

TRENDS IN THE DEVELOPMENT OF THE BULGARIAN DAIRY MARKET

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ABSTRACT — *The main object of this article is the dairy market, which includes all Bulgarian companies operating under code 10.5 of „Classification of economic activities 2008“ and Bulgarian consumers of milk and dairy products. The main purpose of this article is to analyze the trends in the dairy market including the production and the consumption of dairy products. The dairy market has strategic importance for Bulgaria. Milk is a vital product present in everyday nutrition, but in addition to the social and health effects, the dairy sector contributes to providing permanent jobs in rural areas as well as protecting the environment. The main efforts of dairy producers are aimed at investing at all stages of the production chain as well as encourage trade. Of all the products on the dairy market, Bulgaria has a well-established production potential of yoghurt, cheese and yellow cheese obtained from the different types of milk produced in the country. Despite the dwindling consumption of dairy products, the sustainability of the sector is still preserved. Enterprises in the dairy industry are consolidating and becoming more present in the market.*

Keywords: Bulgarian dairy market, dairy products, milk production

1. INTRODUCTION

The main purpose of this article is to analyze the trends in the dairy market including the production and the consumption of dairy products. The production of dairy products, which is a traditionally developed branch with a significant place in the Bulgarian economy, gives about 5-8% of the production of the food industry. The consumption of dairy products is also extremely important for Bulgaria. Milk and dairy products are vital elements of traditional Bulgarian cuisine. They are part of the everyday menu of almost every Bulgarian consumer. Consumption of dairy products also plays an important role for the health of every person by adding to the body extremely important and valuable micro and macro nutrients.

Besides the social and health effects, the production and consumption of milk and dairy products contribute to the development of the Bulgarian economy. The dairy industry provides for many people permanent jobs in rural areas and helps to preserve the environment. The production of dairy products belongs to the secondary (processing) sector of the economy. It is characterized by low energy intensity but high labor intensity and raw material consumption – raw material costs form over 70% of the value of its production.

2. MATERIALS AND METHODS

The methodological apparatus used in this article includes a set of economic methods and approaches. More specifically, the methodology includes the method of information gathering and

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the method of data processing and analysis. A number of logical-theoretical methods have been used as the method of comparison and the method of the study of historical development. Quantitative analysis in the article involves processing statistical information. Calculations were made using the software product Microsoft Excel 2016.

For collecting information from primary sources is used information from:

- company websites,
- market positions in separate distribution channels and sales outlets,
- interviews with owners and managers,
- consultants in the field,
- and last but not least monitoring.

The secondary sources of information that are used are databases of associations, branch organizations, Bulgarian Industrial Association, Association of Dairy Producers in Bulgaria, National Statistical Institute, Ministry of Agriculture, Food and Forestry, marketing research agencies, periodical and daily publications and reports on the activity of the companies in the sector, business information (guides, overviews, brochures, etc.).

3. RESULTS AND DISCUSSION

The dairy market in Bulgaria has a number of peculiarities that distinguish it among the EU partner countries. The cow's milk dominates Bulgarian market for dairy products. Our country has traditionally been a producer of milk also from sheep, goat's milk and very little buffalo's milk. While in other countries of the European Union the share of cow's milk is over 98%, in Bulgaria this percentage is between 93-95%. In 2016, according to the Agrostatistics Department of the Ministry of Agriculture, Food and Forestry, the share of cow's milk in the total production is 93.5% and this rate is likely to increase, mainly due to the continuing shrinkage of sheep's milk and marginalization in goat's milk and buffalo's milk.

Another peculiarity of the dairy market is the lower commodity volume. The share of milk delivered to the dairy industry compared to total milk production is low compared to the EU average.

In Bulgaria dairy companies buy up about 45-55% of the raw milk and this percentage is declining especially after 2007 (Fig. 1). A large proportion of raw milk is used for direct sale and consumption, which is particularly valid for sheep's and goat's milk. In 2015, the redeemed milk for processing by dairy companies accounts for about 50% of the total cow's, sheep's, goat's and buffalo's milk produced from farms.

