Food Market of the Republic of Kazakhstan: Export Opportunities

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Abstract

The article analyzes the resource potential of export opportunities of the agro-industrial complex of the Republic of Kazakhstan. It presents a study of agro-industrial exports over the last five years, highlights the main problems in this area and the measures taken by the state to solve them, and emphasizes the problems of non-tariff regulation of exports of agro-industrial products of Kazakhstan. The creation of accredited laboratories for examining agricultural products according to international standards is proposed as one of the directions for solving this problem. Purpose of the research is to study the export potential of the food industry of the Republic of Kazakhstan and to develop proposals to increase its share in the structure of the country's exports. Presented a study of exports of agro-industrial complex products of Kazakhstan for 2016-2020, identified the primary problems in this area of research, the steps of state support for their solution, described the issues of non-tariff regulation of exports of products of the country. One of the possible ways of solving this problem is the opening of accredited laboratories for the examination of agricultural products by international standards. Results of the study: Based on the analysis of the expansion of the range of exports of the Republic of Kazakhstan in the context of consolidated commodity groups, the authors show that the highest concentration of exports is in the export of mineral products. In addition, stable diversification growth is observed in exporting agricultural products of both animal and plant origin. The need for certification of agricultural products through creating a network of laboratories that meet the requirements of international standards in the exporting countries is conditioned.

Keywords: Economics, Agro-Industrial Complex, Food Industry, Export, Certification of Products

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1. INTRODUCTION

Balanced economic development of the state creates prerequisites for the growth of the welfare of its population and increases the importance of the country in the international division of labor. The economic development of the state should be based on appropriate dominants, capable to entail a systemic effect of progressive movement of the whole economy. Limited resources should be directed to those sectors, which are capable to be a locomotive for the development of others, and conditions of Kazakhstan, the priority direction is development of the agrarian sector of the economy. Compared with the central and southern regions of Kazakhstan, the development of the West Kazakhstan region is less dependent on agricultural production, considering the natural resource potential. Still, the region concentrates significant capacities for processing of agricultural raw materials. The border position of the region contributes to the development of foreign economic relations with the Russian Federation, but the structure of these relations does not fully represent the sectoral production potential of the regional economy, which leads to the loss of potential income. While the structure of food imports everywhere creates excessive competition for domestic producers and leads to inefficient foreign currency spending. Therefore, determining of priorities in increasing exports of the region's agro-industrial complex will make it possible to solve the problem of forming an effective structure of the region's economy, taking into account regional specifics and national interests.

2. LITERATURE REVIEW

"Export opportunities" of a country or region refers to its «ability to develop market and property» and "ability to profit" in foreign markets where its products are sold (Farinha et al., 2018).

There is a significant amount of literature on the export competitiveness of agricultural products. However, most studies have focused on developing countries (Henson & Loder, 2001; Srivastava et al., 2006; Babiker et al., 2011; Erkan & Yildirimci, 2015; Su et al., 2020), but few have considered developed countries (Ferro et al., 2015; Gilbert & Mukhova, 2018). In recent years, there has been a growing interest in studying Kazakhstan's food market in order to forecast promising export opportunities.

The export-oriented strategy for the development of the agro-food complex of Kazakhstan needs justification in the context of food security policy, which involves resolving the contradiction between the national interests associated with the saturation of the domestic market of the Republic, and the attitude to improve competitiveness in world food markets, as well as the development and implementation of export potential. In connection with this situation, we set the task of studying the export capabilities of the food industry of the Republic of Kazakhstan, identifying the main problems of export development of food products, and outlining possible ways to solve them in the framework of this study.

Currently, there is a lack of work in the theory and methodology of international trade that explains the factors or trends of export development, particularly in view of its impact on the domestic market of the exporting country. On the one hand, an export’s research
methodology has been developed within the framework of the gravity approach (Anderson & Van-Wincoop, 2003; Tinbergen, 1962), in which the distance between trading partners, partners' GDP, and a number of other factors explain export flows, but its capabilities are limited in the part of solving problems of assessing the impact of exports on the internal market.

