

The main problems of processing livestock products in the Republic of Kazakhstan

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Abstract. Objective. Identification, assessment and solution of the main problems of livestock processing enterprises in the Republic of Kazakhstan. **Methods.** In the course of the study, analytical and economic-statistical methods, general scientific methods of systemic, comparative and structural-logical analysis were applied. **Results.** The article presents the results of the assessment of the current situation processing of livestock products in the Republic of Kazakhstan, the dynamics of dairy production for 2015–2019, which have a significant effect on the production direction of the industry, the regional location of the dairy enterprises, security at the expense of domestic production, exports and imports of milk and dairy products. The main problems of the milk processing industry are identified. Measures of state support for the processing of agricultural products are disclosed in order to ensure maximum utilization of processing enterprises, increase the share of processing of agricultural raw materials and increase the competitiveness of domestic products in the domestic and foreign markets. The current situation of meat processing enterprises in terms of their number and workload in the context of regions and in the republic as a whole is studied. The article presents the dynamics of the production of sausage products, canned meat and meat-growing products, security due to domestic production, as well as the export and import of meat products. The main problems and a number of measures of state support for the meat industry implemented by the state are indicated. Trends in the development of agricultural processing enterprises within the framework of the main state programs for the development of the meat industry of the Republic of Kazakhstan are presented. **The scientific novelty** lies in the study of the problems of processing livestock products in the Republic of Kazakhstan and the definition of the main directions of state support for processing enterprises in the livestock industry.

Keywords: livestock processing, processing plants, livestock products, state support, subsidies, milk processing, meat processing, major industry problems, sausage production, canned meat production.

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Introduction

Processing of agricultural raw materials and production of quality, affordable and competitive food products are among the priority tasks of the agro-industrial complex in ensuring the country's food security.

At the present stage of development of the livestock industry, state support is provided to processing enterprises with the aim of their sustainable development, ensuring maximum load, increasing the share of processing of agricultural raw materials and increasing the competitiveness of domestic products on domestic and foreign markets. Despite this, the level of processing of livestock products in Kazakhstan remains low. Thus, the Prime Minister of the Republic of Kazakhstan A.U. Mamin at the meeting of the Government of the Republic of Kazakhstan stressed: “There are issues that require close attention. Today, the volume of livestock processing remains low; in Kazakhstan it is not more than 35 %, whereas in Russia it is 40 %, in Belarus – 50 %, and in developed EU countries – more than 90 %. At the same time, our processing plants cannot ensure additional growth on their own due to low capacity, obsolete equipment and a lack of raw materials” [1].

In this regard, there is a need for a new, verified approach in the agricultural sector, creating conditions for processing raw materials within the country, attracting investment and the latest agricultural technologies, ensuring the stability of state support measures, increasing their effectiveness [2].

That is why the issues of providing the population of the country with high-quality food, processing of livestock products, and the need for state support for processing enterprises of the livestock industry acquire national economic significance, which determines the relevance of the research topic.

The purpose of the study is to analyze the current state of processing enterprises in the livestock industry, identify the main problems of processing livestock products and determine the priority areas of state support for processing enterprises.

Recently, scientific research in the field of ensuring the country's food security, assessing resource factors, the relevance of state support and regulation of agricultural producers are reflected in the works of I. P. Chupina [3], A. G. Mokronosov [4], F. A. Shulenbaeva [5], S. I. Lilimberg [6], E. S. Ogorodnikova [7], G. M. Dyuzelbaeva, O. I. Malyarenko [8], Z. K. Esymkhanova [9].

A literature review highlighted the importance of continuing research in this area and exploring a wide range of issues related to the processing of livestock products.

Methods

In the course of the study, analytical and economic-statistical methods, general scientific methods of systemic, comparative and structural-logical analysis were used.

Results

Livestock, being an important branch of agriculture, provides the population with basic food products (meat, milk, eggs), sources of essential protein, without which it is impossible to provide a high level of nutrition. Effective management of food safety and product quality is critical to maintaining and improving the competitiveness of livestock production.