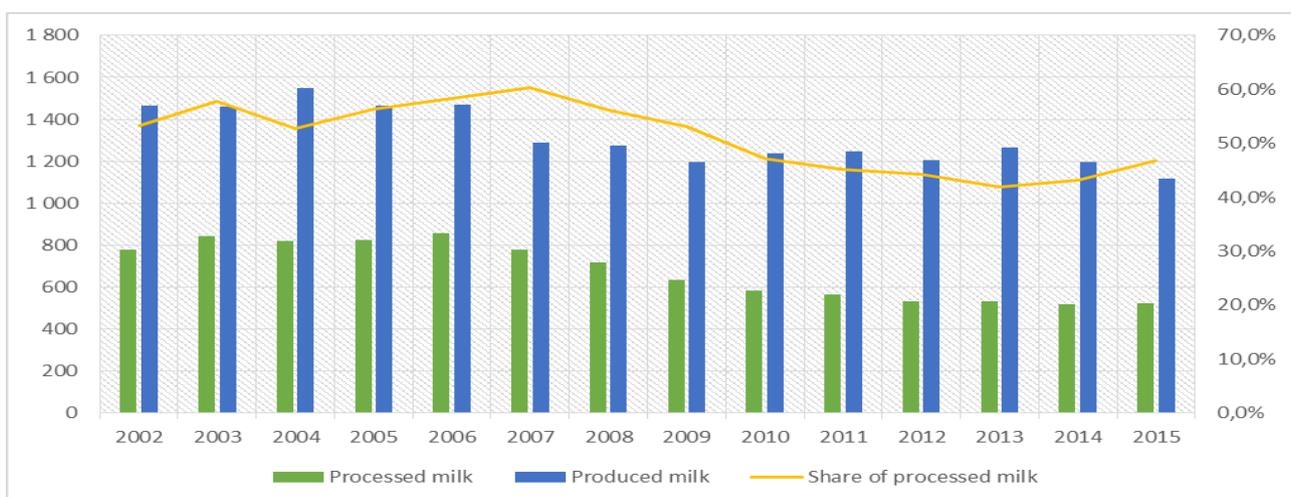


Fig. 1 Dynamics of the variables „produced milk“ and „purchased and processed milk“

Source: Agrostistics Department of the Ministry of Agriculture, Food and Forestry (2018)

Unlike almost all EU countries, livestock breeding and in particular cattle breeding in Bulgaria continues to be subject to various exceptions to the general regulatory base. The most serious issue is the quality of milk and the conditions for its production. The conditions for cow's milk production in the European Union are laid down in Regulation (E) №853/2004, which they define specific hygiene requirements for raw materials and foodstuffs of animal origin.

Another peculiarity of the Bulgarian dairy market is the observed and characteristic feature of the national agricultural structure – dualism. Milk livestock breeding is a striking example of its fragmentation, small, self-sustaining holdings dominate.

Regarding the farm structure, the positive signal is the gradual increase of the larger farms at the expense of the small ones, and such consolidation is observed in every livestock breeding sub-branches, which, however, is synchronous with the continuing decrease in the grassland. The structure of production is determined by various factors, with capital and yield being the most important.

Another characteristic feature of milk cattle breeding is the extremely worrying fact that our country is the penultimate place in Europe on the productivity of one animal. The average annual milking rate of cows in Bulgaria is 3,670 kg. per capita, while in other European countries it is almost double – 6 692 kg. This should be seen as one of the main weaknesses in the dairy industry in Bulgaria and as an opportunity to increase its efficiency.

In addition to the common characteristics that have been dealt here, attention needs to be paid to the more specific features of the dairy market, the dairy consumers and the dairy producers. Account is taken of the peculiarities of:

the functional areas of the dairy producers;

- production and supply of milk and dairy products;
- demand and consumption of milk and dairy products;
- price dynamics of the main raw materials.

