romania's Statistical Yearbooks, 2001–2007.

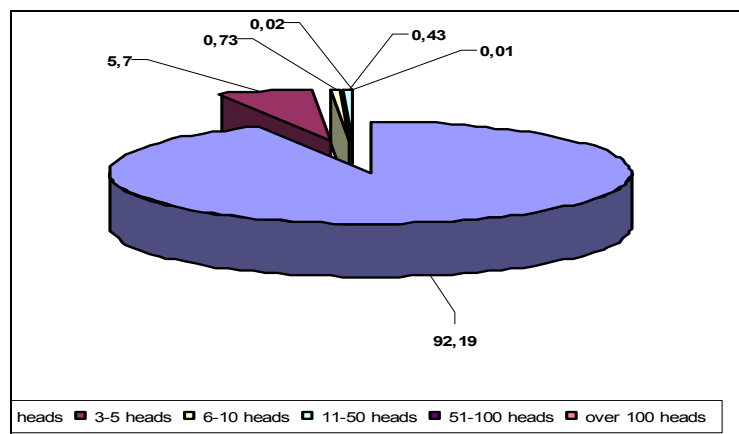
Figure 2. The evolution of the breeding stock and of the milk production.

Thus, compared to the year 2006, the breeding stock was down by about 20 thousand heads (1.2%) by the end of 2007, and the total production diminished by almost 3400 thousand hl (5.2%). The average yield in 2007, of 3078 litres/head, is quite modest as compared to that in EU-15 Member States and even compared to the New Member States (only 55% of the EU-15 average and 75% of the EU-10 average in the year 2006, according to the Eurostat data), though it experienced significant growth by over 50% in the period 1990–2007. The main reason is the increase of feed prices, by up to 30% by the end of the year.

In the period 2000–2007, the farm restructuring process was slow and far from being completed. Thus, in 2007, the milk production was obtained on 1.05 million holdings, with an average size of 1.63 heads, much lower compared to that in the European countries; 72% of the total number of dairy cows was found on very small holdings (1–2 heads). The farms with over 100 heads, which we consider commercial or potentially commercial farms, represent 2.23%, and they own only 0.02% of the total number of dairy cows. By comparison, in Poland, for 10 years (1995–2005), the number of dairy cow farms decreased by 51%, so that in 2005,

¹ In the areas severely affected by drought from Muntenia, Moldova and part of Transylvania the peasants had to face the situation of selling their animals at one quarter of the normal market price. Thus, in many cases, they had to sell a suckler cow for 500 RON, when normally its price ranged from 2000 to 5000 RON. The most affected region was the south (counties Ialomița, Constanta, Dolj and Olt) where a large part of farmers with two or three cows preferred to sell their animals at modest prices, or most often to slaughter them.

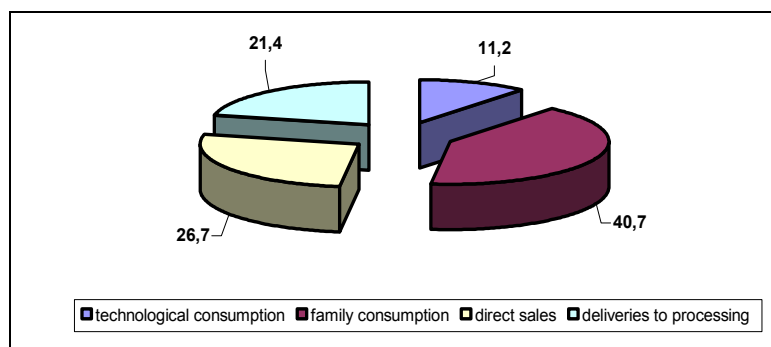
their number was about 700 000². Thus, it is estimated that a large part of the small producers, with 1–3 dairy cows, will not survive on the market in the next years, when the deadline for milk conformation to EU standards is the end of 2009, due to the rigours imposed by the milk quality along the whole chain. The only survival possibility for these small producers would be to get associated, in order to make investments, joint investments eventually, which should allow them to obtain a certain milk quantity under economic efficiency conditions (Figure 3).



Source: MARD.

Figure 3. The structure of the dairy cow farms –%–

The fragmented farm structure and the insufficient development of the milk collection infrastructure are also reflected in the structure of milk production destination (Figure 4).

