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STUDY OF THE CURRENT CONDITIONS AND PROSPECTS OF DAIRY PRODUCTION DEVELOPMENT IN UKRAINE

Abstract. Analysis of marketing information conforms that the branch of milk production is of great importance in support of human balanced diet. Nowadays, Ukraine is a great producer of milk and takes the tenth position in the world rating of the largest producer countries. The aim of the article is to study peculiarities of development of the branch of dairy production in Ukraine under current conditions and in the future. To achieve the set goal, the authors of the work used the methods of comparison, statistical and system analysis, and forecasting based on trends. Basing on the analysis of secondary information it is argued that considerable reduction of milk production in Ukraine has lately caused reduction of the output of some kinds of dairy products. To estimate impact of the level of milk consumption and consumer price index on milk production in Ukraine, the authors of the research have developed a double-factor econometric model. According to the results of econometric modeling, it is determined that growth of consumption of milk and dairy products per 1 person in Ukraine by 1 % will cause increase of the output of milk by 1.327 %, while increase of the index of consumer prices for food products and soft drinks by 1 % will cause reduction of milk output by 0.255 %. A negative effect on development of the dairy market is done by deficiency of raw material and its low quality. It is determined that, according to expert estimates, Ukraine has great prospects in the field of dairy products export, and it is expected that until 2030, the world demand for dairy products will grow and it

will be hardly satisfied by the principal countries, exporting those products. However, to increase export of their products, milk-processing enterprises of Ukraine should sufficiently improve parameters of dairy products quality. It is studied that growth of export of dairy products can result in deficiency of those products at the domestic market, because a considerable reduction of milk production in Ukraine has recently caused reduction of the output of some kinds of dairy products. Analysis of the market of dairy products also confirms that it experiences a severe competition and producers should actively introduce innovations in their marketing activity to be competitive. According to the research results, milk-processing enterprises can get competitive advantage due to introduction of advanced technologies, supply of new products at the market, production of organic products, opportunity of re-use of packaging, intensification of flexible pricing, expansion of the area of sale and attraction of new intermediaries, formation of consumers' loyalty to the brand, choice of trade agents with the good image.

Key words: tools of investigation of the dairy products market in Ukraine, methodology of determination of the factors influencing production of dairy products, export of dairy products, key factors of success at the market.

Formulation of the problem

Food safety of Ukraine considerably depends on development of its dairy industry, which takes an important position in support of a balanced diet

of its residents and demonstrates great prospects for growth of revenues from export of those products. However, development of milk-processing enterprises is influenced by transformations in the factors of their macro environment (political, demographic, economic, natural, scientific and technical) and micro environment, including variations of consumers' preferences, severing of their requirements to ecological and natural properties of products, lack of the raw material (milk) of good quality.

Timeliness of the topic

Opportunities for the further growth of dairy products export and supply of Ukraine's population with dairy products depend on development of milk-processing enterprises. Hence, it is important to study conditions of the dairy market in Ukraine and the factors fueling or stagnating development of milk-processing enterprises in Ukraine.

Analysis of recent research and publications

Scientists pay much attention to investigation of milk and dairy market in Ukraine. The works [1, 2] study tendencies of development of milk-processing industry, its principal problems and prospects of development with consideration of

the current trends of export and import. The research [3] specifies principal problems in milk branch of Ukraine, which restrict export of the products of milk-processing enterprises. Foreign experience in the field of production of organic and qualitative dairy products is described in [4].

However, the researchers pay poor attention to investigation of the branch of dairy products in total, with consideration of the available competitive environment, and key factors of success.

Aim and tasks of the article

The aim of the article is to study particularities of development of the branch of dairy production in Ukraine under current conditions and in the future.

Main findings of the research

Considerable recession of milk production has recently caused fall of the output of some kinds of dairy products, and in the inter-season period of the market of dairy products, it depends on import of raw material. For the last 25 years, one observes reduction of the number of cattle, particularly it has reduced 6.9 times, cows – 4.2 times. The negative dynamics to reduction of the number of cattle in Ukraine is confirmed by the data in the Table 1.