Strategic business units operating on the dairy market, have some characteristics that distinguish them from other companies in the country. In particular, these functional areas are related to product policy, production process, costs and price levels, product logistics, marketing and sales.

The product range of dairy companies is relatively small and quite traditional. It does not have any specifics and uniqueness to pursue a particular price and niche positioning, which is why it faces massive competitive pressure. Within the scope of product assortment, the following product categories are mainly included: yoghurt, which are subdivided into multiple groups; drinking milk and fruit milks with different flavors; cheese; yellow cheese; fresh milk – natural and pasteurized with different fat content; cream; butter; curd; melted cheese; starters and others. The products are available in packs of different materials, weight / liters, colors, way of opening, etc.

The variety of products allows identifying multiple diverse groups of competitors depending on product specialization: one-product, one-line specialization, production of several product lines, offering product lines covering all product categories within the class. The products differentiate according to the degree of naturalness, fat, taste, packaging, more at a lower price, reputation.

The production process of dairy products is distinguished by its specific features. It has a strong dependence on the quality of production and the choice of reliable suppliers of raw materials. The technological level of development has decisive importance for the production of competitive products, so efforts must be directed towards continuous technological and product innovations that meet the market requirements and the actions of competitors.

In the dairy market, companies can differentiate themselves as producers of natural dairy products or products made from artificial additives. Choosing a product at either extremes or an intermediate one has an impact on expiration, taste and price. Longer shelf life is determined by the use of modern

technology, artificial starters and various additives in dairy production. Longer dairy products are beneficial to producers because it allows longer storage and transport options.

There is a correlation between the shelf life on the one hand and the degree of product naturalness. As the product approaches the requirements for a natural dairy product, the shorter the shelf life and the opposite: the more artificial additives are used, the longer the shelf life of the products.

Natural products require partnerships with suppliers of dairy raw material and quality control when milk is a major percentage of the final product ingredient. The opportunities for a high-quality dairy raw material in the country are limited. When using plant-based raw materials and artificial starters for production, finding alternative suppliers is easier.

Natural products have higher production costs than manufactured on an artificial basis, which leads to the requirement for higher prices. The cost structure is unfavorable in the presence of high fixed costs, low labor productivity, high labor intensity, raw material consumption and material input compared to the industry's average and most competitive firms on the market.

Aggravating conditions exist when there is too much administration; laboratories that do not promote the development of new products and / or sales of licenses. Logistics costs also have an impact on total costs, including transport and storage of raw materials and finished goods. In a more favorable situation are competitors who have placed their production close to their main sources of dairy raw materials – farms as well as to some of the main sales regions where the bulk of the sales of the products is concentrated.

Due to its specificity, transporting raw milk on the one hand and finished dairy products on the other requires the use of a specialized fleet. The geographic size of Bulgaria allows the individual dairy company to expand its business across the country, as under normal conditions any delivery can be made within the working day. This allows even natural products to reach the final point of sale and be realized within the shelf life if direct delivery is made.

When multiple reloading agents are used, there is a risk of going beyond the shelf life required by the majority of chain stores. Because of its volumetric nature, the cost of transport per unit of output is lower when the amount transported is greater and utilizes the load capacity of the vehicle. This requires different modes of transport, the variety of which is determined by the quantities and frequency of single deliveries, as well as necessarily smaller cars for intra-city transport.

The skills, capabilities and resources in the marketing and sales area of the dairy producers in the dairy market are crucial to the sustained growth in sales and revenue of the company. However, a large number of companies continue to be product-oriented, and are believed to be the leading product performance. Along with them there is an evolution in marketing activity. Key elements for success are the four elements of the marketing mix: distribution, communication, product and pricing policies. An important part of marketing and sales management is the clever segmentation of the market, as multiple segmentation opportunities have to be identified within the dairy class, and the criteria used are too diverse.