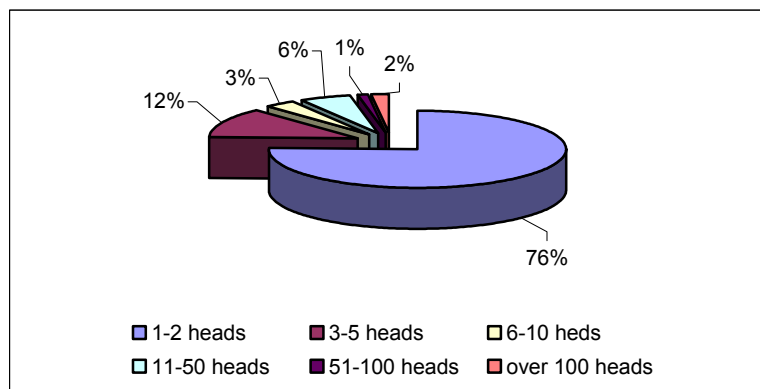


Source: Operational MARD data.

Figure 4. Milk production destination –%–

² Axel Tonini, Roel Jongeneel, Modelling the Dairy Farm Size Distribution in Poland Using an Instrumental Variable Generalized Cross Entropy Markov Approach, IAAE – 104th EAAE Seminar, Agricultural Economics and Transition: „What was expected, what we observed, the lessons learned”.

Thus, while in the period 1985–1989, the milk quantity taken over and processed by the milk processing units represented 40% of total production, after 1989, this quantity decreased each year, and represented only 21.4 % of the total production in 2007. A significant percentage, i.e. 26.7%, is represented by the milk supplied directly to the consumers on the market (liquid milk, sour cream, cheese), 40.7% is represented by self-consumption, and 11.2% is the milk for suckling calves. Milk collection is the decisive factor for the profitability of processing units. Both milk quantity and quality are affected by the high level of milk production fragmentation. Thus, about 76% of the milk production comes from the small farms of 1–2 heads that account for 92% of the total number of dairy farms. (Figure 5).



Source: *MARD*

Figure 5. Structure of milk production by types of farms.

3. MILK COLLECTION

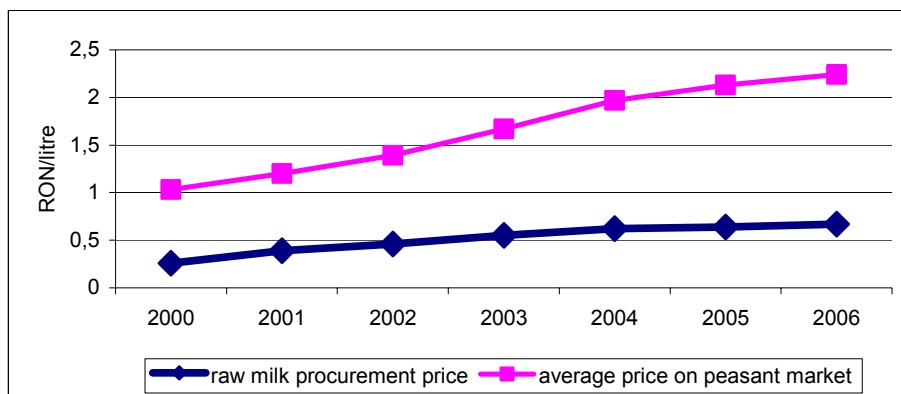
The logistics for the milk collection process is still weakly developed, the specialized companies preferring to collect milk from a single source on a 500 km distance, rather than from 100 sources on a 10 km distance. About 60% of the raw milk is collected in the counties Cluj, Brasov and Timis. If the proper milk collection is a problem, the exclusive collection of milk which complies with the quality and health standards imposed by the European Union is even a greater problem; it is well-known that, according to specialists' estimations in the dairy industry, only 30% and 40% of the milk coming from the farms meets the quality requirements imposed by the European Union, as regards the organic content, as opposed to 99% conform milk in Hungary³ (January 2007). This percentage features variations depending on the season, being higher in winter and lower in summer. Our country benefits from a transition period until 2009, when producers

³ András BENKO, *Agrifutura zRt.,Tárnok, Hungary*, Analysis of Dairy Sector in Hungary, www.dairyfarmer.net/uploads/media

can still sell non-conform milk on the domestic market. After this date the milk supplied by the producers must comply with the EU conformity standards. The costs generated by the milk transport to processors averagely amount to 0.3 lei/litre.