Analysis of patterns and trends in the development of agricultural processing enterprises shows that in the period of 2019 compared to 2018, there is an increase in the production of processed milk from 538 050 to 556 522 tons (by 3.4 %), fermented milk products from 199 647 to 206 233 tons (by 3.3 %), cheese and cottage cheese from 27 460 to 29 530 tons (by 7.5 %), including hard cheese from 4 619 to 5 219 tons (by 13 %), butter from 18 455 to 18 933 tons (by 2.65 %), ice cream from 28 092 to 30 636 tons (by 9.1 %), sausages from 44 926 to 53 683 tons (by 19.5 %), canned meat from 8 073 to 8 608 tons (by 6.6 %), chilled fish 25 222 to 27 371 tons (up 8.5 %). At the same time, the production of milk powder decreased from 3 931 to 3 115 tons (by 20.8 %) and processed fish from 10 749 to 9 842 tons (by 8.4 %).

It should be noted that the dairy industry specialises in the production of processed milk, butter, cheese and cottage cheese, powdered milk, fermented milk products, condensed milk and ice cream (table 1). It ranks first in the country's total food production.

The actual consumption of dairy products in 2019 was 1 919.5 tons. Security at the expense of domestic production was 83.6 %. The rest was made up by imports. The population of the country is fully provided with milk and dairy products (in terms of milk). It should be noted that mostly milk is used by the rural population in non-processed form. The dairy industry accounts for 18 % of the volume of food products produced in the republic.

In 2019, dairy products were produced for a total amount of 294.5 billion tenge. There are 164 milk processing enterprises in the republic with a capacity of 2.1 million tons of milk per year and a load of 76 %.

The location of milk processing enterprises by region is associated with the location of raw materials, so these enter-

prises are mostly located in the North Kazakhstan, Kostanay, Akmola, East Kazakhstan, Pavlodar, Almaty, Zhambyl, and Turkestan regions. Meanwhile, the lack of production of milk and dairy products in comparison with the need is noted in Mangystau, Atyrau, and Kyzylorda regions.

The population of the country is provided with processed milk by 103.3 %, fermented milk products by 89 %, butter by 90 %, cheese and cottage cheese by 57 %.

In 2019, the volume of exports of dairy products in terms of milk amounted to 150 thousand tons in the amount of 56.9 million USD. The export volumes of processed milk increased by 43.8 % (from 27.4 to 39.4 thousand tons), fermented milk products by 15 % (from 9.6 to 11.1 thousand tons), butter by 1.6 times (from 1.7 to 2.8 thousand tons), ice cream by 1.5 times (from 1.5 to 2.3 thousand tons).

The volume of imports of milk and dairy products (in terms of milk) amounted to 464.6 thousand tons in the amount of 215.8 million USD. In the structure of milk imports, the largest share is occupied by fermented milk products (36 thousand tons), milk powder (22 thousand tons) and processed milk (21.5 thousand tons). At the same time, 67 % (311.8 thousand tons) of dairy products were imported from the EAEU countries, and 33 % from foreign countries, which is 152.8 thousand tons of dairy products in terms of milk in the amount of 54 million USD.

The main problems of the milk processing industry include:

1) undeveloped raw material base, characterized by low quality of incoming raw materials (milk) due to the content of dairy cattle mainly in the personal farmstead (more than 70 %). Poor quality is affected by untimely and poor-quality sanitary and veterinary measures (vaccination, proper balanced feeding, improvement of genetic potential, etc.), non-primary treatment (cooling, cleaning, etc.). As a result, such raw materials are characterized by high bacterial contamination, extreme acidity, low heat resistance, low fat content;

2) the lack of development of the procurement system, the high costs that arise during the procurement and transportation of products;

3) high share of obsolete and worn-out equipment, existing low level of mechanization and automation of production;

4) lack of qualified specialists with secondary and vocational education;

5) insufficient protection of the domestic market from hidden import dumping [11].