Regarding to the production and supply of milk and dairy products in the country, a relatively constant trend can be noticed. According to data of the Agrostatistics Department of the Ministry of Agriculture, Food and Forestry (2018), during the last 15 years, the dairy companies produce and offers a total of about 240 to 280 thousand tons of milk and dairy products (Fig. 2).

Considering that, for the same period, about 260 firms were operating on the market, with an average annual production of about 1000 tons per company. It is noteworthy that over the past two years, for which data from the Agrostatistics Department of the Ministry of Agriculture, Food and Forestry are available, there is a slight increase in the supply of dairy products. This can be explained by the fact that in 2015 milk quotas for the Bulgarian dairy producers have been removed.

In the portfolio of products available on the Bulgarian dairy market, two main groups can be identified. The first group of products are the main products, which includes packed fresh milk, natural yoghurt, white brined cheese and yellow cheese. The second group of products refers to those

that are more specific or less commonly sought (secondary), namely: milk fat, curd, cream, smoked cheese.

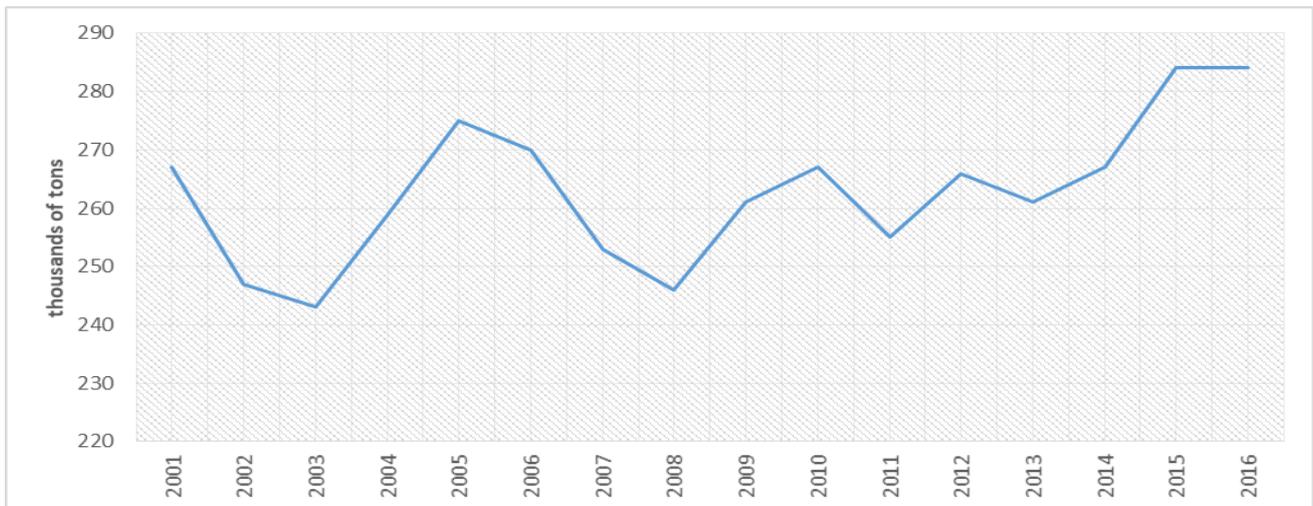


Fig. 2 Dynamics of the supply of milk and dairy products

Source: Agrostatistics Department of the Ministry of Agriculture, Food and Forestry (2018)

The supply of natural yoghurt is the largest on the dairy market. The quantity available on the market for the period 2001 - 2016 ranges from 120 to 140 thousand tons. The data show that yoghurt is between 40% and 50% of the total supply of dairy products in the country over the period considered. The share of the quantities of white brined cheese and yellow cheese remained relatively constant. It is noticeable that the change in the direction of the increase in supply only with packaged fresh milk, which has increased approximately 2.5 times during the survey period (Fig. 3).

