In the context of the transition to a green economy and the need to improve the quality of life of the population, the problems of ensuring food security are increasing. The importance of the Kazakhstan boundary zones (free economic zones), aimed at the country's agricultural sector development, is growing in the age of world economic globalization and comestibles problem aggravation due to the environmental crisis.

Based on the fact that Kazakhstan has a large fertile territory, available environment suitable for the development of animal husbandry, crop production, it would be necessary to create free economic zones, to develop border areas oriented to agricultural productivity enhancement. It is a hot topic for ensuring food security of Kazakhstan and of countries which are scarce of food.

Integrated agricultural structures in the boundary regions should be a factor in the food security of the Republic of Kazakhstan, which in turn is related to the development of cross-border trade of the country. Boundary regions play an important role in the development of the Kazakhstan economy considering the overall length of the borders.

The article considers the transboundedness also as a sphere of implementing cooperative relations in the agricultural sector in the new integration format conditions. The development of various forms of cooperation and integration, including free economic zones, will promote the growth of production of certain types of crop-growing and livestock materials, as well as the way of the import substitution.

Keywords: agricultural sector, boundary zone, food safety, free economic zone, integration, green economy.
РАЗВИТИЕ ТРАНСГРАНИЧНЫХ ЭКОНОМИЧЕСКИХ ЗОН КАК ФАКТОР ОБЕСПЕЧЕНИЯ ПРОДОВОЛЬСТВЕННОЙ БЕЗОПАСНОСТИ КАЗАХСТАНА

С.А.Сагинова*, Э.С. Бактымбет1, А.Н.Бигалиева2

1 Казахский университет технологии и бизнеса, Астана, Казахстан,
2 Кыргызский экономический университет имени Мусы Рыскулбекова, Бишkek, Кыргызстан,
e-mail: saginova.s@gmail.com

В условиях перехода к зеленой экономике, необходимости повышения качества жизни населения возрастают проблемы обеспечения продовольственной безопасности. Значение приграничных зон Казахстана (свободных экономических зон), направленных на развитие сельскохозяйственного сектора страны, возрастает в эпоху глобализации мировой экономики и обострения проблем, связанных с экологическим кризисом.

Исходя из того, что Казахстан имеет большую плодородную территорию, наличие природных условий, пригодных для развития животноводства, растениеводства, необходимо создание свободных экономических зон, развитие приграничных территорий, направленных на повышение производительности сельского хозяйства. Эта актуальная тема для обеспечения продовольственной безопасности Казахстана и стран, испытывающих дефицит продовольствия.

Комплексные сельскохозяйственные структуры в приграничных регионах должны стать фактором продовольственной безопасности Республики Казахстан, что в свою очередь связано с развитием приграничной торговли страны. Приграничные регионы играют важную роль в развитии экономики Казахстана, учитывая общую протяженность границ.

В статье трансграничная рассматривается также как сфера реализации кооперационных отношений в аграрной сфере в условиях нового интеграционного формата. Развитие различных форм сотрудничества и интеграции, в том числе свободных экономических зон, будет способствовать росту производства отдельных видов растениеводческой и животноводческой продукции, а также пути импортозамещения.

Ключевые слова: аграрный сектор, пограничная зона, продовольственная безопасность, свободная экономическая зона, интеграция, зеленая экономика.

Introduction. The importance of development of specific economic zones and other integration organizations aimed at development of the country’s agricultural sector is growing within the conditions of the world economy globalization. In the opinion of G.A. Kaliyev, a famous Kazakh scientist, world economic relations have been constantly changing the balance of geostrategic and political forces, blurring the geopolitical boundaries of regions and creating the broad transition zones taking on greater and greater importance for the main geopolitical centers [1].

Besides, further integration processes in the world space include development of free trade zones with such leading partners as the EU, China, as well as Egypt, India, South Korea, Iran, etc. The development of these processes is impossible without integrated formations functioning. Today, Kazakhstan has such zones as industrial and production zones, i.e. "Seaport Aktau", "Ontustik", "National Industrial Petrochemical Technopark, "Pavlodar", "
"Saryarka", "Taraz Chemical Park"; service zones such as "Burabay", "Astana - new city", "Khorgos-Eastern Gates"; and technical and educational zone, such as "Park of Innovative Technologies".

