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Collective work, edited by Piotr Bórawski Andrzej Parzonko Ireneusz Żuchowski

CHALLENGES IN THE **MILK MARKET** (INVESTMENTS, DISRUPTIONS, LOGISTICS, COMPETITIVENESS, PRICES, AND POLICY)

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**CHALLENGES IN THE MILK MARKET (INVESTM** 

Wydawnictwo Ostrołęckiego Towarzystwa Naukowego im. Adama Chętnika w Ostrołęce 2021



# Challenges in the milk market (investments, disruptions, logistics, competitiveness, prices, and policy)

Scientific editors: Piotr Bórawski, Andrzej Parzonko, Ireneusz Żuchowski

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## DETERMINANTS OF THE PROCESS OF SHAPING PURCHASING DECISIONS ON THE DAIRY PRODUCTS MARKET IN HOUSEHOLDS OF YOUNG PEOPLE

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### **15.1. Introduction**

The dairy market is one of the most dynamically developing markets for food products, and milk and dairy products are widely consumed by consumers (Bórawski et al. 2021). They are valued not only for their taste, but also for their special nutritional and preventive properties. This market has a great development potential. The main factor determining this development is demand, both on the domestic and international markets. The consumption of milk in Poland has been growing successively for 14 years. According to GUS data published on October 30, 2020, the balance consumption of cow's milk, including milk intended for products without raw material processed into butter, reached the level of 225 liters per capita (https://stat.gov.pl/obszary-tematyczne/ceny-handel/ceny/ ceny-produktow-rolnych-w-styczniu-2020-roku,4,93.html).

The increase in the general level of milk consumption in Poland in recent years occurred in the conditions of good economic conditions on

the international market and in the conditions of real prices of dairy products in relation to food in general, including in particular meat and meat products. Factors stimulating the increase in consumption were, among others: the continued good income situation of the population, related to the increase in wages and the implementation of the government program "Family 500+" and the change in the consumption model, in which animal protein products have an increasing share. (www.agropolska.pl/produkcja-zwierzeca/bydlo/polacy-pija-coraz-wiecejmleka,1536.html). In Poland, the consumption of milk and its products

per capita, however, is still lower than in most Western European countries.

Looking at the milk market from the point of view of the current situation in the environment of enterprises, it should be stated that, starting from spring 2020, the domestic dairy industry was characterized by a relatively high dynamics of development, despite the recession in the global, EU and national economy, the main reason of which was the pandemic caused by COVID-19. It is expected that in the near future, however, the upward trend in balance milk consumption may be halted, which may result in a progressive recession in the national economy, as well as deterioration of the situation on the labor market, a decrease in consumer income and restrictions on the movement of the population. As a consequence, households will be forced to reduce expenditure on food, including dairy products.

The introduction of restrictions on economic activity in the HoReCa channel in the spring and autumn of 2020 resulted in a decrease in the demand for food products, including products for secondary processing and food preparation. (Milk Market 2020). It is also expected that in 2021 the domestic milk market will continue to be influenced by further economic recession, which will be a consequence of subsequent waves of the COVID-19 pandemic. (*Users/uzytkownik/ Downloads/snqjmpt4g1h8hbhi9vidje4t84\_mleko\_59\_20-net.pdf*).

Despite the huge variety of dairy products and milk processing companies, there are still opportunities for further development of this segment on the domestic market. In such a situation, it becomes extremely important for entrepreneurs to get to know the consumer, his needs, preferences and criteria that guide him when choosing specific products. Because the purchase of dairy products can be influenced by various factors, including: economic, psychological, but also social and marketing factors, etc. In order to function and be successful on the market, a company should look at its products through the eyes of buyers. It is also necessary to constantly evaluate and analyze the offer of enterprises and its continuous improvement. Nowadays, a manufacturer, in order to be able to compete effectively on the market, is forced to encourage consumers to buy through various forms of promotion. In addition, the market situation forces producers to diversify their product offer more and more, and to introduce various innovations to the market, both of a product and marketing nature (Meimankulova et al. 2018). One of the main directions of market changes, including changes in the commercial strategies of enterprises is to modernize the existing distribution channels, as well as to launch new ones with the use of modern sales techniques.