Table 1

Dynamics of the number of cattle in Ukraine at all categories of farms, million animals* [5]

| Year | Cattle | | Cows | | Year | Cattle | | Cows | |
|------|-----------------|---|-----------------|---|-------------------|-----------------|---|-----------------|---|
| | million animals | Indices (comparing to the previous years) | million animals | Indices (comparing to the previous years) | | million animals | Indices (comparing to the previous years) | million animals | Indices (comparing to the previous years) |
| 1991 | 23.73 | – | 8.26 | – | 2005 | 6.51 | 0.94 | 3.64 | 0.93 |
| 1992 | 22.46 | 0.95 | 8.06 | 0.98 | 2006 | 6.18 | 0.95 | 3.35 | 0.92 |
| 1993 | 21.61 | 0.96 | 8.08 | 1.00 | 2007 | 5.49 | 0.89 | 3.1 | 0.93 |
| 1994 | 19.62 | 0.91 | 7.82 | 0.97 | 2008 | 5.08 | 0.93 | 2.86 | 0.92 |
| 1995 | 17.56 | 0.90 | 7.53 | 0.96 | 2009 | 4.83 | 0.95 | 2.74 | 0.96 |
| 1996 | 15.31 | 0.87 | 6.97 | 0.93 | 2010 | 4.49 | 0.93 | 2.63 | 0.96 |
| 1997 | 12.76 | 0.83 | 6.26 | 0.90 | 2011 | 4.43 | 0.99 | 2.58 | 0.98 |
| 1998 | 11.72 | 0.92 | 5.84 | 0.93 | 2012 | 4.65 | 1.05 | 2.55 | 0.99 |
| 1999 | 10.63 | 0.91 | 5.43 | 0.93 | 2013 | 4.54 | 0.98 | 2.51 | 0.98 |
| 2000 | 9.42 | 0.89 | 4.96 | 0.91 | 2014 | 3.88 | 0.85 | 2.26 | 0.90 |
| 2001 | 9.42 | 1.00 | 4.92 | 0.99 | 2015 ¹ | 3.75 | 0.97 | 2.17 | 0.96 |
| 2002 | 9.11 | 0.97 | 4.72 | 0.96 | 2016 ¹ | 3.68 | 0.98 | 2.11 | 0.97 |
| 2003 | 7.71 | 0.85 | 4.28 | 0.91 | 2017 ¹ | 3.53 | 0.96 | 2.02 | 0.96 |
| 2004 | 6.9 | 0.89 | 3.93 | 0.92 | 2018 ¹ | 3.38 | 0.96 | 1.97 | 0.98 |

*Without consideration of temporarily occupied territory of the Crimean Autonomous Republic and the area of Anti-Terrorist Operation

A sufficient reduction of the number of cattle in Ukraine is mainly caused by unprofitability of their maintenance due to increase of the prices for fodder, ability of milk-processing enterprises to increase milk yield in some season determining purchase prices for milk, liquidation of large-scale animal breeding farms and complexes, increase of the number and importance of small private farms in supply of milk-processing enterprises with raw material.

In 2018, the share of milk production by farms of population constituted 72.2 %, and the share of agricultural enterprises – 27.3 %, contrary to 2017, when the share of milk production by farms of population constituted 73.1 %, and the share of agricultural enterprises – 26.9 %. Table 2 presents information concerning milk production in Ukraine in terms of regions.