To solve these problems, state support is provided for the processing of agricultural products through subsidies:

Table 1
The production of dairy products for 2015–2019*

Name	Measure	2015	2016	2017	2018	2019	2019 to 2018, %
Processed milk and cream	tons	466 726	472 405	481 888	538 050	556 522	103.4
Butter and milk spreads (pastes)	tons	17 072	15 600	16 840	18 445	18 993	102.6
Cheese and cottage cheese	tons	30 681	24 218	25 192	27 460	29 530	107.5
Including hard cheeses	tons	2 976	3 567	4 256	4 619	5 219	133.0
Unripe cheese (including whey cheese) and cottage cheese	tons	16 897	17 198	17 653	18 494	19 436	105.1
Condensed milk and cream, in non-solid forms	tons	6 780	9 215	9 224	8 327	6 963	83.6

* Source [10].

1) the costs of processing enterprises for the purchase of agricultural products for the production of products of its deep processing (butter, milk powder, hard cheese);

2) to recover part of the costs of up to 25 % of milk processing enterprises when investing in the modernization of existing and construction of new plants;

3) interest rates of 5 % per annum on working capital loans for all areas of agricultural processing;

4) value-added taxes to procurement organisations in the amount of the assessed VAT;

5) breeding work for the development of the raw material base in animal husbandry, increasing the productivity and quality of livestock products [12].

State support to dairy processing enterprises is provided in order to ensure their maximum utilization, increase the share of processing of agricultural raw materials and increase the competitiveness of domestic products in the domestic and foreign markets.

As part of the sectoral programme for the development of dairy farming in 2020–2024, it is planned to increase milk production on organized farms by increasing the productivity of livestock and adjusting production technology; provision of animals with complete fodder is planned, measures are being taken to expand the areas sown with fodder crops in order to strengthen the fodder base, construction of irrigation systems is planned, etc. [13]. In the republic, work is underway to create dairy, family and training farms, create conditions for the development of cooperation in the dairy industry, expand state support measures for the technical equipment of dairy farms, cooperatives, milk collection points, procurement organizations in order to improve the quality of harvested raw materials.

If we talk about the meat industry of the republic, it is more represented by the production of sausage products and meat semi-finished products, and to a lesser extent-canned products and ready-to-eat products.

The meat industry accounts for 16.5 % of the volume of food products produced in the republic. As of January 1, 2020, there are 171 meat processing enterprises operating in the republic (table 2). By the end of 2020, 3 new meat processing plants were introduced: Aizet Farms LLP with a capacity of 20 thousand tons of meat per year; BEF EXPORT GROUP2 LLP with a capacity of 20 thousand tons of meat per year; Marzhany Cheese LLP with a capacity of 5 thousand tons of meat per year.

In general, in 2019, the capacity of meat processing enterprises is about 248 thousand tons of meat per year, without poultry meat. Processed 342.5 thousand tons of meat (including poultry), which was 30.6 % of the total volume of its production. At the same time, the workload is 45.7 %.

In 2019, the country's meat processing enterprises produced 53.6 thousand tons of sausage products (table 3), this is 19.5 % more than in 2018 (in 2018 – 45.1 thousand tons). The country's domestic demand for sausage products is 86 thousand tons. Security at the expense of domestic production is 62 %. The import of sausage products is 33,315. 8 tons in the amount of 68.9 million USD, the export is 372.1 tons.

The main producers of the republic are: “Rubikom” LLP (Pavlodar region), “Rokos i Ko” LLP (Aktobe region), “Aprel” Kulager” LLP, “Dedov” LLP (Karaganda region), “Myasopererabatyvayushchiy zavod Bizhan” LLP (Almaty), “Aprel” LLP (Nur-Sultan), “Astana Agroprodukt” LLP, “Bizhan” LLP, “Kaz Beef LTD”(Akmola region), “Kazmyasoprodukt” LLP, “EMC Agro” LLP (North Kazakhstan region), “Pervomayskie Delikatesy” LLP, “Mereke-et” LLP (Zhambyl region).