Although the conditions influencing consumer behavior in the dairy products market were the subject of many studies also by the author of this study, the factors influencing purchasing decisions are constantly changing. Therefore, research on this problem should be repeated and updated on an ongoing basis, so that enterprises can efficiently adapt their offer to the current purchasing preferences.

## 15.2. Research objectives and methodology

The aim of this study was an attempt to define the elements determining the purchasing behavior of consumers on the milk and milk products market.

The study, thanks to the conducted empirical research, was aimed at finding answers to research questions and an indication of:

- What factors are young buyers guided by in their everyday purchasing decisions on the dairy products market?
- What is the assortment structure of food products purchased by consumers?
- Defining the role of the brand and marketing activities carried out by enterprises in purchasing decisions.

- Defining the perception of product and marketing innovations and their impact on the purchasing process as well as the speed of their acceptance.
- Determining how the concept of quality is perceived and its impact on the purchase of dairy products.

679 respondents took part in the study, of which, after an initial selection from the obtained research material, responses obtained from 664 people were submitted for further analysis. The selection of the research sample was deliberate. The main selection criterion was the respondents' declaration of regular purchase and consumption of dairy products in households. Another criterion was the specific age range of the respondents, namely getting to know the opinions of young people on the subject of the survey. The group of young people was aged 18-39. The research tool was a standardized questionnaire, which consisted of closed questions, both single and multiple choice, and it was fully anonymous. The obtained results made it possible to draw conclusions and compare them with the general market trends taking place in the analyzed sector. Moreover, they were compared with the results of research published by other authors dealing with related issues.

The study population was 69% female and 31% male. The most numerous group among the respondents were people aged up to 25 (84%), the respondents aged 25-39 were 16%. Taking into account the level of education, more than half of the respondents (55%) were people with higher education, 34% had secondary education, and 11% had vocational education. The respondents living in the countryside accounted for 21% of the respondents, 34% of the respondents represented a city with over 500,000 inhabitants. residents. Among the opinion makers, 18% stated that they lived in the city from 20,000 to 100,000. residents. Inhabitants of cities from 100,000 to 500,000 19% of the respondents were residents, while the least numerous group, 8%, were people living in cities with up to 20,000 people. The most numerous group were schoolchildren/students who constituted 68% of the respondents.

More than half of the respondents, i.e. 58%, declared that their monthly income is between PLN 1,000 and PLN 3,000/person/month. 28% of respondents indicated that their income is below PLN

1,000/person/month. On the other hand, the smallest number, because 14% of respondents, defined their net income at the amount above PLN 3,000/person/month.

## 15.3. Research results and discussion

Among the respondents, 33% declared that they eat dairy products even several times a day (these were mostly female people). 29% consume them several times a week. Slightly less, because 27% chose the answer once a day, and 5% of the respondents stated that they eat dairy products once a week. Only 3% of the respondents chose the answer once a month and less often. The same number of people only buy dairy products for other family members, but do not consume them regularly. The obtained results show that dairy products play a significant role in the daily diet of the respondents.

According to the research, it was women who more often than men declared to make a purchase decision, and also showed a greater frequency of consumption of dairy products, especially due to their prohealth and dietary values. Taking into account the criteria differentiating consumers' attitudes towards the features of purchased dairy products, it can be concluded that it is women who attach more importance to the various features of food products taken into account during the product selection (purchase) process (Ubrežiová, Iveta, et al 2019). They buy them, as a rule, not only for themselves, but also for other members of households with which they live together. Thus, they very often impose the type of products consumed on a daily basis, thus taking on a specific role of the "household leader" and following the current market trends. As Szwacka-Mokrzycka points out, this may be the result of women's experience and greater knowledge of food products (Szwacka-Mokrzycka and Kociszewski 2013), because it is women who relatively more often shop for food (Boaitey and Kota 2020).

