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Research Article

AGRICULTURE IN THE EURASIAN ECONOMIC UNION: ANALYSIS OF TRENDS AND CHALLENGES

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ABSTRACT

The paper reviews and analyzes the production potential and basic trade indicators of the Eurasian Economic Union countries. It shows that the region had a difficult transition, after which a role of agricultural sector decreased substantially. It also demonstrates that countries pursue different strategies to support agricultural and food production. Production patterns of the countries affected trade in agricultural and food products. The only country in the union, which has positive trade balance in agricultural and food products, is Belarus. The paper pays special attention to challenges of the Eurasian agriculture on the example of the effects of pandemic. The pandemic has a negative impact on agricultural production and trade as many producers experienced significant losses due to lockdowns, border closures, disruption of labor markets and export restrictions and bans. To help overcome future shocks, the paper provides policy recommendations based on regional cooperation and policy coordination.

Keywords: The Eurasian Economic Union, agriculture, food security, international trade, agricultural policy.

Eurasian
Research
Journal
July 2020
Vol. 2, No. 2

INTRODUCTION

One of the main goals of creation of the Eurasian Economic Union (EAEU) was economic diversification of the member countries. This goal is important as the member countries of the union depend on natural resources. Trade in resources also dominate intra-EAEU trade. Resource based development models led to regional stagnation resulting from the end of energy super-cycle. Following the drop in oil prices, regional trade reduced significantly, and the governments of the union responded differently.

Understanding the vulnerability of the implemented models, the countries of the region re-evaluated the importance of agricultural and industrial policies. All member countries pursue and implement different support programs in order to make agriculture a driving force of diversification. Here it should be noted that this economic goal was a priority a long time ago. The coronavirus pandemic shows that agriculture together with health-care sector and pharmaceutical industry are vital for any country. During the pandemic, many countries worldwide introduced food export bans, which caused price shocks and market distortions. These measures disrupted agricultural and food trade within the EAEU, putting food import-depending countries at risk. At the same time, all political leaders of the EAEU expressed strong support and promised to stimulate industry using fiscal and monetary measures. President of Kazakhstan called food security a key element of national security and instructed the government to widen mechanisms of financing of agricultural sector and to provide preferential low interest rate loans (Akorda, 2020).

Therefore, a goal of the paper is twofold. Firstly, it aims to assess agricultural potential of the region in terms of production and trade. It will analyze changes in production and policy and major agricultural and food trade indicators of the EAEU countries. Secondly, and most importantly, the paper reviews existing and new challenges for the Eurasian agriculture and provides some recommendations to overcome them by strengthening regional agricultural potential and food security. The rest of the paper is organized as follows. Section 1 briefly reviews agricultural potential of the EAEU with a focus on major sectoral indicators. Section 2 analyzes trade indicators in agricultural and food products. Section 3 discusses challenges for the agricultural sector of the EAEU countries and provides some recommendations for development of future policy based on strengths of the union and taking into consideration its weaknesses.

1. AGRICULTURAL AND FOOD PRODUCTION IN THE EAEU

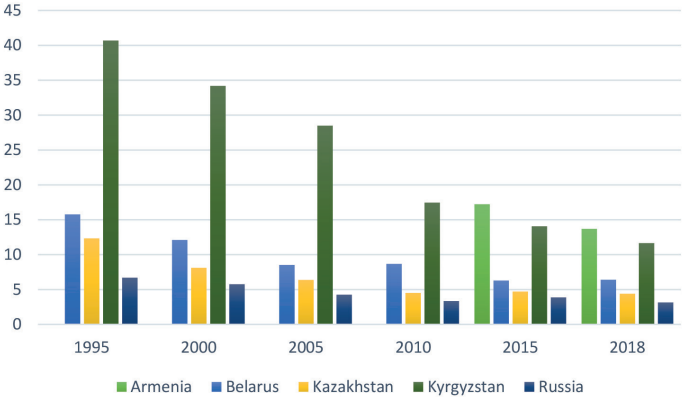
Majority of members of the EAEU are traditionally specialize in agricultural production. However, the share of agriculture in gross domestic products (GDP) in all member countries of the union decreased substantially since independence. At the same time, the share is still high for Armenia and Kyrgyzstan and in 2018 equaled 13.7% and 11.6% of GDP, respectively. In the same period, the indicators of Kazakhstan and Russia were less than 5%. Only Belarus experienced insignificant growth in 2018 compared with the 2015 data. Its share increased from 6.3% to 6.4% (Figure 1). Employment in agriculture (as % of total employment) also decreases in all countries (excluding Belarus) and in 2019 varied from the lowest 5.8% in Russia to the highest 29.6% in Armenia.