Table 2

Milk production in Ukraine, thousand tons [6]

| Region | All categories of farms | | Agricultural enterprises including farms | | Farms of population | |
|-----------------|-------------------------|---------|--|--------|---------------------|--------|
| | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 |
| Vinnitsia | 851.3 | 827.1 | 198.1 | 206.3 | 653.2 | 620.8 |
| Volyn | 411.9 | 390.8 | 83.5 | 87.2 | 328.4 | 303.6 |
| Dnipropetrovsk | 300.7 | 294.1 | 70.4 | 70.9 | 230.3 | 223.2 |
| Donetsk | 190.2 | 186.3 | 77.1 | 71.2 | 113.1 | 115.1 |
| Zhytomyr | 547.7 | 552.4 | 112.0 | 115.2 | 435.7 | 437.2 |
| Transcarpathian | 325.2 | 345.5 | 2.9 | 1.5 | 322.3 | 344.0 |
| Zaporizhzhia | 260.7 | 243.9 | 36.8 | 37.2 | 223.9 | 206.7 |
| Ivano-Frankivsk | 463.5 | 441.1 | 18.5 | 17.1 | 445.0 | 424.0 |
| Kyiv | 435.9 | 435.6 | 223.9 | 224.5 | 212.0 | 211.1 |
| Kirovohrad | 305.6 | 307.3 | 57.7 | 61.3 | 247.9 | 246.0 |
| Luhansk | 124.8 | 127.1 | 33.3 | 30.9 | 91.5 | 96.2 |
| Lviv | 528.3 | 505.5 | 28.2 | 27.7 | 500.1 | 477.8 |
| Mykolaiiv | 342.2 | 335.4 | 41.6 | 46.3 | 300.6 | 289.1 |
| Odesa | 348.6 | 335.2 | 32.7 | 32.7 | 315.9 | 302.5 |
| Poltava | 792.4 | 765.4 | 424.6 | 397.3 | 367.8 | 368.1 |
| Rivne | 433.3 | 416.7 | 78.9 | 76.1 | 354.4 | 340.6 |
| Sumy | 416.0 | 410.1 | 176.3 | 173.5 | 239.7 | 236.6 |
| Ternopil | 451.4 | 449.6 | 72.8 | 79.2 | 378.6 | 370.4 |
| Kharkiv | 522.5 | 526.6 | 240.0 | 240.1 | 282.5 | 286.5 |
| Kherson | 293.3 | 284.5 | 42.7 | 45.2 | 250.6 | 239.3 |
| Khmelnyskyi | 596.7 | 625.0 | 161.0 | 169.4 | 435.7 | 455.6 |
| Cherkasy | 507.9 | 484.1 | 300.6 | 291.5 | 207.3 | 192.6 |
| Chernivtsi | 281.6 | 272.9 | 14.0 | 13.2 | 267.6 | 259.7 |
| Chernihiv | 548.8 | 536.6 | 238.1 | 244.5 | 310.7 | 292.1 |
| Ukraine | 10280.5 | 10098.8 | 2765.7 | 2760.0 | 7514.8 | 7338.8 |

Analyzing the data of the Table 2, one can conclude that amount of milk production has been increased at the agricultural enterprises in Vinnytsia, Volyn, Dnipropetrovsk, Zhytomyr, Zaporizhzhia, Kyiv, Kirovohrad, Mykolaiiv, Ternopil, Kherson, Khmelnytskyi and Chernihiv regions. Farms of population have increased milk production in Donetsk, Zhytomyr, Transcarpathian, Luhansk, Poltava, Kharkiv and Khmelnytskyi

regions. However, totally in Ukraine, production of milk in 2018 was reduced by 1.8 % comparing to 2017.

Increase of the price for milk, energy sources and fuel, under-developed domestic structure of purchasing centers on rural territory negatively influence development of Ukrainian milk-processing enterprises, causing reduction of the output of milk and dairy products.

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To estimate impact of the level of milk consumption and index of consumer prices on production of milk in Ukraine, there research composes a double-factor econometric model based on the data in the Table 3.

According to the calculations, the following model is created

$$\hat{y} = - 132,89 + 698,13x_1 - 23,18x_2 .$$

Principal results of examination of the model adequacy are described in the Table 4.

Results, presented in the Table 4, enable applying of the obtained model for determination of the coefficients of elasticity for the volume of milk production in Ukraine (Table 5).