4. PRICES

In 2007, the price received by the small farmers for the milk delivered to processors, which did not comply with the EU standards, was 0.6–0.7 RON/litre (18–24 cents), while the milk price which complied to the EU standards, mainly delivered to processing by the large-sized farms was about 0.8–0.9 RON/litre; this price increased to 1.0–1.1 RON/litre (30 cents) in 2008. By comparison, the conform (extra quality) milk price received by the Hungarian producers was of 26 cents/litre in 2007 (Figure 6).



Source: Romania's Statistical Yearbooks 1990–2007, National Institute for Statistics.

Figure 6. The evolution of the cow milk price

5. MILK PROCESSING

The tendency of concentration and structural change in the milk processing sector became increasingly obvious, as the accession moment was getting closer. A large part of the units in the milk processing industry in Romania completed their modernization process and are now in conformity with the European legislation, while other units had to end up their activity. According to the data supplied by the National Sanitary-Veterinary and Food Safety Authority (NSVFSA), in 2008, out of total 264 processing units, 35 units were authorized for cross-community exchanges, 42 units were in conformity with the EU structural requirements and authorized to receive and process conform and non-conform milk without separation, 2 units were in conformity with the EU structural requirements and authorized to receive

and process conform and non-conform milk along separate lines and 185 units were still in the transition period until 31.12.2009 when they were supposed either to comply with the EU standards or to end up their activity (Table 1).

Table 1

The milk processing units, May 2008

Category	Total units
A. Units authorized for cross-community exchanges	35
B. Units in conformity with the Community structural requirements, authorized to receive and process conform and non-conform milk without separation	42
C. Units in conformity with the Community structural requirements authorized to receive and process conform and non-conform milk on separate lines.	2
D. Units authorized for a transition period until 31.12. 2009	185
TOTAL	264

Source: The National Sanitary Veterinary and for Food Safety Authority, 2008.

The number of multinational companies present on the Romanian dairy market is not high as compared to other industries; yet the market share of these enterprises is quite significant. The dairy market – estimated by the specialists from the industry at about 900 billion euro in 2006, is disputed by the following great players: Friesland (subsidiary of Friesland Coberco Dairy Foods from Netherlands, in partnership with Napolact), Danone, Dorna Lactate (a Romanian – Swiss partnership). According to the statistics of the Romanian Employers' Organization in the Milk Industry (APRIL), by the obtained turnover, the Friesland Company was the leader, with 105 million Euros and a market share of 20–25%, followed by Danone, the leader on the yoghurt market, with a turnover rate of 87 million Euros and a market share on the yoghurts segment of 50%, followed by Hochland (the greatest cheese producer on the local market), which, according to the information from the company had 80% notoriety among consumers, the market share of the company on the market segments where it is present ranging from 30% to 80%.

Out of total dairy market, the cheese market represents almost 50%, while milk and yoghurts had shares of 30% and 20% respectively. The specialists' estimations are optimistic: the dairy products market will reach over 1 billion Euros in the next three-four years, with a new structure, where the milk and cheese consumption will decrease in favour of the fresh dairy products, yoghurts included. In the future, it is estimated that the industry will process about 2 billion litres of milk every year, almost double compared to the quantity processed at present.

The development of the milk processing sector in the last years (through foreign investments, the emergence of multinational companies and the support provided under SAPARD) was positively reflected in the production of processed products that increased and experienced significant diversification in certain products (2.5 times in the case of fresh processed products, twice in cheese and fresh consumption milk and a slower increase in butter and milk powder) (Table 2).

Table 2

The production of industrially processed dairy products

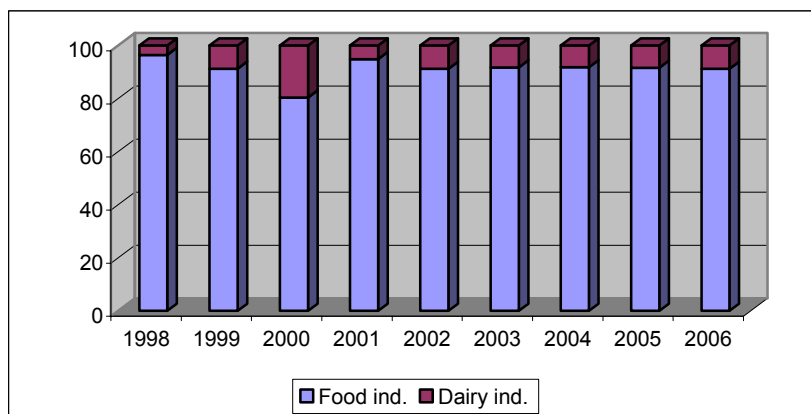
Specification	2001	2002	2003	2004	2005	2006
Fresh milk for consumption	1168	1281	1442	1577	1600	1665
Fresh dairy products	1306	1665	1740	2708	3171	3072
Butter	7	5	6	7	8	8
Cheese	36	43	49	53	61	66

Source: National Institute for Statistics, Romania's Statistical Yearbooks, 2001–2007.