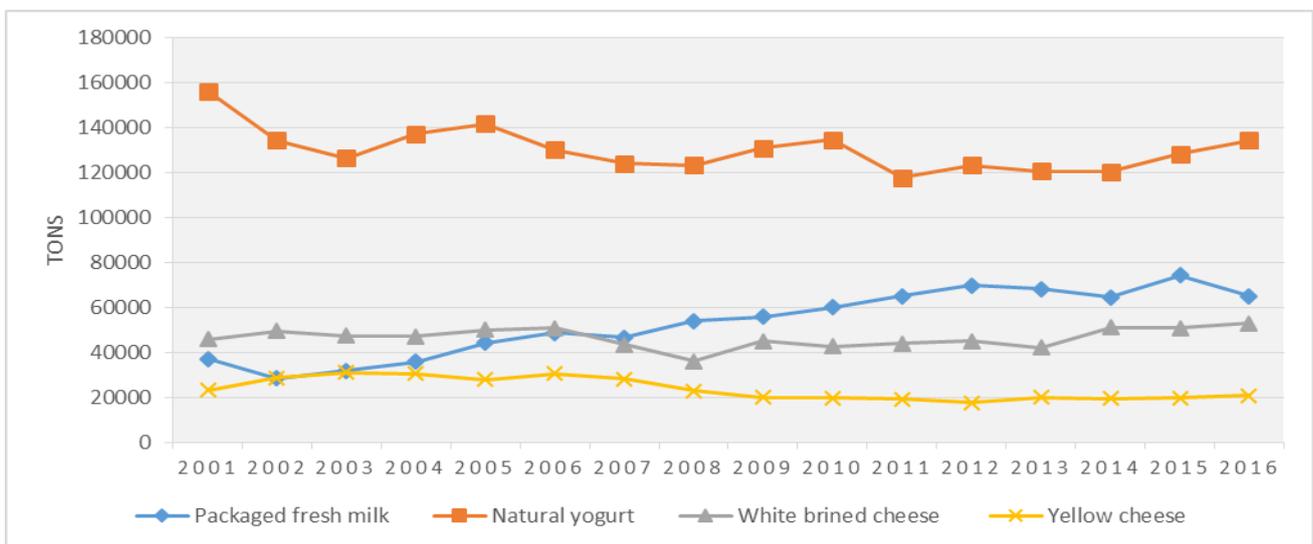


Fig. 3 Dynamics of the supply of packed fresh milk, natural yoghurt, white brined cheese and yellow cheese

Source: Agrostatistics Department of the Ministry of Agriculture, Food and Forestry (2018)

A positive trend in the supply of dairy products can also be noticed in cream products and smoked cheeses (Fig. 4). While only 600-700 tonnes a year were offered in 2001, 2500 tonnes of cream and

about 3,000 tonnes of smoked cheese are offered in 2016. One of the main factors for this increase in recent years is the increased purchasing power of the population, which, with higher living standards, is geared towards more specific products such as cream and smoked cheese. By contrast, milk fats show a decline in the production and the supply, which is mainly due to the avoidance of this product due to its unfavorable impact on the healthy lifestyle of the population.