Eurasian Research Journal
July 2020
Vol. 2, No. 2

Indicators of Kazakhstan and Kyrgyzstan equaled 15.8% and 21.2%, respectively. Belarus is the only country where agricultural employment increases. Its indicator increased from 9.7% in 2015 to 11% in 2019 (Figure 2). Employment in agriculture also provides important information about the level of agricultural development. It is important to note that agricultural sectors of Belarus and Russia are more capital intensive, while the rest of the members still rely on labor-intensive production. Therefore, there are wide differences in productivity. Production of agricultural products per worker shows Russia's leadership in the EAEU followed by Belarus and Kazakhstan. In 2018, production of a worker in agricultural industry in Russia was $15.8 thousand, while in Belarus and Kazakhstan the workers produced $11.5 thousand and $7 thousand, respectively. The indicator of Kyrgyzstan was low and equaled $1.6 thousand (Figure 3). However, despite increasing trend of the indicator, the EAEU countries lag far behind global leaders. For instance, production per worker in leading global agricultural and food producers such as Canada and Netherlands were respectively equal to $95.7 thousand and $80.8 thousand in 2018. This shows that agricultural sector of the EAEU lacks of innovation and technological development. According to Gollin et al. (2002), low agricultural productivity delays industrialization, which results in a country's per capita income falling far behind that of the leaders.

At the same time, agricultural production per capita increases in the EAEU over time (Figure 4). Belarus initially had higher values and in 2018 maintained its position. Favorable conditions including higher prices for agricultural products allowed Kazakhstan to catch up Belarus in 2015, but following shocks worsened its performance. Despite its size and production volumes, by this indicator Russia ranks fourth out of 5 countries. Its position is behind Belarus, Kazakhstan and Armenia. Since 2010, its indicator had no changes. If in 2010 this indicator equaled $568, in 2018 it decreased to $558. The dynamics of this indicator of Kyrgyzstan is similar to that of Russia. Armenia and Kazakhstan experienced steady growth of the per capita agricultural production, which decreased in 2018. Belarus had an explosive growth in 2010 with following decrease due to economic slowdown of its regional partners, mainly Russia.

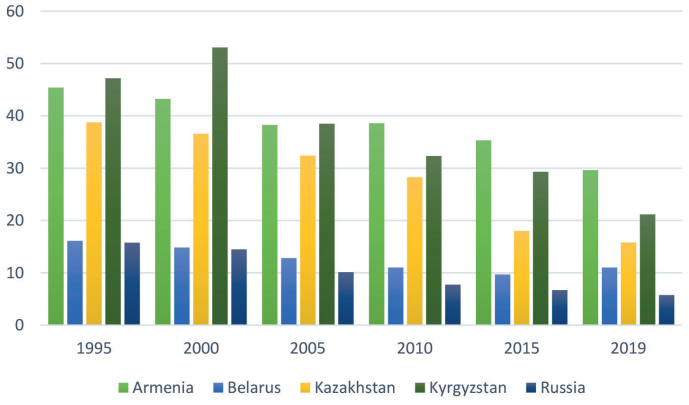
Figure 1. *Agriculture Value-Added in the EAEU Countries (% of GDP), selected years*



Source: The author's compilation based on the World Bank (2020a)

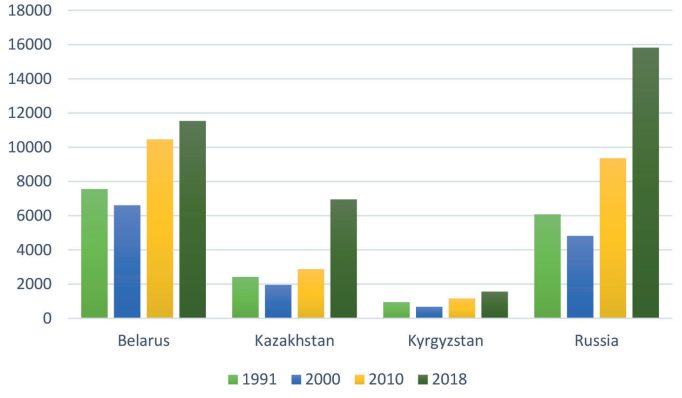
Eurasian Research Journal
July 2020
Vol. 2, No. 2

Figure 2. *Employment in Agriculture in the EAEU Countries (% of total employment), selected years*



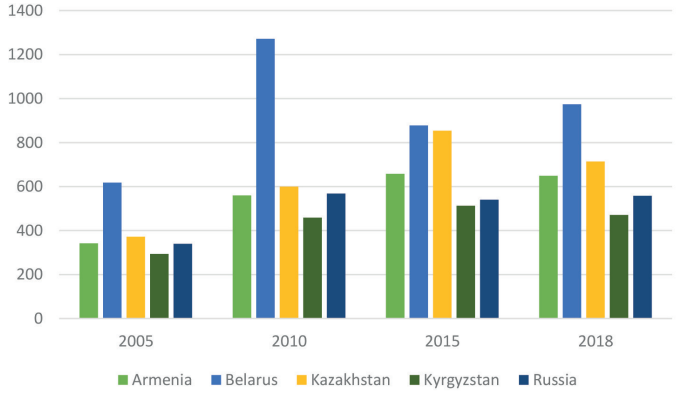
Source: The author's compilation based on the World Bank (2020b)