Considering the fact that Kazakhstan has a large fertile territory (it occupies the 9th place in the world), all conditions for the development of animal husbandry, huge crop areas for grain growing, it would be necessary to create free economic zones aimed at increasing the efficiency of agricultural production. Kazakhstan borders on Russia in the east, north and northwest, on Uzbekistan, Kyrgyzstan and Turkmenistan in the south, and on China in the southeast.

On the global stage where the food crisis deepens in the less developed and other countries, the development of the agricultural sector in Kazakhstan as well as in other countries would play a role in solving the food problem. According to the data of the Eurasian Economic Commission (EEC), the industry of the Eurasian Economic Union (EAEU) has overcome the recession caused by the global financial crisis, and entered the "digital" phase of its development: the growth of industrial production in the EAEU states amounted to 2.6% for the eight months of 2017; and that of the agricultural production of the EAEU countries amounted to 1.5%, while the total GDP growth of states was 1.8% [2].

Competition in the food market is intensifying. There is an increase in its participants, which means that trade conflicts are inevitable. However, there is the possibility for the border areas of Kazakhstan to constructively solve such disputes, which will favorably influence the development of the economy, including its integrated structures.

According to Kazakh scientists, Kazakhstan can use the integration potential of the EAEU in modernization and industrialization, as well as implementation of export diversification on this basis in the context of developing export-oriented import substitution through the involvement of its own resources [3].

It should be noted that the existing potential growth opportunities for individual sectors of the country are constrained due to internal problems:

- shortage of primary processing and storage capacities;
- unmatured system of relations between agricultural producers and processing enterprises;
- lack of high-quality raw materials in sufficient quantity;
- uneven development of rural infrastructure.
- underemployment, increased internal migration of the rural population;
- delay the economic development level of the border areas.

All the above-mentioned problems call for their accelerated solution.

**Materials and methods.** The research included the generalizing achievements of economic science in the field of creating models for the development of border regions and various methods of system-oriented economic analysis, dynamic series, relative quantities, and schemes.

The information base was formed on the basis of materials of the Agency on Statistics, FAO and ILO reports, sociological research, publications in the periodical press, current legislative and regulatory acts of the Republic of Kazakhstan, and also summarizes in the field of formation of various integration groups in the agricultural sector, aimed at addressing the food security problem.

**Result and Discussion.** Currently, 7.6 million people live in rural areas of Kazakhstan. It is 43% of the total population of the state. The mass outflow of the rural population to cities and the migration of the working population from the northern regions to the southern ones continue. The Government has developed a plan for the development of conditions for the migration from densely populated territories to less densely populated ones.

The evidence from overseas experience of the state regulation of the development of rural areas shows that this development is based revenue levels (GDP per capita, unemployment rate) which are in tense contact with the economy of rural areas. The author presents the data of border rural areas, as joint business zones should be developed there first of all.

In order to ensure the food security of the Republic of Kazakhstan, integrated agricultural structures in the border regions should play a role, which in turn is related to the development of cross-border trade in the country. For Kazakhstan, the role of border regions in the development of the economy is important, considering the overall length of borders, especially with Russia. According to the Kazakh scientist, the Russian vector was chosen not by chance, considering that 12 regions participate in cross-border cooperation only from the Russian side, and 7 from Kazakhstan [4]. The border regions of Kazakhstan and Russia are developing economic activity which is evidenced by a Memorandum of Cooperation signed by the West...
Kazakhstan branch of Kazakhstan National Economic Chamber "Atameken" and the Kazakhstan Chamber of Commerce and Industry of the Orenburg region. It should be noted that the Orenburg region has a section of the Russian-Kazakh border of more than 1870 kilometers [5]. Its activity with China, Mongolia and the countries of the Central Asian region is growing along with Russian cooperation.

The further development of livestock production will depend on the expansion of economic cooperation with Kyrgyzstan. For example, farmers of both countries pin their hopes on holding trade fairs, building livestock corridors of veterinary laboratories and temporary cattle holding places, which would allow increasing raw materials for dairy factories in the Zhambyl region. Given that more than 500 joint ventures operate in Kazakhstan and Kyrgyzstan, it can be assumed we have all conditions to form a free economic zone [6].

The emerging Shymkent-Tashkent-Khujand Economic corridor (STHEK) should play an important role in the development of rural areas and in ensuring the growth of food security. It should be agreed with the research of Kazakhstani scientists that the STHEK region has the potential to become a transnational economic corridor.

The food security decision is also facilitated by the intensification of the trade and economic cooperation between Kazakhstan and Uzbekistan on the basis of the development of the transport and logistics sector (the creation of a network of high-speed railways, the completion of Angren-Pap electrified railway line, the extension of the highway for the uninterrupted auto traffic between the Fergana Valley and the rest of the country, etc. [7].