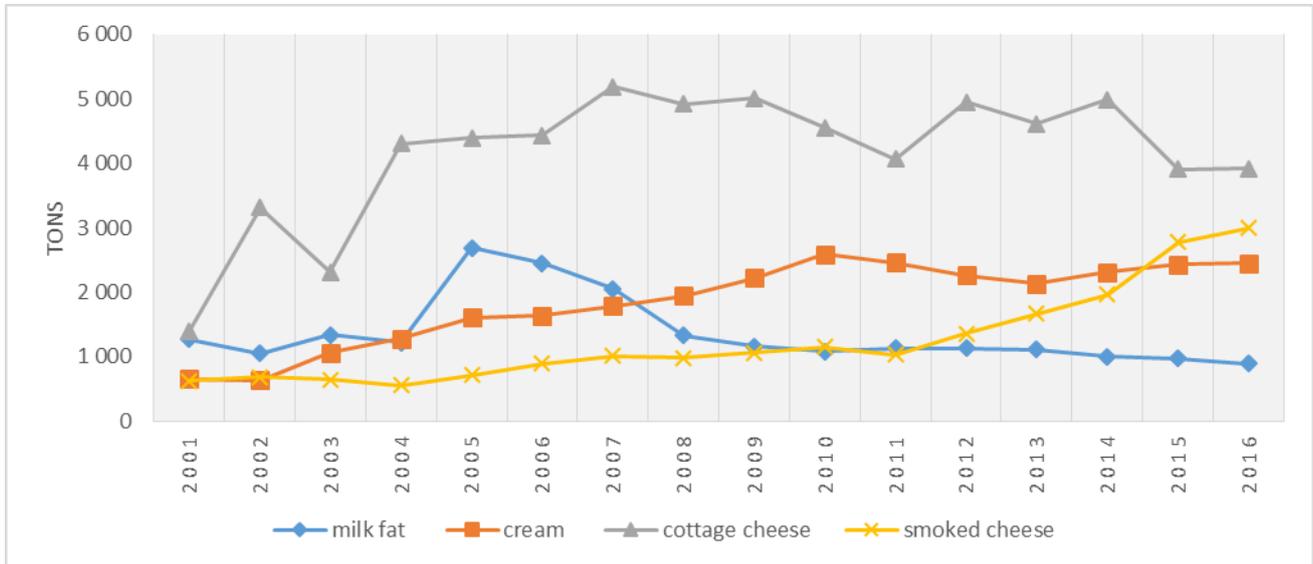


Fig. 4 Dynamics of the supply of milk fat, cream, cottage cheese, smoked cheese
Source: Agrostatics Department of the Ministry of Agriculture, Food and Forestry (2018)

In contrast to the supply, the demand on the dairy market has mostly negative trends (Fig. 5). According to National Statistical Institute data (2018), in 2017 total annual consumption of milk and dairy products (63,1 kg / person) declined by 6.5% compared to consumption in 2010, when the average person consumed 67,2 kg. dairy products.