The theoretical basis explaining the interaction of export with an exporting country's domestic market includes international trade models in which this relationship is implemented within the framework of the general equilibrium mechanism (Krugman, 1980; Melits, 2003). Through this mechanism price spikes in the export market lead to a change in the cost of factors of production in the domestic market, which impacts on the volume of the domestic production. However, trade models are designed to explain global trends in international commodity exchange and are poorly suited to explain the relationship between exports and domestic sales. Moreover, standard models of international trade are based on the assumption that domestic and export sales of firms do not depend on each other, i.e., firms maximize profits in one sales market independently of another, which does not allow us to study the relationship between exports and the domestic market, bypassing the mechanism of general equilibrium.

In most publications devoted to the analysis of the relationship between the state of the domestic market and exports, generally the influence of domestic market factors, primarily domestic demand, on the dynamics of exports is estimated. Many foreign studies in this area are conducted at the micro level, i.e., at the level of firms, the results of which were then used for analysis at the macro level. (Krugman, 1980; Vannoorenbergh, 2012; Wang, 2016)

The analysis of publications on the research topic showed that there are arguments both in favor of a negative substitution effect between exports and supplies to the domestic market (Almunia et al., 2018; Esteves & Rua, 2015; Lee et al., 2009; Bobeica et al., 2016; Bugamelli et al., 2015), and a positive one when sales for export and to the domestic market complement each other (Berman et al., 2015; Erbahar, 2020).

3. METHODOLOGY

During the study, monographic, abstract-logical, and economic-statistical methods were used. Based on the principles of classical economic theory and institutional theory, the concepts of export potential of the agro-food complex and the food industry of Kazakhstan were investigated, and the specifics of its formation were revealed, taking into account the object of research. Based on economic and statistical methods, we assessed the trends and prospects of growth of food production and export potential of Kazakhstan's agro-food complex. In addition to some specific methods, the following scientific approaches to analyzing the problem were used: dialectics, abstraction, deduction, induction, analysis, and synthesis.

The official statistical data from the Bureau of National Statistics of the Republic of Kazakhstan, the State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan, and the COMTRADE international trade database were used to calculate this analysis.
To determine the development of product exports, we used the indicators accepted in international practice: the degree of export concentration, the standard deviation from the average export value, the unit weight of the standard deviation from the average export value («Qaztrade» Trade Policy Development Center, 2020; IFPRI, 2020).

The degree of export concentration is a theoretical value determining the number of similarly sized export products. This indicator is more suitable for sectoral studies as it is less sensitive to evaluation relative to overall indicators. The higher the value of the index, the more diversified the exports and, consequently, the higher the rating of the exporting country. The degree of export concentration is calculated according to the following formula (1):

\[
NE_{ict} = \frac{1}{\sum_{k=1}^{n} \left( \frac{x_{ik}^t}{x_{cl}^t} \right)^2} \tag{1}
\]

Where:
- \( i.k \) - exports of products k from country i in period t;
- \( i.cl \) - export of commodity group cl from country i in period t;
- \( i.k \times Xi.cl \) - the share of products k in the exports of commodity group cl of country i

The standard deviation from the average export value complements the degree of export concentration and is the dispersion-a measure of dispersion between the highest and lowest values of a statistical series, that is, the deviation from the average. This index reflects each country's export production distribution and compares it to the average export value.

The specific weight of the standard deviation from the average export value (SD SD) is calculated as follows: first, we find the variance, then the standard deviation (SD), and then the specific weight by the following formula (2):

\[
S_{cl}^t = \sqrt{\frac{\sum_{k=1}^{n} \left( X_{ik}^t - \overline{X}_{cl}^t \right)^2}{N \left( \overline{X}_{cl}^t \right)}} \tag{2}
\]

Where:
- \( i.k \) - exports of products k from country i in period t;
- \( \overline{X}_{i. cl} \) is the average export value of country i for all the products included in product group cl for period t;
- \( (Xi. k - \overline{X}_{i. cl}) \) is the deviation from the average value of production k from country i for period t;
- \( \sqrt{\sum_{k=1}^{n} \left( X_{ik}^t - \overline{X}_{cl}^t \right)^2} \) - standard deviation;
- \( S_{cl}^t \) - the specific weight of the standard deviation.
4. FINDINGS AND DISCUSSION

Kazakhstan is an industrial-agrarian country where the stabilizer of economic development is the creation of conditions to ensure the competitiveness of products of animal and plant origin and support the timely sale, processing, and export of agro-industrial products. Improving the competitiveness of agricultural products is impossible without state support, where the main measures are additional state subsidizing of interest on loans of agricultural producers, insurance of agricultural activities, infrastructure development, and other effective impact levers.