Analyzing the responses as to the frequency and type of assortment of the groups of dairy products purchased, it can be concluded that the surveyed consumers most often bought traditional milk (most often UHT containing more than 2% fat) (75%) and various types of yoghurts (67%). Consumption of products from the group of yoghurts and various types of milk delicatessen, such as breakfast cheese or drinking yoghurts, was more often declared by people aged 18-25 (53%), most often singles or still living in shared households with parents (Walli and Trail 2005). The most frequently consumed highly processed products in this age group were natural products without additives, and products enriched with various types of additives, such as fruit, muesli, or with the addition of breakfast cereals, etc. Of the respondents, 47% of women declared regular consumption of probiotic products, believing in their pro-health and dietary properties (Timon 2020) (Avila 2020). However, they were more often acquired by middle-aged women, i.e. 25-39 years of age (74%), the rest were declarations of younger women (up to 25 years of age). Men did not see the need to consume this type of products, being skeptical as to the essence of their pro-health impact (Wajs and Stobnicka 2020). Only 13% of them reported incidental purchase of these products, very often as a result of persuasion by their partners. The importance of respondents is also growing regarding the purchase of organic products (27%), as well as lactose-free products (13%).

A large proportion of the respondents (64%) declared that they usually buy products such as: cream, butter, cottage cheese, and processed cheese several times a month or less frequently during larger purchases made for the whole family. In the case of buttermilk, kefir and blue cheese, more than half of the respondents declared that they buy and eat them incidentally. Products such as natural kefir or natural or flavored buttermilk are eaten more often in the summer, e.g. to quench thirst, or as a supplement to the daily diet with dairy products during a break at work on hot days, when the demand for other food products decreases. When it comes to yellow cheese, more than 40% of respondents answered that they buy it once a week, and only 7% of people said that they did not buy it at all, most often they were people from the oldest part of the study group and people who declared food and dietary intolerances associated with this product.

It is also worth noting that in recent years there has been a growing tendency to supplement and gradually replace traditional animal dairy products with artificial plant milk and its products. More and more often you hear about people who give up drinking cow's milk for various reasons, e.g. lactose intolerance, allergy to cow's milk protein, veganism, or simply the desire to diversify their diet (Silva and Libeiro 2020). This process is also an expression of a specific development of the fashion for vegetarianism or veganism, especially among young people (Mann and Reluca 2020). For those who choose a dairy-free diet, the food market offers many milk substitutes in the form of plant-based drinks that are lactose-free and cholesterol-free. Beverages obtained from plants vary in taste, color and properties depending on what they are prepared from. The most frequently purchased milk substitutes include: rice, almond, soy and coconut milk. This situation is undoubtedly a threat to the traditional processing of animal milk and to the entire dairy industry, not only in Poland but also around the world. About 7% of respondents declared that they are gradually inclined to switch to this type of diet and supplement traditional dairy products with vegetable protein products.

The responses of the respondents surveyed by the author also reflect the generally prevailing trends in the consumption of dairy products in recent years on the domestic market, published in mass statistics (https://www.portalspozywczy.pl/mleko/wiadomosci/roznice-wwielkosci-spozycia-produktow-dairy-in-dependence-on-income, 178491.html). However, yoghurts and other dairy desserts are still underestimated products in the purchase and consumption process and, unfortunately, still represent a low share in the purchasing basket of a standard household in Poland (Woźnialis and Wilk 2020).

Looking at the results of the research from the point of view of the amount spent on purchases of dairy products, a significant relationship can be observed between the type (product category) and frequency of purchases of dairy products and the income of the respondents. 39% of people with an income above PLN 3,000/person/month declared that they spend over PLN 60 a week on this type of products, compared to people with lower incomes because there were more than half of them. The highest-earning group of respondents most often declared purchasing brand-name highly processed products as well as organic dairy products and probiotic products. People with an income of PLN 1,000-3,000/person/month declared that they usually buy dairy products for PLN 31-40/month (approx. 30%). Most often they were mid-priced products with a predominance of products necessary for the daily

functioning of their household, such as: milk, butter, grain cheese, processed cheese or cottage cheese. On the other hand, products such as organic products or more expensive yoghurts and dairy products were purchased by this group much less frequently. The amount of up to PLN 20 was most often chosen by the respondents with the lowest income. This may be due to the fact that due to limited income, these farms are forced to act more rationally, and therefore they make more thoughtful purchases and purchase the cheapest and rather non-brand products (most often private labels of retail chains). These farms are limited to basic types of products, such as whole milk, cottage cheese, cheaper butter or a milk-fat mix. On the other hand, more processed products or delicatessen dairy products in this group of buyers are rather incidental purchases.