Figure 3. *Agriculture Value Added per Worker in the EAEU Countries (constant 2010 US$), Selected Years*



Source: The author's compilation based on the World Bank (2020c)

Figure 4. *Per Capita Production of Agricultural Products in the EAEU Countries, (current US$), Selected Years*

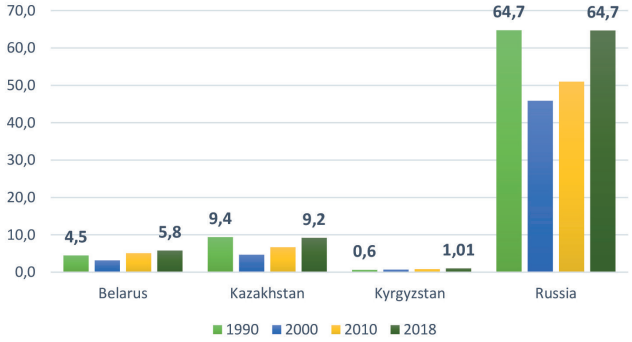


Source: The author's compilation based on the EEC (2020a)

Eurasian Research Journal
July 2020
Vol. 2, No. 2

Many countries of the region achieved no changes compared with their initial production indicators in 1990. For instance, production of agricultural products (in constant prices) shows that indicators of Russia in 1990 and 2018 coincide. Kazakhstan, in turn, did not achieve its 1990 production level. If in 1990 its production equaled $9.4 billion, in 2018 it decreased to $9.2 billion. Only Belarus and Kyrgyzstan demonstrate positive changes. In Belarus agricultural production increased from $4.5 billion in 1990 to 5.8 billion in 2018, and in Kyrgyzstan it increased from $0.6 billion to $1.01 billion for the same period (Figure 5).

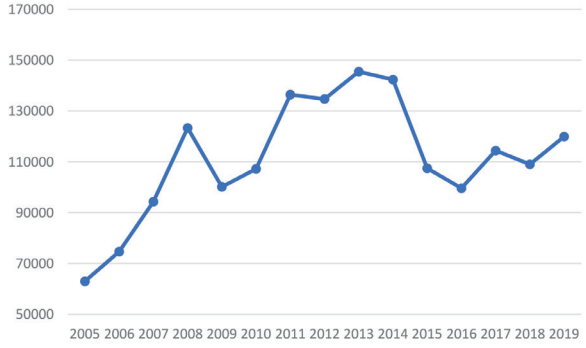
Figure 5. *Agriculture Value Added in the EAEU Countries (constant 2010 US$), Selected Years*



Source: The author's compilation based on the World Bank (2020d)

Data from the Eurasian Economic Commission (EEC, 2020b) shows that in 2019, the agricultural production of the EAEU was $120 billion (in current prices) and this level did not exceed its pre-crises indicators. The highest pre-crises levels were in 2008 and 2013 and equaled $123 and $145 billion, respectively. In 2016, the value of agricultural production decreased to $99.6 billion (Figure 6). The global financial crisis, economic slowdown of Russia since 2012, end of the energy super-cycle coincided with the political crisis in Ukraine, negatively and significantly affected production indicators. Russia has the largest share in total production, which in 2019 equaled 76.1%. The shares of Kazakhstan and Belarus were equal to 11.4% and 8.3%, respectively. Indicators of Kyrgyzstan (2.6%) and Armenia (1.5%) are less significant (Figure 7).

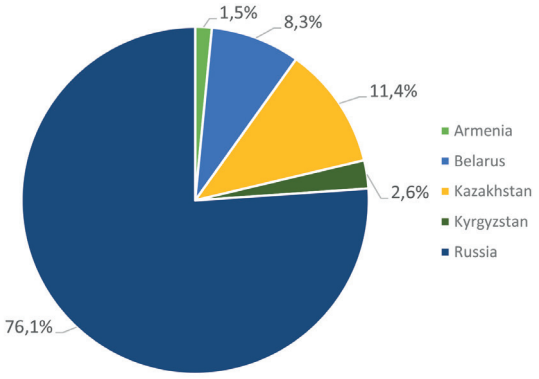
Figure 6. *Agricultural Production of the EAEU Countries, Current Prices (million $US)*



Source: The author's compilation based on the EEC (2020b)

Eurasian Research Journal
July 2020
Vol. 2, No. 4

Figure 7. *Shares of the EAEU Countries in Total Agricultural Production of the EAEU in 2019*



Source: The author's compilation based on the EEC (2020b)

Available resources are important for agricultural development. Transition period was difficult and led to significant decline of agricultural output. Before transition, agricultural sector of many planned economies had similar characteristics such as large inefficient farms with high costs of production, high levels of food consumption, subsidized food prices and pervasive monopoly in food processing and distribution (Brooks et al., 1991). The Soviet Union was spending 10% of its national income (20% of the government budget) on food subsidies. However, since 1992 state support of agricultural sector declined sharply. As a result, an average share of unprofitable farms in Kazakhstan increased from less than 5% in 1990–93 to more than 60% in 1998 and the country reduced input use by more than 40% (Lerman et al., 2003). Since 2000, with the start of resource boom, employment in agriculture shifted towards services. Another important factor, which affected agricultural sector, is urbanization and low support to rural areas. Consequently, the sector started to play a less important role in the economy and regional governments paid insufficient support for its development.