The country’s agriculture specializes in the production of meat - beef, lamb, horse meat, and grain - wheat, barley, rye, millet. Currently, Kazakhstan's high-quality and environmentally friendly organic agricultural products are exported to almost 70 countries worldwide. Kazakhstan plays a leading role in food security in the entire Central Asian region, occupying the leading position in producing and exporting grain and oilseeds. In addition, Kazakhstan is among the world leaders in the export of wheat and flour, where Kazakh grain ranks high on quality indicators. The analysis of relative indicators - the production of primary agricultural products per capita in the country for 2016-2020 is presented in Table 1.

**TABLE 1.** Production of main agricultural products per capita in the Republic of Kazakhstan, kg

<table>
<thead>
<tr>
<th>Types of products</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2020 as % of 2016</th>
<th>On average, in Kazakhstan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals and legumes</td>
<td>1159,6</td>
<td>1141,2</td>
<td>1109,3</td>
<td>941,4</td>
<td>1069,8</td>
<td>92,3</td>
<td>1084,3</td>
</tr>
<tr>
<td>Potatoes</td>
<td>199,3</td>
<td>196,9</td>
<td>208,3</td>
<td>211,3</td>
<td>213,6</td>
<td>107,2</td>
<td>205,9</td>
</tr>
<tr>
<td>Vegetables</td>
<td>213,3</td>
<td>210,2</td>
<td>223,3</td>
<td>235,2</td>
<td>244,8</td>
<td>114,8</td>
<td>225,4</td>
</tr>
<tr>
<td>Bahrain crops</td>
<td>116,4</td>
<td>116,1</td>
<td>117,2</td>
<td>128,7</td>
<td>129,3</td>
<td>111,1</td>
<td>121,5</td>
</tr>
<tr>
<td>Meat of livestock and poultry (slaughter weight)</td>
<td>54,0</td>
<td>56,4</td>
<td>58,0</td>
<td>60,5</td>
<td>62,3</td>
<td>115,4</td>
<td>58,2</td>
</tr>
<tr>
<td>Milk</td>
<td>300,2</td>
<td>305,1</td>
<td>311,1</td>
<td>316,8</td>
<td>322,6</td>
<td>107,5</td>
<td>311,2</td>
</tr>
<tr>
<td>Eggs (pieces)</td>
<td>267,3</td>
<td>282,9</td>
<td>305,9</td>
<td>298,8</td>
<td>270,1</td>
<td>101,0</td>
<td>285,0</td>
</tr>
</tbody>
</table>

*Source: compiled by the author based on the source Bureau of National Statistics (2022)*

This table shows that the dynamics of production growth are observed for almost all types of presented agricultural products, except for cereals and legumes. The decrease in the production of this indicator per capita in 2019-2020 was caused by the abnormal drought, due to which the volume of crop production decreased by 6.7% (4.2 trillion tenge), while the volume of livestock production achieved growth by 3.6% (3.1 trillion tenge).
This table shows that the dynamics of production growth is observed for almost all types of presented agricultural products, except for cereals and legumes. The decrease in the production of this indicator per capita in 2019-2020 was caused by the abnormal drought, due to which the volume of crop production decreased by 6.7% (4.2 trillion tenge), while the volume of livestock production achieved growth by 3.6% (3.1 trillion tenge).

Thus, in 2020, livestock and poultry production increased by 15.4% compared with the base year. The growth of meat production is due to the availability of pastures, forage for own production and the possibility of distant cattle breeding, which complies with Halal requirements and confirms the huge export potential of the country.

In 2021, the volume of exports of Kazakhstani products of animal and plant origin increased threefold compared to 2020. Thus, this indicator amounted to $20.101 million and 13.376 million euros, $1.457 million and 9.226 million euros, respectively.

The central countries that consume agricultural products from Kazakhstan are Germany, Sweden, Great Britain, as well as Belgium, the Czech Republic, and Lithuania. In 2021, agricultural products were supplied to Ukraine and China for the first time. Thus, for 2020-2021, Kazakhstan exported 5.576 tons and 29.219 tons of organic wheat, 14.727 tons and 12.07 tons of organic flax, 321.4 tons and 9.61 tons of organic soybeans, and 328 tons of organic millet, respectively (Mars, 2020).