6. INVESTMENTS IN THE MILK PROCESSING SECTOR

The analysis of the investments volume and structure in the period 1998–2006 in this important sector of the food industry reveals the following aspects (Figure 7):

– In the year 2000 the highest volume of investments was made, as share in the total value of investments in the food industry (19.6%), representing 57.3 million Euros.



Source: Calculations based upon data from “Results and performances of the units in industry and constructions”, 2000–2008, The National Institute for Statistics.

Figure 7. The share of investments volume in the milk sector, in total investment value in the food industry, 1999–2006.

– In the period 1998–2006, the investments value in the milk sector amounted to 10930 billion RON (360.5 million euros); the largest investments were made in the year 2006 (75.1 million euros) and in 2000 (57.3 million euros) (Table 3).

– In the majority private sector, the share of investments increased from 84% to 100% in the period 1998–2006;

– In 2006, about 73% of total investments was represented by own financing sources, the difference being represented by domestic credits or other funding sources.

Table 3

The investments evolution in the milk industry

Year	Million euros
1998	15.1
1999	26.7
2000	57.3
2001	24.2
2002	34.3
2003	38.4
2004	37.5
2005	51.9
2006	75.1
Total	360.5

Source: "Results and performances of the units in industry and constructions", 2000–2008, National Institute for Statistics.

As regards the investment structure, the following can be mentioned:

– The highest share (over 55%) is represented by the investments in machinery, which shows the main interest of the firms in the improvement of the manufacturing technologies (Table 4);

Table 4

The share of total investments value in the milk processing sector by structure elements, %

Specification	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total investments, out of which:	100	100	100	100	100	100	100	100	100
– buildings and special constructions	16	30	22	24	23	22	20	18	31
– machinery	64	56	67	56	64	64	55	55	50
– means of transport	19	13	10	18	11	13	24	26	18
– other investments	1	1	1	2	2	1	1	1	1

Source: "Results and performances of the units in industry and constructions", 2000–2008, National Institute for Statistics.

– The highest investments in "means of transport" were made in 2005 (26%), and in buildings and special constructions in the year 2006 (31%) and 1999 (30%).

7. MILK COMMERCIALIZATION

The fresh consumption milk market supplies main types of products: ultra-pasteurized (UHT) milk, pasteurized milk, which together total about 10% of the quantity of consumption milk sold in Romania; milk that is not processed industrially, which incurs risk for consumers' health, yet by tradition preferred by consumers, with an extremely large share (90%) of the milk sold in Romania. The consumption milk market on the UHT segment is insufficiently developed, mainly because of the low purchasing power, but also because of the lack of consumers' education. The adult population in Romania grew and

formed its food tastes and preferences before 1989. This, because, besides the price, the preference for the unprocessed fat milk “from the countryside” keeps consumers away from the UHT milk, which has a new, specific taste.

The distribution of dairy products on the domestic market is based on chain stores (markets or supermarkets). These stores are mainly located in towns, but also in the rural areas and have the same operation standards as those in the Western European countries, using laser electronic equipment for code scanning and data transmission to the monitoring companies.

The most important channel from point of view of the milk flow volume in 2007 was represented by sales on the free (peasant) market and self-consumption, about 67% of the total milk production being sold in this system. The lack of education with regard to consumption, or even the awareness of making this decision, justified by the lack of money, expose the buyer to very high risks, as it is known that milk can transmit certain serious diseases. Both in quantity and in value terms, the foreign trade with milk and dairy products in the period 2000-2006 had large yearly variations, in both components, i.e. imports and exports. Except for cheese, Romania is a net importer of dairy products. The imports of liquid milk mainly came from the neighbour countries Hungary (60%), the Czech Republic (30%), Germany (7%). The milk exports are non-significant, these being represented by the organic products processed by the company La Dorna, having the Greek market as main destination (98%).

With Romania’s accession to the EU in 2007, the customs duties at import were removed, so that the dairy imports increased by about 30%.