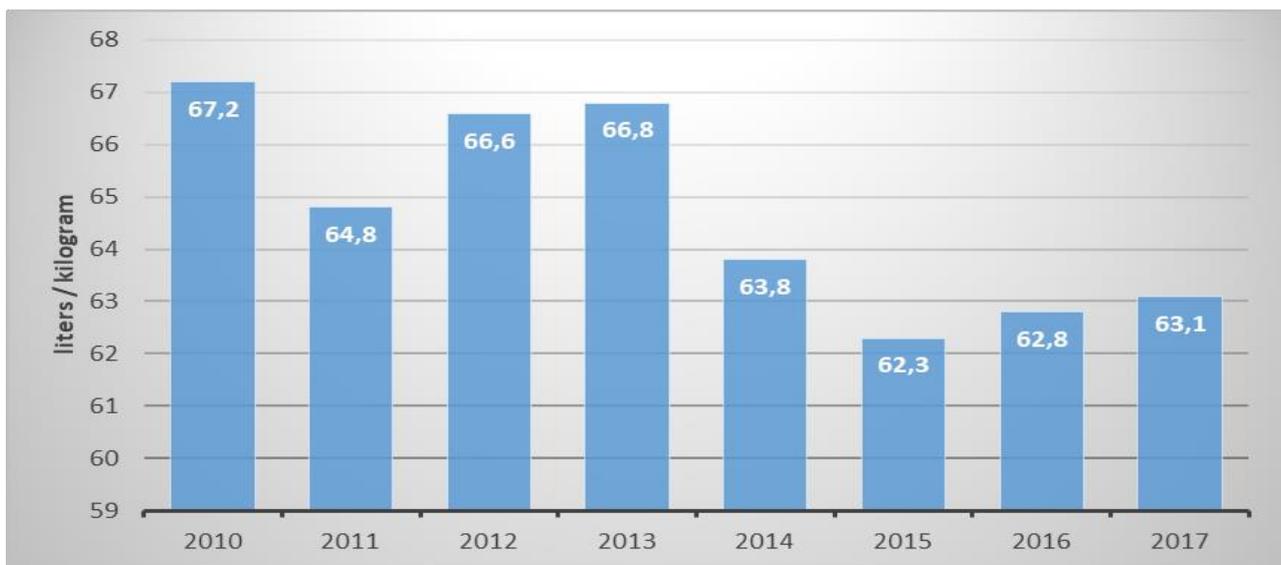


Fig. 5 Dynamics of the demand of dairy products
Source: National Statistical Institute (2018)

Household consumption over the years has been declining mainly for basic dairy products, while secondary dairy products have seen a slight increase (Fig. 6). The most significant is the decrease in the consumption of packed fresh milk. While in 2010, average consumption is 21 liters per person, in 2017 it drops to 17.2 liters. The difference between increased supply and reduced demand for packed fresh milk is driven by the increased exports of dairy products over the past decade.

The consumption of white brined cheese (11.5 kg / person) and yellow cheese (4 kg / person) remained almost constant. A significant increase in consumption, with about 55%, is seen in secondary dairy products.

The negative tendency of a steady decrease in the population in Bulgaria, which has been going on for nearly three decades, can hardly change the current level of consumption and, accordingly, expectations of the level of domestic demand for milk and dairy products. Shrinking population together with increasing competition from imported EU products are serious threats to current domestic dairy companies.

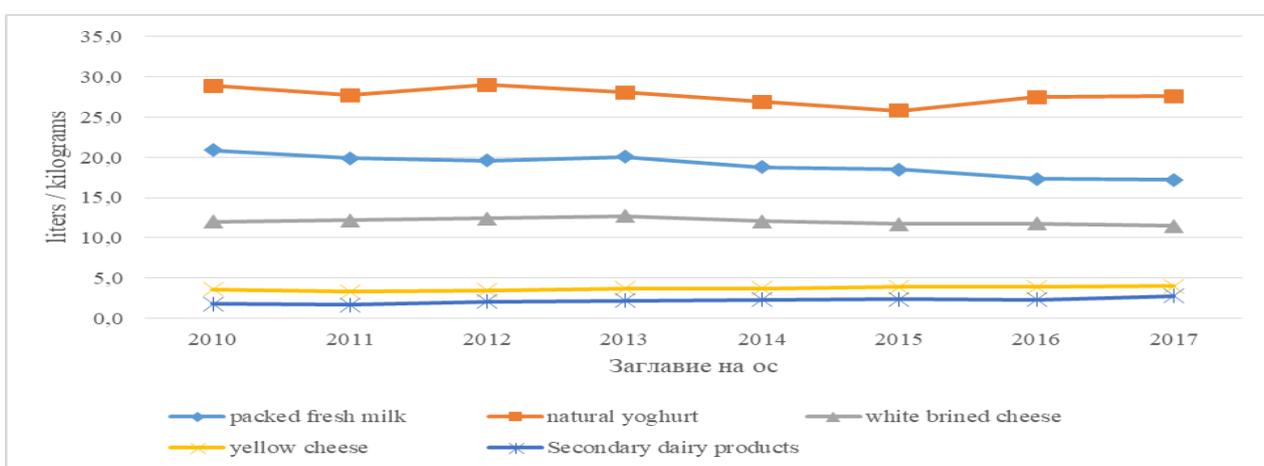


Fig. 6 Dynamics of the demand of dairy products by commodity groups
Source: National Statistical Institute (2018)

The dynamics of raw milk prices over the past 16 years is characterized by mild fluctuations, but generally retains predictable values in the long run (Fig. 7). The purchase price of raw milk, which is the main raw material for dairy companies, remained relatively stable over the considered period. According to European Commission data (2018), it ranges from 550 to 650 BGN per tonne of raw milk. This is a result of the EU's policy of keeping the price of raw materials well-stable by the 1980s, through the milk quotas.