It is planned to maintain a similar trend in the future. The trends observed in the agricultural sector are due to the fact that this market is a priority for the economy of West Kazakhstan region. The state supports farmers and agricultural producers within the State Program of Agro-industrial Complex Development of the Republic of Kazakhstan for 2017-2021.

It is planned that with the help of a similar program, it will be possible:
− To increase labor productivity by 2.5 times to 4.0 million tenge per person employed in agriculture;
− to increase processed product exports by 2.5 times to $2.7 billion. The country's exports of refined products increased by five times to $2.7 billion;
− to increase the volume of gross agricultural production by a factor of two;
− to increase the inflow of investment in fixed capital in the industry by three times;
− to increase the volume of attracted credit funds by nine times by 2021 to the level of 2017.

The livestock market subsidy program aims to maximize the effectiveness of state support measures for the industry in priority areas.

As a state with a raw material orientation economy, Kazakhstan tries to limit the export of raw materials and to stimulate the deep processing of raw materials. Restrictions on the export of raw materials are methods of quotas and licensing, the introduction of an export ban, increased customs duties. So, there is currently a ban on the export of buckwheat, white sugar, potatoes, onions, garlic, sunflower seeds, and oil. Quotas have been introduced for carrots, turnips, beets, cabbage, as well as for flour and wheat.

The Strategic development plan of the Republic of Kazakhstan until 2025 sets the target for non-resource exports at $41 billion. The target indicator of non-resource exports is $41 billion. Achievement of the target indicator of the Strategic Plan on the
volume of non-resource exports is only possible with the creation of favorable conditions for entrepreneurs and the provision of government support measures for domestic producers and service providers.

The food industry of Kazakhstan is one of the strategically important industries designed to provide a sustainable supply for the population with the necessary quantity and quality of food products. The domestic market of livestock products is characterized by a sufficient degree of saturation in the form of raw materials, which fully covers the solvent demand of the population. At the same time, the annual growth of livestock production in the republic is within 5%. The Republic of Kazakhstan, in recent years confidently takes the third place in the world in terms of flour exports. For the past period, flour exports were 4.7% higher compared to the previous year, in addition, exports of condensed milk increased by 73 times, processed milk by two times, canned fruit by 1.9 times, and rice by 85.5%.

Since 2010, over the past ten years, the volume of food production in the country as a whole grew by 2.45 times and amounted to 1,708 billion tenge.

Kazakhstan's key challenges in expanding the food industry are:

- support for innovative enterprises in the food industry;
- expansion of the product range and improvement of marketable appearance;
- improving the quality and safety of food and other products to preserve public health.

Increasing domestic food production could help improve the structure of the social output, since the successful development of the food industry stimulates the development of agriculture and related industries.

Analysis of the development of the food industry of the Kazakhstan shows its stable growth (see Table 2).

**TABLE 2. Growth of food industry production by sector**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat processing and canning, and production of meat products</td>
<td>204</td>
<td>205</td>
<td>228</td>
<td>297</td>
<td>313</td>
<td>53%</td>
<td>5%</td>
</tr>
<tr>
<td>Processing and canning of fish, crustaceans and mollusks</td>
<td>14</td>
<td>17</td>
<td>19</td>
<td>22</td>
<td>27</td>
<td>89%</td>
<td>19%</td>
</tr>
<tr>
<td>Processing and canning of fruits and vegetables</td>
<td>105</td>
<td>106</td>
<td>103</td>
<td>93</td>
<td>99</td>
<td>-6%</td>
<td>7%</td>
</tr>
<tr>
<td>Production of vegetable and animal oils and fats</td>
<td>121</td>
<td>138</td>
<td>136</td>
<td>154</td>
<td>175</td>
<td>45%</td>
<td>13%</td>
</tr>
<tr>
<td>Production of dairy products</td>
<td>225</td>
<td>245</td>
<td>277</td>
<td>311</td>
<td>359</td>
<td>59%</td>
<td>16%</td>
</tr>
<tr>
<td>Production of flour industry products, starches and starch products</td>
<td>307</td>
<td>302</td>
<td>265</td>
<td>309</td>
<td>375</td>
<td>22%</td>
<td>21%</td>
</tr>
</tbody>
</table>
Considering the structure of the food industry in comparison with 2020 in 2016, last five years high growth showed such commodity items as "Production of ready-made animal feed" growth - 153% from 35 billion tenge in 2016 to 89 billion tenge in 2020, "Processing and canning of fish, crustaceans, and mollusks" growth - 89% from 14 billion tenge in 2016 to 27 billion tenge in 2020, "Beverage production" growth - 70% from 254 billion tenge in 2016 to 433 billion tenge in 2020. The decrease is observed in "Processing and preserving of fruits and vegetables" sectors decrease by 6% from 105 billion tenge in 2016 to 99 billion tenge in 2020 and "Production of other food products" decrease by 0.1% from 241 billion tenge in 2016 to 240 billion tenge in 2020.