Nowadays, members of the EAEU conduct different policies to support agricultural development. Currently, agroholdings start to dominate agriculture in Russia. They have more than half of revenue of all agricultural enterprises, permanently increase in size, acquire more land, obtain government subsidies, and by providing higher capital investment increase their competitiveness (Uzun et al., 2020). At the same time, production of smallholders is declining and their importance in the Russian agriculture is decreasing. Russia's agricultural policy does not favor smallholders, as they do not allow Russia to become global agricultural power and left behind technological innovations (Wegren, 2018). Contrary, in Central Asia and in the remaining Commonwealth of Independent States, in general, small family farms outperform the large enterprises. However, policymakers continue to favor large agricultural enterprises and provide them investment and other support measures such as subsidies. This policy puts smallholders at disadvantage (Lerman and Sedik, 2018). Belarus has its own experience of agricultural support through creation of agro-towns with high level

Eurasian Research Journal
July 2020
Vol. 2, No. 2

of investment in social infrastructure. Opportunities in agro-towns create incentives for people to move to rural areas and to be involved in agricultural activity. This policy can explain the increasing number of both rural population and employment in agriculture in the country. Moreover, Belarus actively supports its technological sector through its Hi-Tech Park, located in its capital Minsk, where many residents develop agricultural technologies and innovations. For instance, OneSoil, a resident company of the Hi-Tech Park, develops agricultural technologies, which help 127 thousand farmers worldwide (Khitakhunov, 2020).

Thus, the share of agriculture in GDP and its role decreased in the EAEU since independence. However, some of the EAEU members did not achieve their pre-independence level of production. Difficult transition period led to decline of the sectoral importance in the economies of the union. Moreover, countries pursue different strategies to develop their sectors with different outcomes.

2. TRADE IN AGRICULTURAL AND FOOD PRODUCTS IN THE EAEU

For the last decades, increases in global population, higher commodity prices, poverty reduction and higher incomes in developing countries, and policy towards liberalization significantly and positively affected agricultural trade. The Food and Agriculture Organization of the United Nations (FAO, 2019) indicates that food exports (excluding fish) increased from $304 billion in 1997 to $1026 billion in 2017. Europe and the Americas remain the main contributors to the global trade in agricultural products such as wheat, maize, soybean, and meat. Smith and Glauber (2020) provide data showing the importance of agricultural and food trade. For instance, in 2018, almost one quarter of global wheat consumption was obtained from imports. For rice, global import penetration (imports as a percent of global consumption) more than doubled from 4% to 9% between 1995 and 2015. The role of developing countries in agricultural and food trade increased substantially and their contribution made global supplies diversified. The OECD/FAO (2019) report shows that on average, agriculture faces much higher trade barriers than manufacturing, and it still face average import tariffs of around 16% compared to 4% for industrial goods. OECD (2020) argues that the food and agriculture sector is increasingly organized within global value chains (GVCs). Data shows that about 20% of exports re-exported by the first importing country. Developing countries also started to play a key role in the GVCs as important suppliers of intermediate products. As a result, the GVCs contribute to the stronger sector and employment growth, raise food availability, lower prices and improve consumer choice.

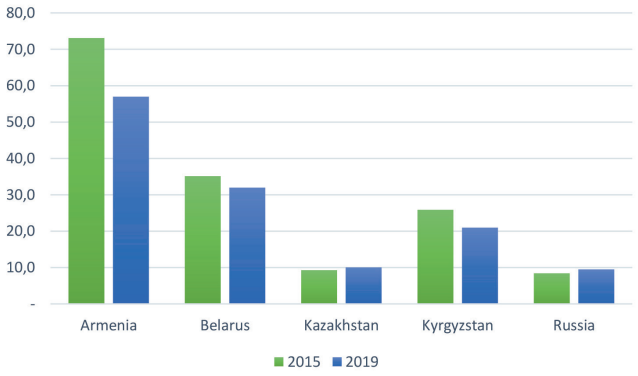
Priority of the governments of the EAEU countries is given to promotion of agricultural and food export. Russia and Kazakhstan are in the list of top global wheat suppliers. In 2017, Russia (ranks 1st) exported more than 33 million tonnes of wheat, while Kazakhstan's (ranks 10th) export exceeded 4 million tonnes. Kazakhstan is also one of the leading global exporters of wheat flour. Belarus is emerging as an important meat producer. In 2017, Belarus' (ranks 7th) cattle meat export exceeded 103 thousand tonnes (FAOSTAT, 2020).