Thus, taking into account international specialization and international division of labor, the active participation of border regions in the integration processes is of paramount importance for the development of cross-border cooperation.

In food security in Kazakhstan, the development of border regions has both positive and negative factors:

- positive factors: the incomes of commodity producers increase due to the processing of agricultural products; purchasing power increases, unemployment and internal migration rates are reduced; the problem of ensuring food security of the population of the countries of the transboundedness zone with better food products is being addressed;

- negative factors: The country's dependence on the supply of goods from abroad is growing, which can weaken its political independence; the growth of traditional products produced in the border areas is declining; costs associated with the training of old personnel and the emergence of new personnel in-demand for integrated structures, are increasing.

In the opinion of both Kazakh and foreign scientists, motives to develop integration processes are: to improve the quality of life of the integrating countries both on the part of producers due to the growth of incomes from the formation of new trade flows, and consumers due to the reduction of prices for individual goods, caused by the competition development; strengthening of economic positions of the countries which are members of integration associations in the world space [8].

According to Kazakh scientists, many countries have operating technoparks, clusters, business incubators, innovation centers. In the EAEU, the development of technoparks is being implemented for cooperation within the framework of the Silk Road. In the current conditions of the development of information technologies, EAEU countries have gained access to state purchase markets. The formation of EAEU digital space was a noticeable step on the way to active cooperation. The transition to an electronic form of issuance of receipts will make financial resources more available, and thus expand the trade in agricultural goods.

The study considers the transboundedness also as a sphere of implementing cooperative relations in the agrarian sector under the conditions of a new-format integration. The development of various forms of cooperation and integration, including free economic zones, will promote the growth of production of certain types of crop and livestock raw materials, as well as the solution of import substitution problem.

To develop and increase the production of domestic products, it is necessary to increase state support for agriculture, which is associated with the availability of low resource potential.

Any state takes into account national interests, including Table I shows the specific advantages of the production of certain types of agricultural products in the context of countries participating in the Eurasian Economic Union (EAEU).
Table 1 - Production volumes of food, beverages and tobacco products by EAEU member states for January-December 2022

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Production volume (current prices)</th>
<th>mln. USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>National currency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armenia</td>
<td>1 060,1</td>
<td>2 433,3</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>3 966,4</td>
<td>8 613,7</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>62,0</td>
<td>736,9</td>
</tr>
<tr>
<td>Russia</td>
<td>10 877,5</td>
<td>161 243,3</td>
</tr>
</tbody>
</table>

Note - compiled from source [9]

To date, Kazakhstan is ranked 60rd place among the world's exporters by the end of 2021. In the structure of the country's exports, the main share is in mineral products, i.e. 65.9% in 2021.

The dynamics of the structure of exports of agri-food products is specified in Tables II.

The largest export structure share (about 50%) is occupied by wheat and wheat flour (Table II), according to which Kazakhstan is one of the world's largest exporters (9th place).

Table 2 - Structure of exports of agri-food products of Kazakhstan in 2010-2015, mln. USD

<table>
<thead>
<tr>
<th>HS code</th>
<th>Name</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>Share (%) 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>Wheat and muslin</td>
<td>694</td>
<td>660</td>
<td>972</td>
<td>1003</td>
<td>1151</td>
<td>1426</td>
<td>38</td>
</tr>
<tr>
<td>1101</td>
<td>Wheat flour</td>
<td>505</td>
<td>469</td>
<td>448</td>
<td>362</td>
<td>490</td>
<td>441</td>
<td>12</td>
</tr>
<tr>
<td>1003</td>
<td>Barley</td>
<td>109</td>
<td>137</td>
<td>293</td>
<td>297</td>
<td>176</td>
<td>165</td>
<td>4</td>
</tr>
<tr>
<td>1204</td>
<td>Flax seeds, whether or not broken</td>
<td>92</td>
<td>109</td>
<td>141</td>
<td>180</td>
<td>207</td>
<td>227</td>
<td>6</td>
</tr>
<tr>
<td>0304</td>
<td>Fish fillets and other fish meat</td>
<td>40</td>
<td>40</td>
<td>44</td>
<td>36</td>
<td>36</td>
<td>29</td>
<td>1</td>
</tr>
<tr>
<td>1205</td>
<td>Seeds of rapeseed</td>
<td>31</td>
<td>54</td>
<td>69</td>
<td>50</td>
<td>21</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>1512</td>
<td>Sunflower oil</td>
<td>30</td>
<td>55</td>
<td>66</td>
<td>81</td>
<td>103</td>
<td>117</td>
<td>3</td>
</tr>
<tr>
<td>2202</td>
<td>Waters, including mineral and carbonated</td>
<td>35</td>
<td>36</td>
<td>42</td>
<td>42</td>
<td>36</td>
<td>46</td>
<td>1</td>
</tr>
<tr>
<td>1806</td>
<td>Chocolate</td>
<td>27</td>
<td>40</td>
<td>40</td>
<td>34</td>
<td>33</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>1704</td>
<td>Confectionery</td>
<td>27</td>
<td>38</td>
<td>34</td>
<td>32</td>
<td>29</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>1006</td>
<td>Rice</td>
<td>16</td>
<td>22</td>
<td>26</td>
<td>25</td>
<td>29</td>
<td>39</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>2150</td>
<td>2418</td>
<td>3102</td>
<td>3282</td>
<td>3353</td>
<td>3757</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Data of the Committee on Statistics of the Ministry of Education and Science of the Republic of Kazakhstan