Given the difficult year of 2020 caused by the coronavirus pandemic, the food industry has a positive growth in relation to 2019. Thus, high growth for the year was shown by "Production of flour industry products, starches and starch products" - 21%, "Production of bakery and flour products" - 20%, "Processing and canning of fish, crustaceans and mollusks" - 19% and "Production of dairy products" - 16%.

Six countries occupy the main supply markets of Kazakhstan's food industry with a share of 90%, given that exports in 2020 were made to more than 59 countries. About 24% of exports go to the market of Afghanistan, then 19% of products are exported to

**FIGURE 2.** Share of Kazakhstan's exports by importer, %

*Source:* Data are based on the source («Qaztrade» Center for Trade Policy Development, 2020)
Russia. The Uzbek market accounts for 18% of all exports, the Chinese and Kyrgyz markets account for 12% and 11%, respectively, and the Tajikistan market accounts for 7% of all RK exports. Other countries account is about 10%.

The share of Kazakhstan’s exports by importer presented in Figure 2.

In comparing Kazakhstan’s export volumes with the world leaders in this industry, our country is at a relatively low level. Thus, the volume of U.S. exports exceeds that of Kazakhstan by 55 times, Germany - by 51 times, the Netherlands - by 48 times. The volume of exports of Kazakhstan’s food industry products is 11 times less than that of Russia (Figure 3).

![Figure 3](image_url)

**FIGURE 3.** Comparison of Kazakhstan’s food industry exports with the world leaders, $ billion USD

*Source:* Data are based on the source Bureau of National Statistics (2022)

Methods to stimulate exports include the reduction of taxes and customs duties on exported products of deep processing. In addition, the state provides advisory support to exporters and compensates them for participation in exhibitions.

Support for exports of products of the agro-industrial complex and its processing industry will increase their competitiveness. This can be achieved through additional state subsidies for payment of interest on loans, insurance of activities, development of infrastructure, and creation of other competitive advantages.

The head of state has set a goal of increasing productivity and exports of processed agricultural products by 2.5 times by 2022.

In 2019, exports of agribusiness products totaled 12.41 million tons worth $3.29 billion, an increase of $198 million or 6.4 percent over 2018 (according to the MNE Statistics Committee).

At the same time, the share of exports of processed products in the total exports of agribusiness products in 2018 was 33.65% (2.8 million tons worth USD 1.107 billion). The State Agribusiness Development Program over-fulfilled its targets for exports of agribusiness products by 24.1% ($3.29 billion vs. the plan of $2.65 billion).

The export of Kazakhstan’s agro-industrial products to priority markets is growing. Thus, the export of agricultural products to China increased by 50.5% (total export - 388
million USD), to the Persian Gulf countries (Qatar, Kuwait, UAE, KSA, Oman, Bahrain) by 3.2 times (11.5 million USD), to Central Asian countries (Uzbekistan, Afghanistan, Tajikistan, Kyrgyzstan, Turkmenistan) by 7.4% (1,559 million USD), to the EAEC countries by 8.2%, i.e., 598.0 million USD (Food Industry, 2020).

Support for exports of products of the agro-industrial complex and its processing industry will increase their competitiveness. This can be achieved through additional state subsidies for payment of interest on loans, insurance of activities, development of infrastructure, and creation of other competitive advantages. Deliveries of the top 15 commodities in the ten digits of the TN VED account for 80.4% of exports, with crude oil accounting for 57.8% of all exports. In the structure of Kazakhstan's processed exports, exports of intermediate goods have the largest specific weight. For 2019, exports of passenger cars increased 2.7 times compared to 2018. Exports of gasoline fuel (2.9 times) and means of production (2.2 times) also increased markedly.

In 2014-2019, 144-171 types of products were exported in the commodity groups "Products of animal and plant origin, finished food products" at the level of 4 digits of the TN VED (Table 3).