Table 3

Data for estimation of dependence of the volume of milk production in Ukraine on consumption of milk and dairy products and consumer price index

| Year | Milk production, thousand tons (y) | Consumption of milk and dairy products per 1 person (in milk equivalent) monthly, kg (x ₁) | Index of consumer prices for food products and soft drinks (comparing to the previous year), % (x ₂) |
|------|------------------------------------|--|--|
| 2005 | 13714.4 | 21.7 | 116.2 |
| 2006 | 13286.9 | 22.3 | 105.3 |
| 2007 | 12262.1 | 22.1 | 109.7 |
| 2008 | 11761.3 | 22.6 | 135.7 |
| 2009 | 11609.6 | 19.8 | 111.9 |
| 2010 | 11248.5 | 19.2 | 110.9 |
| 2011 | 11086.0 | 19.1 | 106.4 |
| 2012 | 11377.6 | 19.6 | 97.9 |
| 2013 | 11488.2 | 20.3 | 97.8 |
| 2014 | 11132.8 | 20.3 | 112.2 |
| 2015 | 10615.4 | 19.8 | 145.9 |
| 2016 | 10381.5 | 19.6 | 109.0 |
| 2017 | 10280.5 | 19.3 | 112.9 |
| 2018 | 10098.8 | 19.2 | 111.1 |

Source: completed on the basis [5]

Table 4

Principal results of examination of the developed model

| Index | Estimated value | Conclusions |
|----------------------------------|-----------------|---|
| Criterion C ² | 0.524 | Considering the fact that the criticality of the criterion constitutes 3.8, one can conclude that the phenomenon of multicollinearity between the factors is not present |
| Multiple correlation coefficient | 0.822 | There is a close relation between the volume of milk production and consumption of dairy products, as well as the index of consumer prices for food products and soft drinks |
| Determination factor | 0.675 | Variation of the output of milk by 67.5 % depends on variation of consumption of dairy products and index of consumer prices for food products and soft drinks |
| F-test | 11.445 | Considering the fact that criticality of that criterion constitutes 3.98, one can conclude that the developed model is adequate to the existing relation (a linear form of relation is confirmed) |

Source: own working of authors based on the made research

Determination of the coefficients of elasticity for the volume of milk production in Ukraine

| Indices | Value | Conclusions |
|---------------------------------|--------|--|
| Coefficient of elasticity E_1 | 1.327 | Increase of consumption of milk and dairy products per 1 person in Ukraine by 1 % causes growth of the volume of milk production by 1.327 % |
| Coefficient of elasticity E_2 | -0.255 | Increase of the index of consumer prices for food products and soft drinks by 1 % causes reduction of the volume of milk production by 0.255 % |

Source: own working of authors based on the made research

Referring to scientifically argued food standards and support of food safety, one person should consume up to 380 kg of milk annually, i.e. Ukraine is almost twice beyond the index. In many countries of the EU, consumption of milk and dairy products exceeds the standard and constitutes 440 kg in France, 430 kg in Germany, 380 kg in Denmark, 370 kg in Austria [7].

Thus, in case of increased milk consumption, Ukraine can face the problem of its deficiency. Hence, nowadays, it is necessary to develop measures either concerning growth of milk output per one cow, or increase of the number of cows.

Recently, producers of dairy products have focused their main efforts on increase of the share of market due to purchasing of advanced equipment and active promoting of the produced commodities. In Ukraine, most milk-processing enterprises have not been interested in investing in appropriate formation of their livestock. Notwithstanding the active steps towards renewal of equipment, almost 80 % of equipment at dairy enterprises of Ukraine are outdated, making negative effect on dairy products quality [1, p. 30].