Trade in agricultural products in the EAEU increased from $7 billion in 2015 to

Eurasian Research Journal
July 2020
Vol. 2, No. 2

more than $9.5 billion in 2019. However, the share of agricultural trade in total EAEU trade increased insignificantly from 15.5% to 15.6% for the same period. At the same time, this share at the country level changed more significantly. Armenia experienced significant reduction of its agricultural trade share, which decreased from 73.1% in 2015 to 57% in 2019. Shares of Belarus and Kyrgyzstan also declined, while Kazakhstan and Russia increased their indicators (Figure 8).

Figure 8. *Share of Agricultural Trade in Total intra-EAEU Trade by Countries, %*



Source: The author's compilation based on the EEC, (2020c).

Table 1 shows trade indicators of the EAEU countries. Since early 2000-s both export and import indicators of all countries experienced steady growth, which was interrupted by the global financial crisis. However, all countries recovered fast. Afterwards, since 2010 growth in trade continued until next crisis in 2015, which was connected with the end of the energy super-cycle and led to significant currency devaluations in the regional economies. Mainly both crises-related agricultural trade shocks were due to decrease in prices and lower demand. One of the main conclusions from Table 1 is that all EAEU members, excluding Belarus, have negative agricultural trade balance. Up to 2010 Belarus also had negative net export. However, since the formation of the Customs Union in 2010 this indicator has been only positive. If in 2005 its net export equaled -$458 million, in 2010 it reached $409 million. In 2018, net earnings of Belarus from agricultural export was equal to record $818 million. Accession to the EAEU in 2015 differently affected Armenia and Kyrgyzstan. For instance, Armenia's export started to grow fast and far exceeded its pre-accession level. Due to these changes, Armenia also improved its agricultural trade balance. In 2019, its net export equaled low -$93 million, while its pre-accession maximum was -$557 million in 2011. Both export and import of Kyrgyzstan decreased. Its 2019 export ($251 million) slightly higher than its pre-accession maximum in 2013 ($241 million). Since 2010, Kyrgyzstan experiences lower economic growth rates and highly depends on economic performance of Russia and Kazakhstan due to migrant remittances. Russia has the highest negative trade balance in the EAEU. In 2011, this indicator peaked and equaled almost -$28 billion. Since 2014, due to political crisis in Ukraine, the United States (US) and the European Union (EU) imposed economic sanctions on Russia. Russia responded by

Eurasian Research Journal
July 2020
Vol. 2, No. 2

its countersanctions, which targeted agricultural goods of the EU and the US. These countersanctions contributed to the lower import of agricultural products and improvement in trade balance. However, they also increased food prices and mainly hurt consumers of Russia (Kuznetsova and Volchkova, 2019; Liefert et al., 2019).

Table 1. *Agricultural Trade Indicators of the EAEU Members, million $US (current prices)*

	2001	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Armenia												
Export	49	112	157	224	317	397	414	389	518	628	670	772
Import	206	302	671	781	812	846	809	663	635	715	804	865
Balance	-158	-189	-514	-557	-495	-449	-395	-274	-117	-87	-133	-93
Belarus												
Export	605	1329	3265	3951	4942	5651	5528	4369	4164	4904	5173	na
Import	1098	1787	2856	3208	3607	4114	4789	4406	4026	4524	4355	na
Balance	-493	-458	409	743	1335	1537	739	-38	138	381	818	na
Kazakhstan												
Export	459	679	1946	1837	3109	2733	2638	2136	2129	2418	3033	3284
Import	531	1274	2331	4004	4246	4619	4336	3393	3037	3473	3625	3897
Balance	-72	-595	-385	-2168	-1137	-1886	-1698	-1257	-908	-1056	-592	-612
Kyrgyzstan												
Export	49	77	194	223	224	241	220	144	147	238	199	251
Import	58	167	545	711	786	848	844	574	462	646	596	655
Balance	-9	-90	-352	-487	-561	-607	-624	-430	-315	-408	-398	-404
Russia												
Export	1460	3881	7562	11337	16738	16227	18981	16181	17045	20706	24885	24753
Import	8736	16298	33620	39210	40570	43164	39905	26457	24902	28819	29632	29847
Balance	-7277	-12416	-26057	-27873	-23832	-26937	-20924	-10276	-7858	-8113	-4747	-5094

Source: The author's calculations based on the International Trade Center (ITC), (2020a).

Notes: Agricultural products include chapters 1-24 of the Harmonized System; na – not available

Data from Tables 2-3 shows that agricultural trade plays important role in majority of the EAEU countries. Share of agricultural export in total export is the highest in Armenia. In 2019, this indicator equaled 29.5% and the value is the highest since 2001. The indicator of Belarus also demonstrates positive changes as it increased from 8.1% in 2001 to 15.3% in 2018. Kazakhstan has almost no changes compared with the initial period. In 2001, its share was 5.4%, which increased to 5.7% in 2019. Kyrgyzstan's pre-accession indicators are higher than its post-accession values. Shares of Russian agricultural export changed

Eurasian Research Journal
July 2020
Vol. 2, No. 2

significantly. If in 2001 it was equal to low 1.5%, then in 2019 it reached 5.9%. Imports of agricultural products also important for all members, and in 2019 this indicator varied from the lowest 10.2% for Kazakhstan to the highest 17.1% for Armenia.