### TABLE 3. The leading indicators of the commodity group "Products of animal and plant origin, finished food products" in Kazakhstan

<table>
<thead>
<tr>
<th>Export performance</th>
<th>Unit.</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export volume</td>
<td>million dollars. USD</td>
<td>2 136,2</td>
<td>2 150,0</td>
<td>2 417,6</td>
<td>3 102,1</td>
<td>3 282,5</td>
</tr>
<tr>
<td>Number of export items at the 4-digit level of TN VED</td>
<td>export article</td>
<td>159</td>
<td>165</td>
<td>164</td>
<td>166</td>
<td>171</td>
</tr>
<tr>
<td>Degree of export concentration (equivalent number)</td>
<td>number</td>
<td>5,937</td>
<td>5,901</td>
<td>8,049</td>
<td>7,396</td>
<td>8,116</td>
</tr>
<tr>
<td>Standard deviation from the average export value</td>
<td>million dollars. USD</td>
<td>68,21</td>
<td>67,66</td>
<td>64,89</td>
<td>86,54</td>
<td>86,00</td>
</tr>
<tr>
<td>Specific weight of the standard deviation from the total volume of exports</td>
<td>%</td>
<td>3,19%</td>
<td>3,15%</td>
<td>2,68%</td>
<td>2,79%</td>
<td>2,62%</td>
</tr>
</tbody>
</table>

*Note: Data are based on the source based on the source Bureau of National Statistics (2022)*

At the same time, the indices that characterize the diversification of products have the following values. Degree of export concentration: 3.077 to 8.116. Standard deviation from the average value of exports: from 64.89 to 139.3 million USD. USD, or 2.62% to 4.7% by share of total exports by commodity group. Wheat and flour have the largest share by commodity. In recent years, there has been a trend of increasing flour exports and decreasing exports of wheat. The impact on the diversification of other goods is
insignificant. Below are the first ten types of export products of the considered commodity group.

Analysis of the level of diversification of Kazakhstan’s exports in terms of aggregated commodity groups showed that the highest concentration of exports is observed in the export of mineral products since crude oil accounts for a large share of exports in this commodity group. In addition, among other commodity groups, a stable upward trend of diversification is observed only in the export of products of animal and plant origin. It is worth noting that the export basket includes some goods, the export of which is growing despite the crisis.

Table 4 shows the data on the dynamics of exports of agro-industrial products of the Republic of Kazakhstan for 2017-2021. Products of animal and plant origin occupy, on average 0.3% of the region’s total exports.