As many as 55% of the respondents mentioned super- and hypermarkets as their preferred place of purchase due to the rich and varied assortment offer. Then there were discount stores (15%). Of the respondents, only 4% stated that they shop for dairy products in local stores, and 3% obtained their supplies in sponsored stores (Kusz and Kilar 2020), if, of course, there was such a possibility in their place of residence. On the other hand, the importance of making everyday purchases via the Internet is growing today (23%), given the circumstances in which the research was conducted (COVID 19) (Grashuis et al. 2020). This type of shopping became particularly important in the early stages of the pandemic and the general panic among consumers for fear of direct contact with other people, or even avoiding such contact. In addition, it should be remembered that the study involved young people in most large cities for whom this type of shopping is not a problem. It should be presumed that in the present situation the tendency to make this type of shopping will continue (Seth 2020) due to the ease and possibility of making them without leaving home and wasting time on traditional shopping.

As already mentioned above, purchases of the vast majority of dairy products are routine purchases due to their high frequency, as well as their relatively low unit value and the universality of physiological needs satisfied in this way. The conducted research shows that consumers very often decide to eat dairy products due to the fact that, according to them, it is a food that is convenient to use (eat) (Figure 1). Most of these products are suitable for direct consumption, without the need to put effort into preparing them before consumption. Therefore, these products can be eaten freely regardless of the buyer's location (44%). Many of the respondents buy dairy products out of a habit they learn from family homes (42%), and this process is in many cases closely related to the current model of their household functioning, based in many cases on an easily digestible diet, also in line with the current market trends created by incl. nutritionists and opinion leaders or celebrities. A large part of the respondents stated that they are not able to replace these products with other food products in the process of preparing everyday meals (26%), and the consumption of these products was declared due to their values which are necessary for the proper functioning of the body and due to the wealth of these products. the nutrients they provide (25%). Their undisputed pro-health and dietary values (24%) also turned out to be important for consumers. This fact is particularly important in households where children live (therefore these products are an indispensable element of a diet rich in calcium), as well as in households of people running the so-called "healthy lifestyle". In these farms, the consumption of the vast majority of "light" or "fit" products was declared".

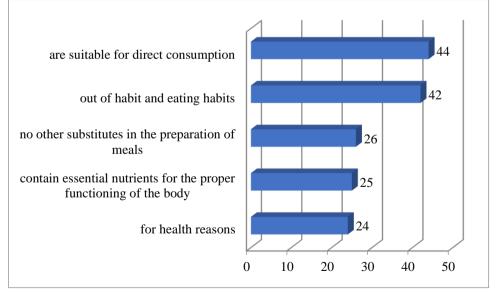


Figure 1. Reasons for consuming dairy products (%) Source: own elaboration

The research also shows that the most important in the process of selecting a specific type of dairy product are, apart from the above-mentioned factors (you can say technical), also their functional and quality values, such as taste, smell, texture, color (80%), and an important factor in making the decision to purchase a dairy product also turned out to be the use-by date (64%) due to the fact that, as is well known, these products are perishable. Almost half (45%) of the respondents stated that long-term purchasing habits related to loyalty to the same brand also had a large influence on their decisions. It manifests itself in a wide range of products related to the purchased products within the same brand. Another factor that should be taken into account in the process of selecting a specific product is the ratio of the price of a given product to the prices of competing brands (38%) within the same product category (Figure 2).

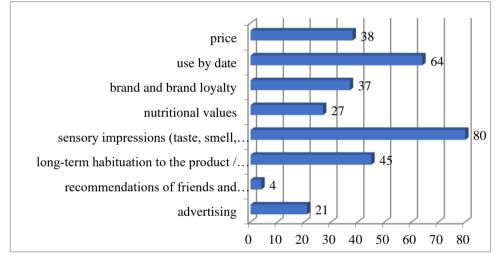


Figure 2. Influence of selected factors on the process of selecting a dairy product (%) Source: own elaboration

In addition to utility stimuli, marketing factors can also be important selection factors. One of them is the aforementioned trust in the brand (manufacturer) and the elements conditioning this trust (attachment), which is reflected in the long-term loyalty of consumers to the manufacturer and its products. The study shows that the importance of the brand for consumers varied. 37% of respondents stated that this factor is very important in the purchasing process, and in the case of 42%

of respondents it is significant. For 17% of respondents, the brand is of negligible importance, while for 4% it has no importance at all in the purchasing process.

