Development of the dairy industry in the region

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Abstract. The article considers the modern situation of the dairy industry in Russia and its regions. The domestic dairy industry is one of the leading branches of agricultural products processing. It gives such an important product for human nutrition as milk. In recent years, this industry is in a situation of stagnation. The situation of the dairy industry can be judged as a whole about the situation of agriculture in the region. In the Siberian region, as well as in the whole country, there was a decrease in the number of cattle, and as a consequence there was a decrease in milk yield. Recently, despite new technologies and increased livestock productivity, milk production has not been sufficient to meet the needs of the population. The way out of this situation is proposed measures of state support in the dairy industry at the regional level.

1. Introduction

The market of milk and dairy products is one of the most important food markets, which is developing dynamically both in the Russian Federation and in its regions. Milk in Russia is traditionally considered as a product of first necessity. Dairy products are in demand by almost all the population of the country.

The modern market of functional food products consists of 65% of dairy products. Due to the promotion of a healthy lifestyle and proper nutrition, as well as the incomes growth, the market of dairy products increases annually both in terms of sales volume and the expansion of the products offered range [1].

Milk and dairy products are recognized as the most useful food. A balanced diet and a healthy lifestyle cannot take place without its use. Nevertheless, despite the global trend of healthy lifestyle in Russia there is a slowdown in the development of the market.

2. Russian dairy market

First of all, this is influenced by the reduction in the number of cattle. This negative trend began in the 80s of the last century. The downward trend is noticeable now. According to Rosstat, the total number of milk cows decreased by 2.5 times in 2018, compared to 1990.

The reduction of the cattle leads to a decrease in milk yields, and, consequently, a decrease in production. The situation has remained stable since 2000 — as can be seen in figure 1. That is, gross milk yields are kept at about the same level. But this figure is significantly inferior to 1990. The sharp decline occurred in 1995. Since this period, the indicators have not increased [2].
Producers are now in a situation where there is a serious shortage of raw materials. Available milk yields are not enough to meet the needs of the domestic market in milk and dairy products. In the coming years, the situation is unlikely to improve, and the deficit will only increase.

In the domestic Russian market there is a steady growth in the production of commercial milk. The reduction of import supplies, the increase in demand for domestic dairy products, the growth of demand for raw milk from domestic milk processing companies, the preservation of investment activity in the industry and the launch of new complexes - all these contributed to the formation of a stable positive trend in the raw materials sector.

At the same time, in recent years, the growth rate of commercial milk production is almost 2 times higher than the annual average, and the main increase is provided by agricultural organizations, while in the private sector, commodity production is declining.

Producers and suppliers of dairy raw materials (sellers of raw milk) are agricultural enterprises of various organizational and legal forms of ownership (JSC, LLC, agricultural firms, etc.), peasant farms and households, which, as a rule, do not have the capacity to store and process milk. So when choosing a buyer, they are guided by the conditions of implementation, territorial proximity, form and terms of payments. Since raw milk is a perishable product, the geographical boundaries of the market are affected by such factors as the distance of the milk producer from the processing enterprises, as well as the requirements for the transportation conditions of the purchased goods, ensuring the preservation of its consumer properties.

3. Development of the region dairy industry

The geographical structure of raw milk production in Russia covers the territory of all 9 Federal districts. The leaders of this production in 2019 were the Volga, Central, Siberian and Southern districts [3] (figure 2).

![Figure 2. Territorial structure of raw milk production in January-June 2019.](image-url)
The total volume of raw milk production in January–June 2019 in Russia amounted to 15.3 million tons, which is 1.4% higher compared to 2018. The increase in production is due to an increase in dairy productivity of cows and the level of marketability.

Siberia occupies one of the leading places among Russian regions for milk production. In 2019, 2.3874 million tons of milk, or 33.72% of the total production in Russia, was produced in the Siberian Federal district (SFD), which has 12 subjects. In the rating of Russian regions for milk production, the SFO steadily occupies the third position, passing only the Volga and Central Federal districts [2].

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The main regions for the milk production in the SFO are the Altai region, Omsk and Novosibirsk regions, Krasnoyarsk region. About 52% of SFD cows are concentrated here and 66% of gross milk production is produced. During the years of reforms, the number of cows in the Siberian regions decreased significantly, which led to a reduction in milk production. In 2017, SFD milk production was about 5.319 million tons compared to 8.0467 million tons in 1985 [4]. Thus, the production of commercial milk decreased by 2.42 times in the SFD for 32 years.

In 2019, more than 30 milk processing enterprises worked on the territory of the Krasnoyarsk region and the Republic of Khakassia. Among the major producers are: JSC "Sayanmoloko", dairy plant "Milko" (a branch of JSC "Unimilk"), "Nazarovskoye milk" (a branch of JSC "VBD"), LLC "Company "Arta". The market also includes small milk producers engaged only in the production of traditional dairy products. The strengths of large national companies represented by branches (JSC "Unimilk", "Wimm-bill-Dann") are a developed dealer network, advertised brand, bright colorful packaging. The weakness is the price: it is higher on average by 10-20%. Also a characteristic feature of our market is the high commitment of buyers to the products of local manufacturers, which is also a disadvantage for world leaders.