The volume of production of canned meat and meat-growing products amounted to 8.6 thousand tons (table 4), this is 6.6 % more than in 2018 (2018 – 8.1 thousand tons). The country's domestic demand for canned meat is 20.6 thousand tons. Security at the expense of domestic production is 41.6 %. The import of canned meat amounted to 12,838 tons in the amount

Table 2
Number and workload of meat processing enterprises*

Regions	Number of enterprises, units	Capacity of enterprises, tons per year	Processed, tons per year	Occupancy, %
Across the republic	171	248 077	113 417	45.7
Akmola	14	18 750	8 440	45.0
Aktobe	11	16 455	8 177	49.7
Almaty	15	10 577	4 701	44.4
Atyrau	2	1 994	1 063	53.3
West Kazakhstan	44	15 050	7 651	50.8
Zhambyl	17	20 937	5 222	24.9
Karaganda	13	21 154	10 617	50.2
Kostanay	24	10 487	5 612	53.5
Kyzylorda	6	522	190	36.4
Mangystau	2	222	151	68.2
Pavlodar	17	48 300	27 680	57.3
North Kazakhstan	12	5 641	1 829	32.4
Turkestan	13	6 848	3 794	55.4
East Kazakhstan	6	48 802	18 277	37.5
Almaty city	2	11 202	5 855	52.3
Nur-Sultan	5	9 984	3 744	37.5
Shymkent	8	1 152	413	35.9

* Source [11].

of 31.3 million USD, the export – 769.7 tons. The main producer of canned meat in the republic is Kubley LLP (West Kazakhstan region).

The volume of production of chilled cattle meat amounted to 64.3 thousand tons, which is 2.8 % less than in 2018 (66.2 thousand tons). Despite the increase in the volume of production of livestock products, domestic production in certain positions does not cover the population's need for meat and dairy products by half [14]. In the structure of meat imports, the largest share is occupied by poultry meat (173.1 thousand tons). The main suppliers to the Kazakhstan market are the USA (129.9 thousand tons), Russia (27.9 thousand tons), and the Republic of Belarus (7.2 thousand tons). Imports of beef and horse meat in 2019 increased by 1.7 times (25.8 thousand tons) and by 5.5 % (2.5 thousand tons), respectively, compared to 2018. At the same time, the volume of pork imports decreased by 16.3 % (1.6 thousand tons) and poultry meat by 9.7 % (173.1 thousand tons). The suppliers are the USA, the Republic of Belarus, Russia and Ukraine. In the structure of imports of meat products, the main share falls on Russia (up to 95 %) [11, p. 71].

The main problems of the meat processing industry include:

- 1) high degree of wear and tear of the equipment;
- 2) insufficient working capital;
- 3) undeveloped meat supply system, uneven supply of raw materials during the year, lack of communication between suppliers of raw materials and manufacturers of finished products;
- 4) insufficiently developed sales infrastructure.

There are also difficulties in attracting investors to the meat processing sector due to the lack of raw materials.

To solve these problems, in 2019, the volume of subsidies amounted to 1932.1 million tenge, so the state support aimed at supporting the meat industry included:

1) reimbursement of part of the costs (up to 25 %) of meat processing enterprises when investing in the modernization of existing and construction of new meat processing plants – 223.6 million tenge;

2) partial refund (up to 25 %) for investments in the purchase of vehicles (cattle trucks, refrigerators) – 147.5 million tenge;