Substantial concentration of production of dairy products and great opportunities for growth of their export are the other peculiarities of the market. Nevertheless, Ukraine is a great producer of milk and takes the tenth position in the world rating of the largest producer countries. In 2017, milk-processing enterprises of Ukraine increased export of the products by 82.4 % comparing to 2016 [8] – almost 841 thousand tons in milk equivalent. The export was 6.5 times larger than the import in kind. It mainly concerned export of sweet butter, i.e. 2.5 times more, comparing to 2016. Its share in the structure of dairy products export took 46 %. The highest demand for

Ukrainian sweet butter was marked in Turkey, Morocco and post-Soviet countries. In 2016, Ukraine started export of dairy products to China, Egypt, UAE, Bangladesh, and Vietnam. Almost 13 % of the total volume of whey was supplied to China, 16.5 % – to Vietnam. 10 % of the volume of exported sweet butter was supplied to Egypt, almost 11 % of dry milk – to Bangladesh, 8.8 % of the total volume of fermented dairy products was exported to UAE [1, p. 30]. In 2017, import of dairy products in Ukraine increased by 24 % and constituted 130 thousand tons, with a considerable share of cheese in it. Principal countries supplying cheese to the Ukrainian market included Poland, Germany and France.

In 2018, Ukrainian milk-processing enterprises exported milk and dairy products for 263 million USD, including sweet butter – 48.8 % of the total export, dry and condensed milk – 22.4 %, cheese – 11.7 [9]. Those data confirm transformations in the structure of exported commodities comparing to the previous period. In 2016, the main shares of export by milk-processing enterprises of Ukraine were taken by milk (47 % of the total export), heavy cream and milk whey (22 % of the total export), sweet butter (11 % of the total export) uncondensed milk and heavy cream (10% of the total export), cheese (7 % of the total export). In 2016, fermented or acidified milk and heavy cream were also exported, i.e. its share took 3 % [10].

Information about export of Ukrainian dairy products in 2018 is presented in the Table 6.

Ukraine has great prospects in the field of dairy products export. Expert forecast argues that until 2030 the world demand for dairy products will increase by 25 % and it will be not satisfied by

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the principal countries exporting those products, such as New Zealand, Australia, Europa and the USA [11]. However, implementation of export opportunities is connected with the necessity of growth of cows productivity, establishment of cooperatives, supply of appropriate control for security and quality of dairy products. The last factor is caused by the current situation in Ukraine, when almost 30 % of the total volume of sold dairy products are counterfeit. At the world market, competitive capacity of Ukrainian milk is caused

by the price factor, i.e. its price is by 16% lower than the world one. Most Ukrainian dairy products are exported to the post-Soviet countries, while such countries, importing dairy products, as Hong Kong, Algeria and Venezuela are left out of consideration.

In 2018, the shares of sweet butter and fat cheese (42.84 % and 28.93 % respectively) were the largest ones in milk equivalent, while the shares of heavy cream and farmer cheese (0.32 % and 2.2 % respectively) were the smallest ones. (Fig. 1).

Table 6

Information about export of Ukrainian dairy products in 2018.

| Naming of products | Principal importer-countries and their share in the total volume |
|----------------------------|---|
| Milk and uncondensed cream | Moldova (36.14 %), Libya (23.64 %), Qatar (16.59 %), Georgia (13.8 %), Poland (6.14 %), Armenia (0.75 %) |
| Condensed milk | Bangladesh (14.84 %), Georgia (10.8 %), Kazakhstan (10.39 %), Armenia (8.69 %), Turkmenistan (7.07 %), China (6.05 %) |
| Fermented dairy products | Moldova (47.73 %), Georgia (19.34 %), Kazakhstan (15.47 %), Poland (8.92 %), Armenia (3.03 %), UAE (2.74 %) |
| Milk whey | China (51.73 %), Philippines (10.1 %), Malaysia (6.18 %), Vietnam (5.17 %), Pakistan (5.09 %), Uzbekistan (3.71 %) |
| Sweet butter and milk fats | Morocco (22.07 %), Turkey (11.07 %), Holland (10.1 %), Moldova (7.54 %), Saudi Arabia (7.35 %), Azerbaijan (6.76 %) |
| Cheese | Kazakhstan (35.6 %), Moldova (33.21 %), Egypt (11.3 %), Georgia (2.95 %), Azerbaijan (2.73 %), Turkmenistan (1.8 %) |