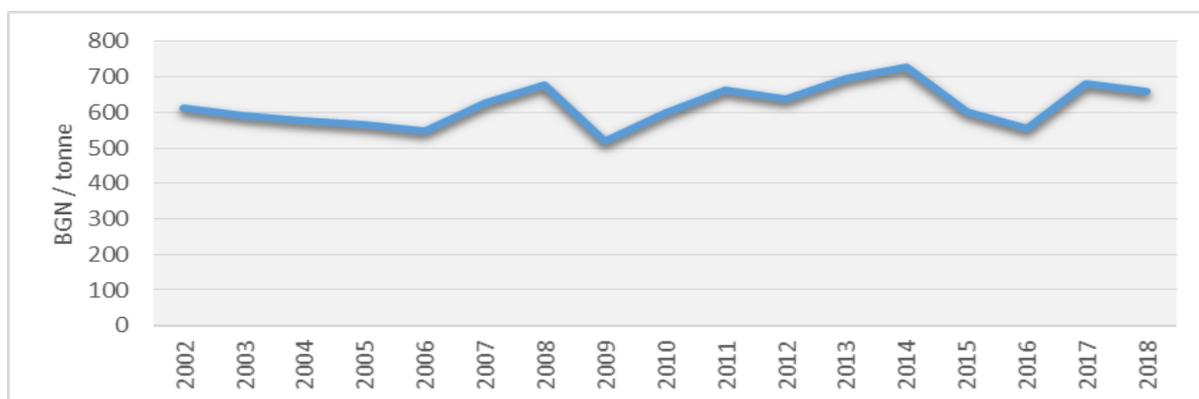


Fig. 7 Dynamics of the purchase price of raw milk

Source: According to European Commission data (2018)

An interesting point is that in 2015, The EU has taken the path to market liberalization by abolishing milk quotas. In these and following years it is still to be understood what would be the purchase price of raw milk in a more liberalized market.

4. CONCLUSION

The following conclusions and summaries can be made from the analysis of the trends in the development of the dairy market:

- Due to shrinking of sheep breeding and marginalization in goat breeding and buffalo breeding, Bulgaria is increasingly approaching the European dairy cattle model, which relies mainly on production (over 98%) of cow's milk;
- The dairy market products is characterized by low commodity volumes. A large proportion of raw milk is used for direct sale and own consumption, with only 50% of the raw material being purchased by dairy companies;
- The product range of dairy products is relatively small and quite traditional. However, in the dairy industry firms can differentiate themselves as producers of natural dairy products or of products made from artificial additives. Natural products have higher production costs than artificially produced, leading to the requirement for higher prices;
- The technological level of development has decisive importance for the production of competitive products, so efforts must be directed towards continuous technological and product innovations that meet the market requirements and the actions of competitors;
- The production and supply of dairy products in the country is characterized by a relatively uniform volume of the quantity in the last 15 years. In the portfolio of products available on the Bulgarian market has two main groups - basic dairy products, which include packed fresh milk, natural yoghurt, white brined cheese and yellow cheese; secondary dairy products, including milk fat, cottage cheese, cream, melted and smoked cheese. The leading role in the supply of the dairy market is for the yoghurt. The available quantity offered on the market structurally represents half of the total volume of all dairy products;
- The demand for dairy products has a tendency of low consumption in recent years, which is mainly due to the steady tendency of declining population in the country. Due to the increased purchasing power over the last 7 years there has been a decrease in the consumption of traditional basic dairy products in exchange for increased demand for secondary dairy products such as cream;
- In 2015 the purchase price of the main raw material for dairy products is free from institutional control and it is yet to be understood how this will affect the dairy market in the country in these and following years.

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