Table 3
The volume of production of sausage products*

Regions	2015	2016	2017	2018	2019
Across the republic	40 188	43 423	45 327	45 097	53 683
Akmola	1 246	1 325	1 925	2 285	2 139
Aktobe	1 939	1 987	2 046	2 543	4 300
Almaty	1 884	2 032	2 004	2 035	2 518
Atyrau	5	162	12	15	–
West Kazakhstan	7 420	8 867	8 035	5 510	8 263
Zhambyl	3 115	2 630	2 746	2 688	3 215
Karaganda	4 745	4 531	4 543	5 249	4 443
Kostanay	3 626	4 054	3 137	3 173	2 872
Kyzylorda	154	162	87	89	70
Mangystau	6	1	9	1	–
Pavlodar	4 361	4 774	4 469	4 190	4 803
North Kazakhstan	1 461	1 454	4 469	4 190	4 803
Turkestan	1 473	1 835	2 774	3 284	4 192
East Kazakhstan	4 192	5 380	7 140	6 979	8 129
Almaty city	3 399	3 277	1 979	2 938	4 234
Nur-Sultan	1 162	952	3 028	2 729	3 454
Shymkent	–	–	104	127	53

* Source [11].

Table 4
Volume of production of canned meat products*

Regions	2015	2016	2017	2018	2019
Across the republic	11 606	8 295	8 871	8 145	8 608
Akmola	–	24	197	181	207
Aktobe	–	–	20	80	7
Almaty	328	384	146	286	146
Atyrau	370	403	417	793	559
West Kazakhstan	7 066	3 857	5 643	5 276	6 488
Zhambyl	–	–	–	191	–
Karaganda	12	–	–	–	–
Kostanay	233	363	160	191	292
Kyzylorda	155	247	263	262	274
Mangystau	1 674	1 628	64	34	34
Pavlodar	–	12	–	–	–
North Kazakhstan	1 768	1 377	945	648	566
Turkestan	–	–	–	71	35
East Kazakhstan	–	–	–	117	–
Almaty city	–	8 295	1 016	15	–

*Source [11].

3) subsidizing the interest rate on loans issued for replenishment of working capital by reducing by 5 % per annum in tenge, for the purchase of fixed assets – by 10 % per annum in tenge for all areas of processing of agricultural products – 1500 million tenge;

4) subsidizing the amount of value added tax to procurement organizations in the amount of calculated VAT – 61 million tenge [11, p.72].

For the development of the raw material base in animal husbandry, breeding work and increasing the productivity and quality of animal products are subsidized. Currently, a long-term program for the development of meat livestock for 2018–2027 is being implemented [15]. In the program of meat farming, an important indicator is the delivery of steers to feedlots. So, at the end of 2019, more than 222.2 thousand steers were handed over, with a plan to hand over 344.6 thousand heads. Despite the fact that farmers are allocated subsidies for the delivered bull calves to feedlots from 2018, the plan was not completed. In this regard, it was decided to intensify the work of the akimats and attract more and more participants to these programs.

In addition, there is a program “Sybaga” for financing farmers for the purchase of breeding stock, which is characterized by positive rates. In general, it was planned to purchase breeding stock in the amount of 96.7 thousand heads under this program, in fact, 91.7 thousand applications were approved and 62.6 thousand heads were purchased, the implementation was 65 %. At the end of 2019, loans were issued for the pur-

chase of 82.2 thousand heads of breeding cattle, or 85 % with the plan of 96.7 thousand heads and 374.4 thousand heads of breeding sheep, or 99.6 % with the plan of 375.8 thousand heads [11, p.73].

Discussion and Conclusion

The results of the study of the processes occurring in the processing of the livestock industry, allow us to formulate the following main problems: lack of raw material base, poor quality of incoming raw materials (milk) because of the content of dairy cattle is mainly in smallholdings; the underdevelopment of the storage system, the high costs in the procurement and transportation of products; a high proportion of obsolete equipment, low level of mechanization and automation of production; lack of qualified specialists with secondary and secondary special education; insufficient protection of the domestic market from hidden dumping of imported goods; a high degree of wear and tear of equipment; insufficient working capital; undeveloped meat supply system, lack of communication between suppliers of raw materials and manufacturers of finished products; insufficiently developed marketing infrastructure; difficulties in attracting investors to the meat processing sector.

The results of the study show the need to continue financing programs to support processing enterprises, which will ensure their maximum utilization, increase the share of processing of agricultural raw materials and increase the competitiveness of domestic products in the domestic and foreign markets.

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