**TABLE 4.** Export of TOP 14 agro-industrial products in the total exports of the Republic of Kazakhstan for 2017-2021

<table>
<thead>
<tr>
<th>№</th>
<th>Name</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>thousand dollars. U.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Live cattle</td>
<td>555,5</td>
<td>1 228,6</td>
<td>50,6</td>
<td>179,9</td>
<td>507,3</td>
<td>0,07</td>
</tr>
<tr>
<td>2</td>
<td>Cattle meat</td>
<td>595,3</td>
<td>2631,6</td>
<td>2 527,9</td>
<td>1078,8</td>
<td>262,7</td>
<td>0,04</td>
</tr>
<tr>
<td>3</td>
<td>Pork</td>
<td>77,0</td>
<td>133,1</td>
<td>187,9</td>
<td>123,9</td>
<td>0</td>
<td>0,00</td>
</tr>
<tr>
<td>4</td>
<td>Lamb</td>
<td>96,0</td>
<td>230,7</td>
<td>232,8</td>
<td>720,9</td>
<td>0</td>
<td>0,00</td>
</tr>
<tr>
<td>5</td>
<td>Poultry meat</td>
<td>883,5</td>
<td>1 033,1</td>
<td>1 562,1</td>
<td>2 399,5</td>
<td>1 610,1</td>
<td>0,23</td>
</tr>
<tr>
<td>6</td>
<td>Cheeses and cottage cheese</td>
<td>817,1</td>
<td>543,7</td>
<td>1 360,1</td>
<td>695,0</td>
<td>821,7</td>
<td>0,12</td>
</tr>
<tr>
<td>7</td>
<td>Eggs</td>
<td>277,0</td>
<td>1 348,5</td>
<td>1 014,6</td>
<td>54,4</td>
<td>718,5</td>
<td>0,10</td>
</tr>
<tr>
<td>8</td>
<td>Wheat</td>
<td>3 899,6</td>
<td>11 174,2</td>
<td>9 022,9</td>
<td>11 331,0</td>
<td>1 095,9</td>
<td>0,16</td>
</tr>
<tr>
<td>9</td>
<td>Barley</td>
<td>43,4</td>
<td>1469,9</td>
<td>543,3</td>
<td>163,1</td>
<td>0</td>
<td>0,00</td>
</tr>
<tr>
<td>10</td>
<td>Rice</td>
<td>734,8</td>
<td>539,4</td>
<td>1 054,3</td>
<td>810,4</td>
<td>2 077,4</td>
<td>0,30</td>
</tr>
<tr>
<td>11</td>
<td>Wheat flour or wheat and rye flour</td>
<td>978,9</td>
<td>1 687,4</td>
<td>2 164,3</td>
<td>1 399,0</td>
<td>1 109,3</td>
<td>0,16</td>
</tr>
<tr>
<td>12</td>
<td>Flax seeds</td>
<td>1 134,1</td>
<td>138,0</td>
<td>2 233,4</td>
<td>1 187,0</td>
<td>2 250,4</td>
<td>0,33</td>
</tr>
<tr>
<td>13</td>
<td>Sunflower oil</td>
<td>644,5</td>
<td>588,8</td>
<td>790,4</td>
<td>904,0</td>
<td>328,1</td>
<td>0,05</td>
</tr>
<tr>
<td>14</td>
<td>Margarine</td>
<td>1 087,7</td>
<td>1 060,7</td>
<td>1 231,9</td>
<td>668,6</td>
<td>1 051,6</td>
<td>0,15</td>
</tr>
<tr>
<td>15</td>
<td>Other</td>
<td>471 010,90</td>
<td>484 589,62</td>
<td>639 853,44</td>
<td>531 241,55</td>
<td>674 835,80</td>
<td>98,28</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>482 835,40</td>
<td>508 397,50</td>
<td>663 830,0</td>
<td>552 956,9</td>
<td>686 668,8</td>
<td>100</td>
</tr>
</tbody>
</table>

*Note: Data are based on the source based on the source Bureau of National Statistics (2022)*
According to the data on the export of agro-industrial complex products for the last 5 years, it can be seen that the largest share in the total exports of agro-industrial complex of Kazakhstan is wheat flour (wheat and rye), so the average indicator is - 25.6%. Until 2020, there were growth dynamics, but due to the pandemic COVID-19, as well as changes in climatic conditions, wheat flour exports decreased by 8% compared to 2019, and in 2021 by 9% compared to the previous year.

In addition, Kazakhstan exports livestock products, where the leading position is taken by the meat of cattle and poultry, so the average share for the analyzed period is 25% and 26%, respectively.

In 2021 the export of rice to the amount of 1,267.0 thousand dollars sharply increases and reaches 0.3% in the total structure of exports. While the export of mutton and pork is not observed due to the need to supply the domestic market. Earlier, the main export of mutton (up to 97%) was made to the United Arab Emirates (UAE), Uzbekistan and Russia. And also to Iran, Azerbaijan, Bahrain and Oman.

Also in 2021 there were no barley exports, this is due to the fact that there were problems with the shipment of barley to China. In addition, some other major buyers of Kazakh barley began active purchases only since December, which also affected the final volume of shipments.

According to FAO projections, the world will need to feed 8.5 billion people by 2030. At the same time, the expected growth of world crop production by 2030 will be achieved by increasing crop yields by 87 percent, by introducing new lands into circulation by 6 percent, by increasing the intensity of farming by 7 percent. The expected growth of livestock and fishery production will also be achieved, primarily due to an increase in productivity. An increase in livestock numbers in emerging and low-income countries is expected to be one of the most important drivers of livestock production growth.

The next billion consumers are diverse, ranging from low-income consumers in Africa, rural consumers in Asia, all the way to the emerging middle class in Latin America and consumers in many developed markets who developed the habit of consuming online shopping products during the COVID-19 pandemic.

At the same time, amid the pandemic, food prices continue to rise. The FAO Food Price Index (FFPI) averaged 133.2 points in October 2021, up 3.9 points (3.0%) from September and 31.8 points (31.3%) from October 2020. This is the highest level since July 2011. The increase from the previous month was mainly due to the continued rise in world prices for vegetable oils and grains.