8. THE CONSUMPTION IN ROMANIA VERSUS THE EU COUNTRIES

The annual average milk and dairy consumption (butter exclusively) was 246.6 litres/capita in 2006, up by 3% compared to the previous year (table 5).

In the year 2006, the consumption of liquid milk with 3% fat percentage averaged 70.2 litres/capita⁴, but, unfortunately only 6.7 litres of milk was represented by the industrially processed milk, the difference being represented by unprocessed milk. The producers are expecting milk consumption to increase in the next five years, as the fresh milk for consumption still has the greatest share in the Romanian consumers’ preferences. On this segment of fresh processed milk, the main producers are Friesland, Albalact, LaDorna, Brailact and Danone, which together held over 75% of the value of the domestic milk market at the end of the year, according to the market data. A novelty for the Romanian consumers is represented by the condensed milk for coffee, which has only one producer on the domestic

⁴ Institutul Național de Statistică, “Coordonate ale nivelului de trai în România. Veniturile și consumul populației în anul 2000–2007”.

market – Covalact Campina. At present, this company covers part of the demand for this product in our country, the difference coming from the imports.

Table 5

Milk and dairy products consumption

Specification	MU	2001	2002	2003	2004	2005	2006
Liquid milk (3% fat content)	Liters/capita	68.0	69.8	70.2	71.2	71.5	70.2
Cheese – sour cream total, out of which	kg/capita	12.9	13.1	13.7	13.5	14.2	14.6
– cow ripened cheese (<i>telemea</i>)	kg/capita	4.6	4.8	4.9	4.7	4.8	4.9
– ewe ripened cheese (<i>telemea</i>)	kg/capita	2.8	2.6	2.5	2.5	2.6	2.5
– fresh cow cheese		....	....	....	....	3.3	3.3
– sour cream, cream	....	....	....	....	....	2.2	2.4
– <i>caciocavallo</i>	....	....	....	....	....	0.8	0.9
Butter	kg/capita	0.2	0.2	0.3	0.3	0.4	0.4
Ice-cream	Kg/capita	....	....	....	....	0.34	0.43

Source: Institutul Național de Statistică, “Coordonate ale nivelului de trai în România. Veniturile și consumul populației în anul 2000–2007”.

As regards the demand for **fresh dairy products** on the market, the most spectacular evolution was noticed in the fruit yoghurts. Thus, while until 2000 this product did not have great success, after this moment it experienced a steady increase of 10–12% each year, this trend being maintained up to the present moment. The consumption of fresh dairy products is 5.4 kg/capita/year, the smallest in the EU. According to the data supplied by Danone Romania, in Germany the consumption is 33.6 kg, in France 33.7 kg, in Bulgaria 16.2 kg, in Hungary 12.7 kg and in the Czech Republic 18.6 kg. According to producers' estimations, in ten years, the Romanian consumers' consumption will reach about 20 kg of fresh dairy/capita/ year. Ice-cream does not represent a traditional product in the Romanian population's diet, it is still perceived as a refreshment food and less as a desert, yet the producers are convinced that this mentality will change. The annual consumption of ice-cream per capita increased by about 20-30% in the last years, but is still low compared to other countries in Europe. Thus, Hungary and the Czech Republic have a consumption of over 3 kg/capita, Poland 4 kg, Italy 17 kg, Belgium 15.5 kg and Sweden 13 kg. The top consumers of ice-cream are the United States, with 27 kg/capita/year. Being a seasonal product, the sales increase in summer, when 90% of the urban population eats ice-cream. The ice-cream consumers share decrease in winter to about 42%. The Romanian ice-cream market is dominated by three large companies: Delta Romania, Alpin and Napolact, which together represent about 60% of the sales volume on the market.

Although cheese consumption grew by 13.2% in the period 2001–2005, it is lower than that in the EU (of about 18 kg/capita/year). If we take in consideration the share of products (*telemea*, feta cheese, *caciocavallo*, spread cheese, cheese

cream), the cheese market is dominated by cacciocavalo (around 40%), both from the point of view of value and of sold quantities.

9. QUOTA FULFILLMENT AFTER THE FIRST IMPLEMENTATION YEAR

The EU enlargement (by 17 New States) determined the emergence of 103 million new consumers on the single market in the year 2008 and an increase of the milk quota by 24.5 million tons compared to the quota stipulated with the 2003 reform, so that the total quota value for the EU-27 is 142 million tons at present.