Source: completed on the basis [6]

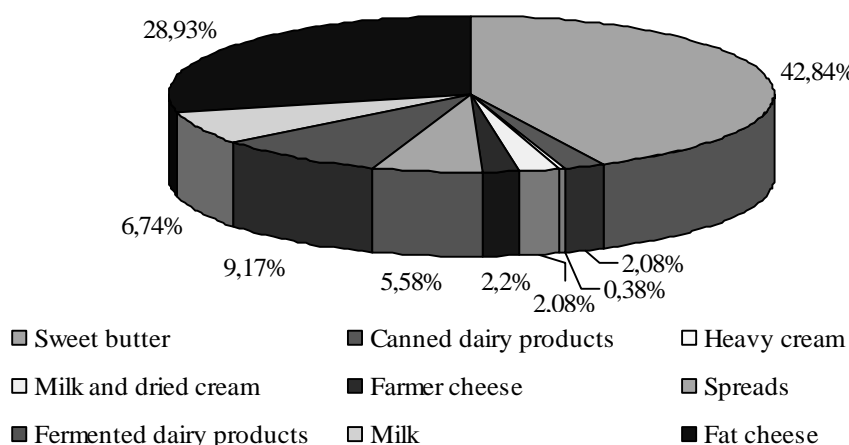


Fig. 1. Structure of dairy production in milk equivalent [6]

Food and agricultural organization of the UNO (FAO) gives forecast of a new crisis at the milk market of Ukraine caused by feeding

stuff price spiral in dairy breeding [12]. Particularly, for the first four months of 2018, prices for milk were reduced by 6.7 %, and

prices for feeding concentrated mix for animals increased by 32.9 %.

However, improvement of milk quality was a positive phenomenon at the milk market of Ukraine in 2018 [9]. For 9 months of 2018, volume of purchase of high quality milk, i.e. extra and high grade, increased by 33.8 % and 7.8 % respectively, while purchase of milk of I grade reduced by 8.9 % and II grade – by 15.1 %.

In Ukraine, severing and support of appropriate control for milk quality can be secured by opening of the laboratory of milk quality testing of the Association of milk producers (AMP), established in 2018 in Uman (Cherkassy region) within the grant

support for the project “Agrosilrozvytok” by USAID. The mentioned laboratory has advanced equipment. It is used to test key physical and chemical properties of milk, presence of additives and inhibitors in milk, to identify agents of mastitis, as well as other bacterial and fungus diseases, their sensitivity to antibiotics [13].

Table 7 describes principal characteristics in the field of dairy production in Ukraine.

Structure of the market of dairy products by the producers is presented by the Fig. 2.

Analysis of operation of the principal producers at the market of dairy products is presented in the Table 8.