Table 2. *Share of Agricultural Exports in Total Exports, %*

	2001	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Armenia	14.5	12.0	15.5	17.0	22.2	27.1	27.8	26.2	28.6	29.3	28.1	29.5
Belarus	8.1	8.3	12.9	9.5	10.7	15.2	15.3	16.4	17.7	16.8	15.3	na
Kazakhstan	5.4	2.4	3.4	2.1	3.4	3.2	3.3	4.6	5.8	5.0	5.0	5.7
Kyrgyzstan	10.3	11.5	13.0	11.3	13.3	13.6	11.7	10.0	10.3	13.3	10.8	12.8
Russia	1.5	1.6	1.9	2.2	3.2	3.1	3.8	4.7	6.0	5.8	5.5	5.9

Source: The author's calculations based on the ITC, (2020a)

Table 3. *Share of Agricultural Imports in Total Imports, %*

	2001	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Armenia	24.6	17.8	17.7	19.0	19.0	19.9	19.5	20.4	19.7	18.4	16.6	17.1
Belarus	13.3	10.7	8.2	7.0	7.8	9.6	11.8	14.5	14.6	13.2	11.3	na
Kazakhstan	8.5	7.3	9.7	10.5	9.5	9.5	10.5	11.1	12.1	11.7	11.1	10.2
Kyrgyzstan	12.5	15.1	16.9	16.7	14.6	14.2	14.7	14.1	12.0	14.4	11.3	13.4
Russia	20.9	16.5	14.7	12.8	12.8	13.7	13.9	14.5	13.7	12.6	12.4	12.2

Source: The author's calculations based on the ITC, (2020a)

Table 4 shows Russia's trade balance in meat and edible meat offal. As data shows, Russia has negative trade balance, which in 2019 equaled -$1.3 billion. This indicator peaked in 2012 and amounted to -$7.3 billion. Russia is a net exporter to the majority of the EAEU countries and net importer from the rest of the world.

Eurasian Research Journal
July 2020
Vol. 2, No. 2

Table 4. *Trade Balance of Russia in meat and Edible Meat Offal, Million $US*

Partners	2001	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
World	-1753	-3016	-5804	-6165	-7325	-6662	-5423	-2911	-2063	-2347	-1658	-1287
China	-20	-7	-6	0	-8	-6	-36	-23	-3	-3	-1	142
Ukraine	-157	-152	-46	-126	-228	-162	-71	-99	64	99	105	103
Belarus	0	0	0	0	-315	-524	-679	-553	-576	-649	-717	-537
Kazakhstan	-5	0	0	0	21	48	30	34	28	32	25	27
Viet Nam	-11	-2	5	4	2	1	2	4	16	38	65	32
Kyrgyzstan	0.03	0.08	0	0	0.60	0.58	1.67	6.59	10.87	19.99	18.01	16.74
Armenia	-0.01	0	0	0	0.04	0.76	0.57	0.67	2.45	8.49	6.64	8.82
Mongolia	-11	-8	-26	-21	-6	-1	-6	-5	-4	-6	-6	4
Finland	-5	-18	-20	-24	-21	-25	-3	2	3	2	3	3
Serbia	0	0	0	-2	-7	-1	-57	-28	-4	-8	-3	-2
Germany	-282	-224	-724	-692	-545	-429	-60	0	0	0	0	0
USA	-632	-553	-659	-747	-934	-359	-257	-4	-4	-3	0.05	0.03
Canada	-32	-43	-229	-401	-634	-258	-338	0	0	0	0	0
Australia	-11	-34	-207	-303	-191	-188	-50	-9	-8	-7	-7	-6
Argentina	-4	-269	-215	-159	-173	-191	-264	-153	-108	-145	-309	-221
Austria	-8	-7	-33	-37	-31	-64	-25	0	0	0	0	0
Belgium	-40	-35	-96	-94	-82	-110	-13	0	0	0	0	0
Brazil	-190	-1194	-1956	-1532	-1670	-1952	-2418	-1483	-1135	-1380	-187	-491
Chile	0	0	-9	-18	-66	-60	-102	-86	-33	-53	-109	-62
Denmark	-79	-87	-323	-387	-330	-441	-46	-2	-2	-2	0	0
France	-72	-81	-187	-209	-173	-180	-36	-2	-2	-2	0	0
Lithuania	-1	-13	-47	-89	-83	-59	-34	0	0	0	0	0
Mexico	0	0	-15	-104	-150	-13	-2	-3	-2	-2	-3	-3
Netherlands	-28	-38	-62	-87	-93	-173	-29	0	0	0	0	0
Paraguay	-3	-71	-228	-198	-570	-653	-603	-378	-262	-270	-475	-334
Poland	-33	-36	-57	-66	-100	-166	-34	0	0	0	0	0
Spain	-40	-52	-200	-299	-351	-181	-7	0	0	0	0	0
Turkey	0	0	0	-1	-1	-3	-26	-16	0	0	-1	-8
Uruguay	-0.4	-9	-281	-314	-316	-175	-136	-38	-28	-33	-78	-25