Therefore, the study attempted to clarify what the respondents associate a branded product with. Most of the respondents answered that the brand of a dairy product is closely related to a specific price (60%) and a specific (i.e. acceptable in many respects) quality of the products of a given brand preferred by consumers (57%). For 29% of respondents, the satisfaction of using is extremely important, and for 20% the sense of security of the purchased product and the comfort of its use. 9% of respondents take into account the opinion of friends about a given product brand, while 6% suggest the prestige resulting from the purchase and use of a given product brand (Figure 3).

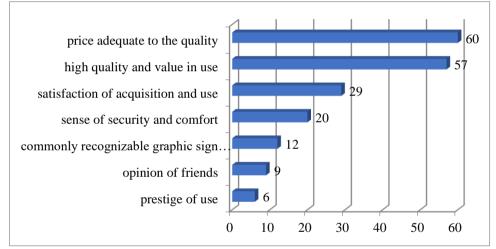


Figure 3. Features of branded dairy products (%) Source: own elaboration

The respondents were also asked to choose up to four brands of dairy products that they most willingly buy. The first place (67%) was taken by Piątnica, famous mainly for cottage cheese and cream. Mlekovita (44%) came in second, offering a wide range of products. Mlekpol (33%) and Danone (32%) also turned out to be eagerly purchased brands. 28% of respondents preferred the Hochland brand. 15% of respondents declared that Krasnystaw is the brand they eagerly purchase. Other less significant brands accounted for 8% of declarations.

Fixing the brand in the minds of buyers usually reflects the great involvement of producers in all kinds of promotional activities. Advertising is one of the forms of promotion by which enterprises communicate with the client by providing him with valuable messages (e.g. place, time of promotion, launch of a new product, reminder of an existing product brand, etc.). Research shows that advertising has an impact on making purchasing decisions, but not as clear as one might expect, taking into account the age of the population under study. Among the respondents, 41% even declared that they do not take dairy product advertising into account in the purchasing process, and in the case of as many as 38% of the respondents, it has little influence. Advertising significantly influences the purchase of dairy products in 21% of respondents. Such an answer was given especially by the youngest among the respondents.

If we compare the above research results with others, it turns out that e.g. in the studies conducted by Jąder (2014), taste was considered the most important factor influencing the choice of dairy products, and advertising was considered the least important factor. Ziarno and Hauzer (2009) listed the expiry date, price and name of the producer as the most important purchasing factors. On the other hand, in the publication of Kudełka and Marzec (2004), half of the respondents placed the use-by date (durability) in the first place in the hierarchy of factors influencing the purchase of dairy products.

The respondents were also asked about the most common forms of promotion of dairy products. Television advertising was ranked first (62%). Commercial and promotional newspapers (49%) and price promotions (46%) were listed successively. For 18% of respondents, promotional packaging was a common form of promotion, and for 15% – tasting. 14% said they noticed such advertisements on billboards and 13% on the Internet. Only 4% declared that they most often see such advertisements in the press (Figure 4).

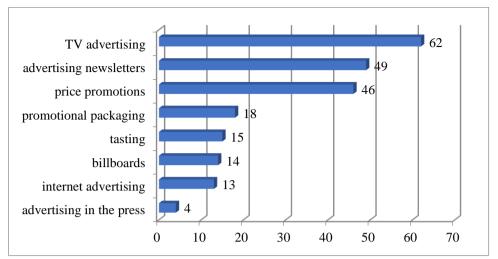


Figure 4. Basic forms of promotion of food products perceived by consumers

Source: own elaboration

The directions of development and diversification of the dairy products market result from the consumption trends mentioned in the theoretical part of the study, as well as from the current needs and preferences of consumers. Apart from traditional dairy products, the consumption of which is deeply rooted in the daily diet of many households, there are also completely new or significantly changed products on the market, referred to as innovative. The innovativeness of such products may be perceived in various ways by consumers (Naspetti 2021). Therefore, the survey asked consumers about the features of an innovative dairy product. Over 60% of respondents stated that such a product has a new taste (new, natural additives), and according to 39% of respondents, that it has an additional pro-health effect (extending the functional features of products, often reflecting contemporary nutritional trends). According to 24% of respondents, an important feature of the new product is the reduced fat content or better use of its culinary possibilities (21%). In the opinion of 16% of respondents, an innovative product should necessarily have a new, more recognizable packaging and a new design.