Table 7

Principal characteristics in the field of dairy production in Ukraine

| Characteristics | Directions of study |
|---|---|
| 1 | 2 |
| 1. Principal economic characteristics of the branch | In 2018, production of milk constituted 10098.8 thousand tons and was reduced, comparing to 2017, by 182 thousand tons. In 2019, the further fall of the index is expected. In 2018-2019, reduction of the volume of export of milk and dairy products along with increase of the volume of import of those products were negative tendencies. Producers of milk and dairy products are spread on the whole territory of Ukraine. Innovations in that field expect application of advanced technologies for processing and packing of milk, as well as supply of new products at the market |
| 2. Analysis of competitive environment | Intensity of competition at the market of dairy products is high. Competitive advantage is first gained by the enterprises, which propose a wide range of commodities, innovative products of improved quality with a considerable number of useful elements and available new tastes, in ecological and convenient packaging, make efforts to establish partnership relations with consumers through the social networks. However, the price factor is very important for consumers with low income. There is a poor chance for new companies to enter the market of dairy products, because consumers give preferences to the known brands. Competitive pressure by producers of substituting products is insufficient, because there are no substituting products, which satisfy the same demand. Milk is the principal raw material for production of dairy products. To secure the required volume of raw milk, it is necessary to crate personal purchasing centers, to control milk quality. The degree of impact of purchasing companies, first retail networks, is rather high. They determine assortment of commodities and set their requirements to prices for commodities |
| 3. Driving forces | Differentiation of needs, severing of the requirements to naturality of the products |
| 4. Competitive position of the main participants (strategic groups) | In 2018, the largest producers of dairy products in Ukraine included: GE Danone, GE Milk Alliance, GE Lactalis-Ukraine, LLC “Loostdorf”, PJSC Wimm-Bill-Dann Ukraine, PJSC “Prydniprovskiy milk factory”, PJSC “Halychyna”, PJSC “Ternopilskiy milk factory”, GE Terra Food, GE “Formula” [14]. However, the highest growth in 2018, comparing to 2017, was demonstrated by such companies as PJSC “Halychyna”, GE Lactalis Ukraine, LLC “Loostdorf” |
| 5. Analysis of competitors | There are some strategic groups, which can be distinguished according to their shelf life, their price level, organic properties of products |

Table 7 continuation

| 1 | 2 |
|---|---|
| 6. Key factors of success | In technologies – it is introduction of advanced capacities; in marketing – introduction of innovative products at the market, intensification of organic properties of products, opportunity of re-use of packaging, strengthening of flexibility in pricing, extension of the geography of sale and attraction of new agents, in the field of communication – formation of consumers’ preference of some brand; in professional training – choice of qualified staff and trading agents with an appropriate image |
| 7. Prospects of the branch and its general attractiveness | Improvement of milk quality and growth of its output will create preconditions for increase of the volume of supply of milk and dairy products at the domestic and foreign markets. Increase of the level of consumers’ earnings and promotion of dairy products will create preconditions for growth of domestic demand for dairy products. Increase of demand at foreign markets will open new opportunities for export of milk and dairy products |

Source: own working of authors based on the made research

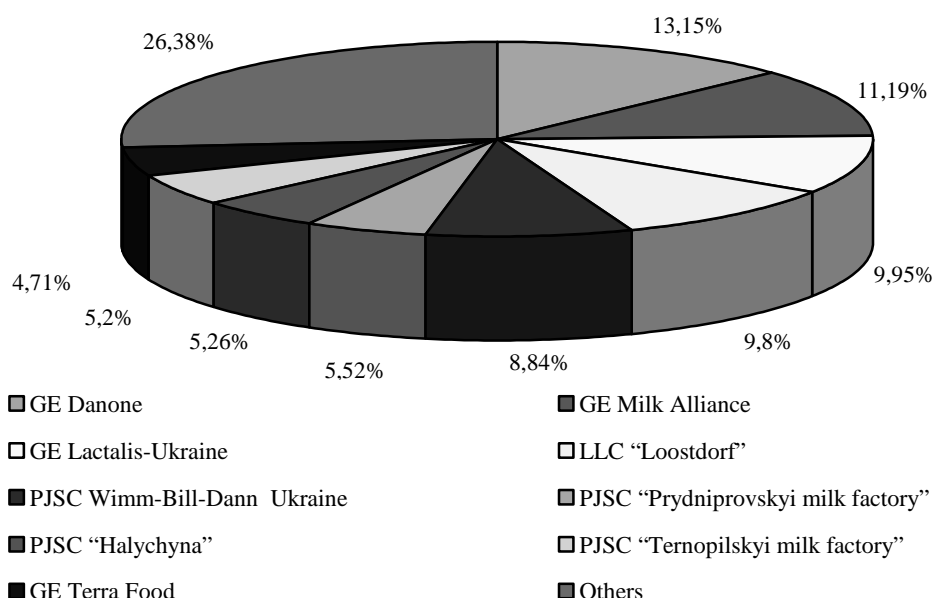


Fig. 2. Structure of the market of dairy products by producers [14]