Today, the key trends in the food industry are:
- consumer interest in environmentally friendly products;
- tightening environmental standards (both by certain countries and international organizations), a priority for "green technology" - the main factor in the development of industry, including the production of finished and semi-finished products, will be the availability of raw materials for processing.

The effectiveness of export promotion of Kazakhstani goods and services is determined by the presence of unreasonable restrictions and barriers that exporters face. Based on the results of general meetings with representatives of business, government agencies, development institutions, nongovernmental organizations, and transport companies, a set of barriers and problems negatively affecting the development and
promotion of export products was identified, the key among which was problems of studying and meeting technical standards and requirements imposed on Kazakhstani products by third countries. Eliminating the identified barriers and restrictions that hinder the development of companies' export potential will create favorable conditions for the stimulation of export operations (Government of the Republic of Kazakhstan, 2017).

Today, one of the key conditions for participation in international food trade is the ability of the exporting country and the specific enterprise manufacturer to ensure the safety of manufactured products. The main factor determining the competitiveness of products is the quality of food products, which is characterized by safety indicators. Kazakhstan joined the World Trade Organization, and a prerequisite was introducing a quality management system - the HACCP system - at all food enterprises. New requirements for manufacturers of food products have emerged regarding the safety of manufactured products (Niyazbekova & Brodunov, 2020).

The Republic of Kazakhstan has all opportunities for the large-scale export of agricultural and food products, turning this area into a powerful item of income. Kazakhstan has the most favorable political decisions in this regard with the Russian Federation, China, and other countries. However, the wide export of agricultural products of the region is significantly hampered by the problems of their certification for compliance with international requirements (Ibyzhanova et al., 2021).

In Kazakhstan, many regional enterprises have implemented ISO and HACCP standards. There are several types of ISO certificates:
- environmental management system certificate;
- food safety management system certificate;
- certificate-system for occupational health safety management;
- environmental management system certificate;
- information security management system certificate;
- certificate-systems of energy management.

The advantage of having a certificate is entered into the international market when obtaining grants, participating in tenders, and as a necessity for any company in the food industry engaged in producing, selling, packaging, and storing food products.

The Roadmap for the promotion of exports of non-resource goods and services dated September 2, 2019 includes activities of agricultural products (on the harmonization of mandatory TBT requirements, access to standards of priority countries for export; development of accreditation and testing facilities, as well as the involvement of internationally recognized conformity assessment bodies; recognition of conformity assessment results conducted by Kazakhstani laboratories and conformity assessment bodies).

5. CONCLUSIONS

Thus, the food industry is one of the leading manufacturing industries in the country. The state is taking measures to cover domestic demand with local products, investments in the sector are increasing significantly, including at the expense of its funds. Global and regional comparative advantage in several products has already been achieved. At the same time, we should take into account such features of the industry as an excess of
imports over exports, high concentration of exports by individual products, and high concentration of enterprises in the context of sectors.

Analysis of the current situation demonstrates the presence of a sufficient level of export potential of the AIC of the RK on the one hand and a set of measures of state support for the promotion of Kazakh agricultural products in foreign markets. However, further work is required to regulate the certification of products through the creation of a network of its own laboratories that meet the standards of exporting countries.

Laboratories are an important component of the food control system. In any country, a network of well-equipped laboratories and a surveillance system is necessary to establish an effective and efficient food control system. Establishing laboratories requires a significant investment, and significant financial resources are needed to maintain and operate them. Therefore, careful planning of laboratory activities is necessary to achieve optimal results. The required number and location of laboratories must be determined according to the system’s objectives and the scope of work.

The establishment of laboratories requires significant investments, and significant financial resources are needed for their maintenance and operation. In Kazakhstan, 14 laboratories are carrying out laboratory research in the field of food safety. However, the existing laboratories conduct research only according to the methods and standards of the Republic of Kazakhstan.

Moreover, the accreditation of Kazakh laboratories in the National System is limited to the CIS countries and is not recognized in the PRC, EU, Iran. Under such conditions, manufacturers are forced to transfer product samples for specific quality parameters to foreign laboratories, increasing the lead time and significantly increasing the research cost. Currently in Kazakhstan there is no specialized laboratory for the analysis of food products, which will allow to sell of products on the international market.

References


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