The research presented in the publication by Bierzuńska (Bierzuńska et al. 2016) shows that the innovativeness of dairy products was associated by consumers mainly with the new appearance of the product (52.1%), with a new taste (10.7%) and increased health (5.8%). For others, the new product was characterized by a new and/or better culinary use as well as better hygienic quality (0.8%). There was also the answer that it is a product completely different from dairy products already available on the market (28,9%).

One of the important elements taken into account when purchasing dairy products is the broadly understood quality of these products, as well as the way it is understood (defined) by buyers. Product quality according to the management approach is perceived as the level of product excellence and thus its ability to meet the consumer's needs. The quality of the product largely determines whether the buyer will purchase a given product or not, and in many cases also proves the creation of the brand image. The respondents, when asked about the quality of dairy products available on the Polish market, assessed it very highly. This answer was given by 42% of the respondents, and 38% of the respondents assessed the quality as high. Only 10% of the respondents stated that dairy products on the domestic market are of average quality.

The quality level of manufactured goods may be confirmed by certified quality assurance systems held by enterprises. The analysis of the empirical data obtained suggests, however, that more than half of the respondents, regardless of their education, do not pay attention to the information whether the producer has certificates confirming the use of quality and safety management systems in the production process of dairy products (HACCP, ISO 22000 etc.). For 16% of respondents, such a declaration is of little importance, while for 6% of respondents it does not matter at all. 19% of respondents declared that information about certificates confirming the use of quality management systems is of great importance to them, and 13% of respondents that it is very important. Therefore, it should be presumed that the surveyed respondents, when assessing the level of purchased food products, make this assessment in terms of organoleptic, taste and functional sensations, and not in terms of standardization elements (holding a quality certificate).

## 15.4. Summary and conclusion

Consuming dairy products and making choices when buying them is a phenomenon conditioned by many factors, both external and internal. Systematic observation of changes in consumer behavior is extremely important from the perspective of adjusting the offer of enterprises to the diverse requirements of buyers.

The analysis of the conducted survey relating to consumer behavior on the dairy products market allowed for the formulation of the following statements and conclusions:

- 1) Dairy products are widely consumed by respondents with the majority consuming them several times a day, once a day or several times a week.
- 2) Among the dairy products, the most popular among the respondents are milk and yoghurt. On the other hand, the least frequently purchased dairy products are buttermilk, kefir, blue cheese and dairy desserts. The respondents buy these products mainly in super- and hypermarkets, which offer a wide range.
- 3) Taking into account the financial situation of the respondents, it was found that people with higher monthly income spend more on the purchase of more processed and more expensive dairy products than less wealthy people who act more rationally and make informed purchases.
- 4) The purchasing decisions of dairy consumers are mostly routine decisions due to the high frequency of purchasing this type of product. The main reason for consuming dairy products is that they are suitable for direct consumption and from the point of view of longterm habits of the respondents.
- 5) In the hierarchy of factors determining the purchase of dairy products, the most important were sensory impressions and the use-by date. The barrier to the purchase of such products is the high price and short shelf life.
- 6) The brand of a dairy product plays an important role for the respondents in the selection process, albeit diversified for various reasons. More than half of them declare that the brand is very important and of great importance. When choosing a specific brand, respondents take into account the price and high quality guaranteed by a specific brand.

- 7) The vast majority of respondents do not pay attention to advertisements for dairy products, and thus believe that they have little or no influence on their purchasing decisions. Despite the declared lack of visible influence on the purchasing decisions of advertisements, the respondents unintentionally notice them mainly on television, commercial and promotional newspapers and on the occasion of various price promotions.
- 8) The respondents are satisfied with the quality of Polish dairy products offered on the market.
- 9) Most of the respondents associate an innovative dairy product with a new taste and an additional pro-health effect. The respondents are willing to buy new products, but mainly after they have been tried and recommended by friends.
- 10) Almost half of the respondents do not pay attention to the information about the certificates held by the manufacturer, confirming the use of quality and safety management systems in the production process of dairy products (HACCP, ISO, etc.).

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