Table 8

Analysis of operation of the principal producers at the market of dairy products

| Producer | Principal brands | Peculiarities of raw material supply |
|---------------------|---|---|
| 1 | 2 | 3 |
| Danone | “Aktyvia”, “Actimel”, “Rastishka”, “Danissimo”, “Veselyi pastushok”, “Zhyvynka”, “Biobalance”, “Prostokvashyno”, “Tema”, “Halakton” | Large dairy and family farms. 97 % of raw material comes from large farms, 3 % – from farms of population |
| GE Milk Alliance | “Zlatokrai”, “Slavia”, “Pyriatyn”, “Yahotynske”, “Yahotynske dlia ditei”, “Milk alliance” | Main raw material zones include Central and Southern Ukraine |
| GE Lactalis-Ukraine | “Presydent”, “Dolche”, “Laktel”, “FANNI”, “Bilosvit”, “Laktonia” and “Imun+” | Storage of raw material by creation of purchasing centers of milk in villages (totally 130), which are responsible for keeping to sanitary and veterinary standards and equipped with refrigerators and mini-laboratories |

Table 8 continuation

| 1 | 2 | 3 |
|------------------------------------|--|--|
| LLC “Loostdorf” | “Selianske”, “Na zdorovie”, “Burionka”, “Loostdorf”, “Totosha” | Productive capacities are located in ecologically favorable Vinnytsia region and are supplied with the raw material from 50 farming enterprises of the region |
| PJSC Wimm-Bill-Dann Ukraine | “Romol”, “Slovianochka”, “Mashenka”, “Chudo”, “Ahusha” | Main sources of raw material include Vinnytsia, Zhytomyr, Kyiv and Cherkasy regions |
| PJSC “Prydniprovskiy milk factory” | “Zlahoda”, “Liubymchyk” | There are 5 centers of milk purchase, which have advanced equipment |
| PJSC “Ternopilskiy milk factory” | “Molokia” | Supply of raw material is secured by farms. German technology “FRESH TECHNOLOGY” is introduced. It is an innovative technology for purification of milk with the following low-temperature pasteurization |
| GE Terra Food | “Tulchynka”, “Ferma”, “Premialle”, “Bila linia” | Purchase of milk from farms occurs at personal milk-receiving points, which are equipped with modern refrigerating installations. They are used to test milk quality, and only milk of appropriate quality is transported by specialized milk tank vehicles for processing |

Source: completed on the basis [11–22]

Analysis of the market of dairy products confirms that nowadays there is a severe competition and producers should actively introduce innovation in their marketing activity to be competitive at the market.

Conclusions

Nowadays, Ukraine is a large producer of milk and takes the tenth position in the world rating of the largest producer countries. However, a considerable reduction of milk production in Ukraine in the recent years has caused fall of the output of some kinds of dairy products.

To estimate impact of the level of milk consumption and consumer price index on milk production in Ukraine, the authors of the research have developed a double-factor econometric model. According to the results of econometric modeling, it is determined that growth of consumption of milk and dairy products per 1 person in Ukraine by 1 % will cause increase of the output of milk by 1.327 %, while increase of the index of consumer prices for food products and soft drinks by 1 % will cause reduction of milk output by 0.255 %.

The market of dairy products belongs to one of the most competitive markets of commodities in Ukraine. Competitive advantage is gained by milk-processing enterprises due to introduction of advanced capacities, supply of new products at the market, production of organic products, possibility to re-use packaging, intensification of flexibility in pricing, extension of the geography of sale and attraction of new agents, creation of consumers' loyalty to the brand, choice of trade agents with the appropriate image. A negative impact on its development is done by the deficiency of raw material and its low quality.

The following investigation will be focused on introduction of the marketing of significance in operation of domestic milk-processing enterprises in order to improve their competitive capacity.

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