Source: The author's compilation based on the ITC, (2020b)

Within the EAEU, Russia has negative trade balance only with Belarus. In 2019, Russia's trade balance in meat products equaled -$537 million. Other partners include Argentina, Brazil and Paraguay. Before sanctions and countersanctions, Russia imported significant amounts of meat products from countries of the EU. According to Tilekeyev et al. (2016), Russia imported sheep meat mainly from Australia and New Zealand. Producers of Kyrgyzstan do not export sheep meat

Eurasian Research Journal
July 2020
Vol. 2, No. 2

to Russian market as they have low competitiveness in terms of price and quality and their products do not meet existing veterinary and sanitary requirements. These requirements together with inability to overcome them due to lack of investment remain one of the main trade restricting factors in the region. Thus, import ban did not allow Russia's Eurasian partners, in particular Kazakhstan and Kyrgyzstan, to substitute market share of the European and other producers. Conversely, Russia started to play important role as a meat supplier on the market of the EAEU.

Thus, the importance of developing countries in global agricultural and food trade is increasing. The EAEU countries are also key suppliers of many agricultural products, such as wheat and flour. However, the number of these products is limited. At the same time, all EAEU countries, excluding Belarus, have negative trade balance in agricultural and food products. Belarus is emerging as the global agricultural power. Both Russia and Belarus play key roles as food suppliers in the EAEU. Russia tries to develop its agriculture by using political tools such as countersanctions, but they had adverse effect on its consumers. The Central Asian part of the EAEU did not use opportunities to export meat and meat products to the market of Russia. At the same time, Russia itself started to supply meat products to its Eurasian partners. Thus, in order to develop the EAEU's agricultural market, countries of the region should invest in agricultural production. The case of the Russian meat market is a good example of agricultural underdevelopment. Involvement into international trade not only as importers, but also as exporters, can reduce regional and global food security risks.

3. CHALLENGES AND FUTURE PERSPECTIVES OF THE EURASIAN AGRICULTURE

The situation with pandemics shows that agricultural sector must be considered as an issue of national security. This global crisis affects the entire food system from primary supply to factor markets, including labor, capital and intermediate inputs. One of the most important channels of transmission is surge in unemployment and labor availability for agricultural supply chains. The recent global experience shows that labor shortages, including domestic disruption of labor supply and shortage of seasonal migrants, caused by lockdowns negatively affected food production. This situation puts at risk many poor and developing countries, where labor is a key production factor (Schmidhuber et al., 2020). For instance, border closures affected production of tea in Turkey, which mainly relies on Georgian migrant workers. These migrants fed their families by picking Turkish tea and this disruption would bring higher economic costs through production and trade channels (Cohen, 2020). Recently, Tyson Foods, one of the largest meat producers in the United States, after closing several facilities throughout the country, warned that food supply chain was broken and millions of pounds of meat would disappear (Evelyn, 2020). Sihlobo (2020) argues that agricultural sector of advanced countries also experiences labor shortages, as many seasonal migrant workers could not return to their work. For instance, France, Germany, Italy, and the Netherlands depend on migrant workers from Eastern Europe. Consequently, in order to mitigate potential future risks farmers and other agricultural enterprises of developed countries will invest in automation of the industry, which will disrupt agricultural labor markets.

Eurasian Research Journal
July 2020
Vol. 2, No. 2

Social distancing and lockdowns can come at high cost for poor people and lead to famine, as they have no savings and depend on daily earnings. Even under no changes of food production and its availability, lockdowns affect distribution of food and increase prices, making them unavailable for unemployed poor. As a result, poor nutrition has long lasting consequences. Therefore, it is important for governments to conduct cash transfers to people (Ravallion, 2020).

Another challenge, which affects global prices, is food export restrictions. Since March 2020, many important players on the global agricultural and food market started to impose bans and export restrictions. For instance, due to internal market concerns, the world's largest wheat exporters such as Russia, Kazakhstan and Ukraine announced temporary export bans of agricultural products, including buckwheat and rice. One of the largest global rice exporters, Vietnam put a moratorium on new export contracts. Cambodia, Serbia and other minor exporters followed suit. This kind of policy may have high social and political costs. For instance, during the global financial crisis export restrictions and bans significantly increased food prices (up to 45%), plunged at least 100 million people into food insecurity worldwide and caused demonstrations and riots in 48 countries, including Arab Spring uprisings (Hendrix, 2020).