To date, annual supplies of wheat to foreign markets reach 5-7 million tons, flour - 2-3 million tons.

In 2015, the export of wheat flour decreased by 11.9%, the volume of supplies of this product was $ 494 million. The main consumers are Afghanistan (47% or 231 million dollars), Uzbekistan (39% or 191 million dollars) and Tajikistan (8.5% or $ 42 million).

In the import structure, according to Table III, the share of such products as sugar, chocolate, flour confectionery, meat and poultry, tea, fruit is high.

Climatic changes and unpredictable natural disasters intensify the problem of effective land use through oasis irrigation by the reconstruction and the new construction. For example, Kazakhstan has developed Strategic Measures to combat desertification in the Republic of Kazakhstan up to 2025 and allocated funds to implement tasks on watering pastures using
renewable energy sources and creating an appropriate infrastructure[10].

However, to implement the task, the irrigation of pastures on the main land used by agroformations and the land in rural settlements requires the reconstruction of 14,387 wells, which is three times more than the planned amount, and 72,993 million tenge. According to Kazakh scientists' calculations, only 1 well requires at least 13 million tenge, and not 5.5 million tenge, to be allocated by the Ministry of Agriculture of the Republic of Kazakhstan; for this reason, the cost for new flooding installations and flooding installations subjected to reconstruction in the amount of 14387 is 187,031 million tenge [11].

Conclusions. Kazakhstan, like other transboundary states, has not yet realized its integration potential in full. Its effective interaction is hindered by various rates of development of the agroindustrial complex, the lack of unified approaches to the formation of prices in national markets, the immature logistical and social infrastructure, the incoordination of the export policy, the lack of a unified system for informing about dangerous agro-food products and foods.

In the agrarian sector, cooperation and collaboration sprouts emerged in the form of development of joint Kazakh-Russian enterprises. In the future, it is necessary to accelerate the creation of integration agrarian structures with other states bordering on Kazakhstan, as well as far-abroad countries.

The formation of free trade zones will allow Kazakhstan to realize its regional advantages.

References


Information about authors
Saginova S. A. - Ph.D., Associate Professor, Kazakh University of Technology and Business, Astana, Kazakhstan, e-mail: saginova.s@gmail.com;
Baktymbet A. S. - Candidate of Economics, Associate Professor, Kazakh University of Technology and Business, Astana, Kazakhstan, e-mail: asem_abs@mail.ru;
Bigalieva A. N. - Candidate of Economic Sciences, Associate Professor, Scientific Research Kyrgyz Economic University named after Musa Ryskulbekov, Bishkek, Kyrgyzstan, e-mail: asmat.69@mail.ru
Сведения об авторах
Сагинова С. А. - Ph.D, ассоциированный профессор, Казахский университет технологий и бизнеса, Астана, Казахстан, e-mail: saginova.s@gmail.com;
Бактымбет Э. С. - кандидат экономических наук, доцент, Казахский университет технологий и бизнеса, Астана, Казахстан, e-mail: asem_abs@mail.ru;
Бигалиева А. Н. - кандидат экономических наук, доцент, Научно-исследовательский Кыргызско-экономический университет им. Муусы Рыскулбекова, Бишкек, Кыргызстан, e-mail: asmat.69@mail.ru