Farmers and individuals selling products for bottling do not pose a competitive threat, as they occupy a very small market niche; cover an almost unchanged segment of regular consumers. However, it can still be noted that their advantage is available (in most cases) price and high quality products, but, on the other hand, such manufacturers do not always comply with sanitary standards, which can alienate the potential consumer [5].

There is also the possibility of new competitors in the industry. However, serious barriers to entry into the dairy industry are:

- brand commitment and customer preferences;
- control over the distribution channels;
- low costs due to the effect of production scale;
- amount of investment required.

The new manufacturer has a chance to find its niche only in the presence of professional staff, solid advertising budgets and high-quality raw materials, which is currently quite difficult [6].

4. Factors influencing the development of the dairy industry

As already noted, domestic producers are not able to provide milk and dairy products to Russian consumers. The following factors have a restraining effect on the positive dynamics and development of the market:
A permanent reduction in the number of dairy cows. The main reason lies in the rising the cost of feed. As a result, the cattle become very expensive production. As a result, there is a regular decrease in milk yield.

- Increase in cost leads to an increase in net cost and this affects the final price of the product.
- Competition between imported and domestic goods.
- Seasonal variability of purchase prices, which affects the cost of the final product.

It should be noted that even the implementation of the government program on "Development of agriculture" has not brought significant changes for dairy farming. The Krasnoyarsk region receives much money from the Federal budget to support agriculture. But in recent years, these funds have been increasingly concentrated on supporting crop production that is why the amount of funding allocated to support the dairy industry has decreased significantly. This suggests that the industry does not have the potential and does not look attractive for investment [7].

| State support of the dairy industry | 2016 year | 2017 year | 2018 year | Changes in 2017-2018 years |
|-----------------------------------|------------|------------|------------|--------------------------|
| Tools of state support for 1 kg of commercial milk, rub. | 1.8 | 0.9 | 0.9 | 0 |
| Place in the ranking of regions in terms of state support per 1 kg of commercial milk | 52 | 74 | 67 | +7п. |

In 2017, the total budget allocated for state support of the dairy industry fell by half, and the volume of regional funds fell by almost ten times. In 2019 the whole region agriculture has allocated 5.7 billion rubles, and by the end of summer, farmers in the Krasnoyarsk region received a per-hectare support in the amount of 568 million, 210 million rubles for reimbursement of the elite seeds cost, and on raising productivity in dairy cattle – 216 million rubles, production and sales of milk – 424 million.

Figure 3. The amount of state support for the dairy industry, mln. Rub.

In 2019, the sectoral program "Development of production and processing of agricultural products in the Krasnoyarsk region for 2020-2022" was approved in the region. According to the Minister of agriculture and trade of the region - Leonid Shorokhov, its implementation will increase the volume of agricultural production to 2022 by 23% - 161 billion rubles.

"In animal husbandry, the production of livestock and poultry will increase by 9%, milk - almost 6%, eggs-by 4%, - said Shorokhov - the index of food production in 2022 will be 100.9%. Thus, the production of meat will increase by 3%, sausage products by 1.3%, meat and poultry offal by 2%,
flour and grain mixtures by 12%. Construction and modernization of production facilities will contribute to it in 2020-2022”. It is easy to conclude that the dairy industry is not the main direction in agriculture of the region. The national project to increase exports of agricultural products provides for the growth of supplies in the Krasnoyarsk region by 2.5 times. However, the "may decree" will be implemented with the help of wheat and rapeseed exports – their share in the region's supplies is 75%. In immediate prospects, things do not look very rosy. The number of livestock in cattle will continue to decline under the influence of the constant rise in the cost of feed. This will lead to a further decrease in milk yield. The introduction of new equipment, contributing to greater efficiency of production, will not help to increase its performance [8].

5. Measures of state support for the dairy industry at the regional level
The way out of this situation is to create effective measures of state support for the dairy industry. The emergence and development of the instrument for preferential crediting to agriculture, compensation of direct costs incurred in the construction of dairy farms, stimulation of commercial milk production (subsidy for 1 kg of sold milk), financial support for the implementation of existing measures of state support – all these measures contribute to the active attraction of new investors to the industry, the development of small businesses, the implementation of investment projects and the increase in production by existing industry participants by increasing production efficiency, upgrading capacities, improving the genetic potential of animals. The preservation of the volume support for the dairy industry at level no less than 2018 will allow maintaining positive trend of development for the dairy industry and reaching soon the level of food security in Russia in regard to milk and dairy products.

6. Conclusion
The analysis of the current situation of the dairy industry clearly demonstrates all the key problems that it faced. Understanding the proposed measures importance of state support, combining opinions and proposals for the development of the industry of all participants in the production chain, as well as a clear coordination of their actions, will contribute to improving the efficiency of the industry, overcoming the decline in production and increasing investment attractiveness.

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