The EAEU also experienced negative consequences of the lockdowns. For instance, cabbage producers of Kazakhstan had significant losses due to export restrictions, border closures and disruptions of the local labor markets. Officials of the Turkestan region (South Kazakhstan) reported that local production was 300 thousand tonnes, of which 250 thousand tonnes were for the Russian market, but producers could not export it due to lockdowns and export restrictions. The region concluded memorandum with other regions of Kazakhstan for 50 thousand tonnes of cabbage. Ministry of agriculture of Kazakhstan announced that it was working with the Russian consulate and trade mission. Moreover, they added that there was no export restrictions for cabbage (Gorbunova, 2020). As a result, prices for cabbage dropped sharply and farmers had to distribute it for free and had substantial losses. Kazakhstan also experiences price shocks for seasonal products such as strawberry. For instance, in Almaty region average seasonal prices for this product are 350-400 tenge ($0.85-$1). Due to lockdowns and inability of suppliers to distribute harvested strawberry, prices for imported products increased more than 5 times. These market disruptions also brought significant losses for farmers and negatively affected well-being of population. Production and price shocks will have long lasting consequences.

Many studies provide policy recommendations for improvement of agricultural sector of Central Asian and Eurasian regions. For instance, Pomfret (2016) recommends the regional governments to develop business environment in rural areas, facilitate farmers' access to knowledge, fund agricultural research and provide farmers by appropriate information. He notes that government intervention can be caused by emerging agricultural monopolies and environmental impact. Finally, the author points at importance of regional cooperation for sustainable development of agriculture.

Additionally, based on above mentioned and taking into consideration agricultural realities of the region, policymakers of the EAEU should consider following proposals to form future agricultural policies. For the countries of the region, there is a need on agreement not to ban or restrict trade in food or agri-

Eurasian Research Journal
July 2020
Vol. 2, No. 2

cultural products in crises periods. The EAEU should eliminate trade restricting non-tariff barriers for agricultural products, which still exist in the union. At the same time, countries should guarantee transit of agricultural and food products without restrictions.

The EAEU members should assess their current agricultural potential and identify existing challenges. All members should increase agricultural investment by attracting private investment and improving business environment. The countries with more advanced agriculture (e.g., Belarus, Russia) should support countries with lack of resources (e.g., Armenia, Kyrgyzstan). It is possible to organize financial support using resources of regional financial institutions such as the Eurasian Development Bank. It is worth noting that this step towards regional supply chains is not for safety of Kyrgyzstan, but for food security of the whole union and poverty reduction with positive impact on regional development. It should be noted that Russia supports agricultural development of Kyrgyzstan by providing assistance in the modernization of the laboratory and testing facilities through the provision of grant funds (Tilekeyev et al., 2016, p. 46).

Poor policies in one member country of the union such as support of market monopolization, encourage of protectionism and transit bans can lead to market distortions in other countries. Consequences of such actions can include higher prices, food shortages, disruption of supply chains with high social costs. Therefore, the member countries of the EAEU should create competition friendly agricultural markets, which can ensure lower prices, better quality agricultural goods and services, and stimulate innovation in the sector. It is also important not to fully protect the EAEU market from the rest of the world, as it also stimulates competition, impacts on prices and transfers technology and knowledge. This can save the EAEU market from investment disincentives, created by dominant producers not willing to invest in technology and conduct better designed research and development.

Agricultural subsidies and support of agricultural producers should be coordinated regionally in order not to harm partner countries, as there are wide gaps in the level of development of the EAEU countries. The EAEU countries should develop new policy towards smallholders, as in some countries their market share is increasing, but they left behind of state support. Finally, the recent crisis shows the importance of micro-management and competence of regional governors to provide efficient functioning of agricultural markets with provision of all needed production factors, in particular labor.

CONCLUSIONS

The EAEU countries consider their agricultural sectors as the source of economic diversification. However, due to different factors, including difficult transition, reduction of state support, development of other sectors, the role of agricultural sector decreased substantially. Many countries even did not achieve their pre-independence level of production. The EAEU countries pursue different strategies. All of them prefer supporting large agricultural enterprises like Russian agroholdings and ignoring smallholders. Paradoxically, despite small

Eurasian Research Journal
July 2020
Vol. 2, No. 2

farms in Russia left behind in terms support, importance of the smallholders increased substantially in Central Asia and Armenia. Belarus follows comprehensive agricultural policy investing in agro-towns and developing agricultural machinery and technology.

These production patterns affected trade in agricultural products in the EAEU. The only country, which has positive trade balance in agricultural and food products, is Belarus. Creation of the EAEU positively influenced on Belarus' trade in agricultural products with its partners. Russia's partners did not take advantage of import ban, introduced by Russia as countersanctions. This fact is obvious on the example of Russian meat products market. While Russia imports meat from Latin American countries, its role as meat exporter in the EAEU market is increasing.

The pandemic has negative impact on agricultural production and trade as many producers experienced significant losses due to lockdowns, border closures, disruption of labor markets and export restrictions and bans. In order to overcome future shocks, the paper provides policy recommendations, including agreement on food security taking into account new realities, regional policy coordination and cooperation, stimulation of regional agricultural investment, guarantees on transit, development of competition and improvement of local management. As a result, the EAEU can achieve higher-level development of agricultural sector, which can contribute to both regional and global food security.

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Eurasian Research Journal
July 2020
Vol. 2, No. 2

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Eurasian Research Journal
July 2020
Vol. 2, No. 2

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