Together with the accession to the EU, the milk support policy in Romania consisted in introducing a support scheme similar to that in practice in the in EU, by granting decoupled payments per animal head, while also maintaining the national support for livestock breeding and for the improvement of the quality of animal products. In the year 2007, the implementation of the quota system began, as well as the implementation of the complementary national direct payments and of milk premia for the conform milk delivered to the processing units.

The CAP reform has in view the removal of the milk quota by the year 2015. For the sector preparation and shock attenuation, the Council approved the European Commission proposal to increase the milk quota at European level by 2%; this increase was applied to each Member State. Thus, the milk quota for Romania in the market, year 1, April 2008 – 31 March 2009 will be of 3.11 million tons. The supplementation was expected by the producers, as they planned investments in new production capacities. As regards the market year 2007–2008, the Agency of Payments and Intervention in Agriculture (APIA) considers that the cow milk producers did not exceed the quantities allocated by the EU at national level; in this situation, Romania would not pay the tax for exceeding the allocated quota. The non-fulfillment of the milk quota, both for the deliveries to processors and for the direct sales, is due to the conditions of the agricultural year (drought in 2007) but also to the inadequate farm structure, to the scarcity of funds necessary for investments and for milk quality increase.

In conformity with the provisional results published by the European Commission after the first year from quota system implementation, 242,303 active buyers reported a milk quantity for processing of 937,689 tons, which represents 71.45 of the quota allocated to deliveries to processing; 436,911 producers reported direct milk and dairy sales of 1421 thousand tons in milk equivalent, which represents 82.1% of the total quota for direct sales for the year 2007/2008. The percentage of non-fulfillment of quotas per total country is quite high, mainly for deliveries (almost 30%) and of about 18% for direct sales. The highest percentage in quota non-fulfillment (71%) is in the categories of small producers, with quotas under 3000 kg and from 3000 to 5000 kg, i.e. the producers with 1–2 cows, maximum 3–4 animals/farm. The large commercial farms (over 100000 kg) even

exceeded the quota by 9%, and the farms with quotas from 50000 to 100000 kg fulfilled the quotas by 83%. The medium-sized producers (quotas from 5000 to 50000 kg) fulfilled 74% of the allocated quota on the average.

10. CONCLUSIONS

- The development of infrastructure related to the organization of milk collection even from the remotest areas;
- Financial support to increase milk quality in conformity with the European norms as regards the organic content and the correlation with the price;
- The development a market information system and the access to information for all the players in the chain;
- The best use of the opportunity to export the niche traditional dairy products both on the domestic and European markets;
- The development of national programs for livestock breeding and genetic material improvement for the farms of a certain economic size;
- The decrease of the cow herds number to about 700,000 heads; this number easily ensures the milk production at the level of the allocated quota;
- The improvement of milk quality parameters at the level of the EU standards;
- Stimulation of milk quota transactions between farmers, by the diminution of the percentage of retention to the national reserve;
- The balanced development of dairy cow raising in all the regions of the country through the quota transaction limitation within the same region;
- The producers' association represents an important measure for strengthening their role in the relation with processors for the efficient valorization of production.

REFERENCES

1. Alexandri, C., *Securitate și echilibru alimentar în România*, Ed. GEEA, București, 2001.
2. Alexandri, C., Davidovici, I., Gavrilescu, D., (coord.), *Tratat de economia agriculturii*, Ed.Expert, 2004.
3. Gavrilescu, D., Giurca, D., (coord), *Economia agroalimentară*, Ed.Expert, București, 2000.
4. Grodea, M., (2005), *Piața laptelui*, Editura Expert.
5. Vincze, M., *Politici agricole în lume*, Presa Universitară Clujană, 1999.
6. Zăhău, L.(coord.), *Politici și piețe agricole – reformă și integrare europeană*, Ed. CERES, București, 2005.
7. *** National Institute for Statistics, Romania's Statistical Yearbooks 1990–2005.
8. *** Institutul Național de Statistică, Veniturile, cheltuielile și consumul populației în anul 2005.
9. *** National Institute for Statistics, Romania's Foreign Trade Yearbook, 1990–2005.
10. *** National Institute for Statistics, Food Balances by Commodities, 2006.
11. *** Agricultura în Uniunea Europeană – în pas cu timpul, Delegația Comisiei Europene în România, seria "Europa", București, 1996.
12. *** Banca Mondială, ECSSD Sectorul de Dezvoltare Durabilă și de Mediu – Sectorul agroalimentar din România într-o perspectivă europeană, București, iunie, 2005.
13. *** General Agricultural Census 2002, National Institute for Statistics, 2004.