

75

Presentation date: May, 2022
Date of acceptance: August, 2022
Publication date: October, 2022

COVID-19 ON AZERBAIJANI

AGRICULTURAL SECTOR IN TERMS OF PRODUCTION AND EXPORT:
DEVELOPMENT OPPORTUNITIES IN POST-PANDEMIC PERIOD

COVID-19 EN EL SECTOR AGRÍCOLA AZERBAIYANO Y SU RELACION CON LA PRODUCCIÓN Y LA EXPORTACIÓN: OPORTUNIDADES DE DESARROLLO

Valieva Sabina İzzat¹

E-mail: valiyeva.sabina.izzat@gmail.com

ORCID: <https://orcid.org/0000-0001-9797-5071>

¹ University of Cooperation. Baku

Suggested citation (APA, seventh edition)

Sabina İzzat, V.(2022). Covid-19 on azerbaijani agricultural sector in terms of production and export: development opportunities in post-pandemic period. *Revista Universidad y Sociedad*, 14(S5), 728-738.

ABSTRACT

Agricultural sector can be one of the main drivers of Azerbaijani economy in post-pandemic period. On the other hand, due to crowding out effect of oil sector, agricultural sector lags behind of its potential. At the same time, pandemic affected trade relations and disrupted global value chains. According to these objective laws, countries try to protect its agricultural producers and maintain the level of production at least stable. Taking this into account the objective of this article is to analyze the impact of COVID in the agricultural sector of Azerbaijan. Our analysis shows that Azerbaijan's economy has been affected significantly by the pandemic. On the other hand, agricultural sector is one of the minor sectors mainly that has maintained its growth and export potential. Furthermore, reduction of export indicators in some products (especially, tomato) at the end of 2020 was not related to the results of pandemic, but mainly due to geo-political issues. Generally, our analysis shows that despite some negative consequences of pandemic, agricultural sector of Azerbaijan has a tremendous potential, especially thanks to the liberated zones and government should support agricultural sector in post-pandemic period.

Keywords: COVID-19, pandemic, agricultural sector, export potential, non-oil export, anti-pandemic support measures

RESUMEN

El sector agrícola puede ser uno de los principales impulsores de la economía de Azerbaiyán en el período posterior a la pandemia. Por otro lado, debido al efecto de desplazamiento del sector petrolero, el sector agrícola está rezagado de su potencial. Al mismo tiempo, la pandemia afectó las relaciones comerciales e interrumpió las cadenas de valor globales. De acuerdo con estas leyes objetivas, los países tratan de proteger a sus productores agrícolas y mantener el nivel de producción al menos estable. Teniendo esto en cuenta, el objetivo de este artículo es analizar el impacto de COVID en el sector agrícola de Azerbaiyán. Nuestro análisis muestra que la economía de Azerbaiyán se ha visto significativamente afectada por la pandemia. Por otro lado, el sector agropecuario es uno de los sectores menores principalmente que ha mantenido su potencial de crecimiento y exportación. Además, la reducción de los indicadores de exportación en algunos productos (especialmente, tomate) a fines de 2020 no estuvo relacionada con los resultados de la pandemia, sino principalmente por cuestiones geopolíticas. En general, nuestro análisis muestra que, a pesar de algunas consecuencias negativas de la pandemia, el sector agrícola de Azerbaiyán tiene un enorme potencial, especialmente gracias a las zonas liberadas y el gobierno debe apoyar al sector agrícola en el período posterior a la pandemia.

Palabras clave: COVID-19, pandemia, sector agricultor, potencial de exportación, exportación no petrolera, medidas de apoyo contra la pandemia

INTRODUCTION

COVID-19, originating from China – the epicenter – has eventually spread through the whole world and emerged into a pandemic. According to the latest UN estimates, at a minimum, an additional 83 million people, and possibly as many as 132 million, may go hungry in 2020 as a result of the economic recession triggered by the pandemic (FAO, 2020). The spread of the pandemic can devastate rural communities and small-scale food producers who already suffer from low resilience, and limited access to resources and services. Additionally, the pandemic and the resulting disruption to trade, travel and markets could reduce the availability and production of agricultural products.

The coronavirus crisis has had serious economic impacts. These impacts have been widely felt, including by agricultural and horticultural businesses in Azerbaijan. On the other side, the lockdown and other measures taken in response to the pandemics continue to have profound consequences for businesses. It should be noted that with the vaccination processes it is expected that pandemic will disappear, but it is unclear how long it will continue and how great the impact is or will be. For this, the consequences of measures against coronavirus for the Azerbaijani agriculture and agrarian related export sectors will be studied and analyzed in this article.

While resource-exporting countries have better resources to provide the needed support, they also faced the twin challenges of covid and reducing export prices. Azerbaijan has already become a hotspot for the virus, infecting about 335 thousand people, causing 4.941 deaths as of June 07th, 2020. Pandemics has resulted in decline 4,3 percent gross domestic product in 2020. Azerbaijani economy faced with triple shocks since the beginning of 2020. Lockdowns and mobility restrictions have caused many businesses and people lose part or all of their income, raising the importance of government support in maintaining livelihoods. Second, the slowdown in global economic activity has led to a collapse in oil prices, which in turn reduced Azerbaijan's fiscal space, as 90% of exports and 75% of government tax revenues are dependent on hydrocarbons. Third, the Nagorno-Karabakh war in the last quarter of 2020 strained government finances as a result of increasing military and public spending. As it is known, Azerbaijani economy is characterized by high degree of dependence on hydrocarbon exports, which in turn leads to diversification challenges. Tackling the negative socio-economic impact of the pandemic has been no easy task for any government, let alone the government of Azerbaijan facing the triple shocks.

Then, for analyzing the impact of COVID-19 pandemic on non-oil sector in the case of agriculture, and its changing dynamics this study was conducted in January-June 2021 but depending on the purpose of the analysis, the statistical data covered the period of 2019-2021. Within the framework of this study, the analysis of export indicators for agricultural products like tomato, cotton, persimmon and processed agricultural products were carried out on general indicators. Study explores Azerbaijan's trade trends in more detail and compares pre-COVID periods. Furthermore, it is analyzed the reports and data of FAO, World Bank, USAID, ministries of agriculture and economy and other sources regarding support measures on agriculture and export implemented in Azerbaijan.

DEVELOPMENT

The Food and Agriculture Organization (FAO) has stated that COVID-2019 is affecting agriculture in through two significant channels: the supply and demand for food. As it is known, these two channels are directly related to food security, so due to pandemics food security is also at risk. Domestic food supply was significantly affected by labor shortages, disruption of distribution systems, loss of income as well as the massive loss of agricultural products that were impossible to transfer due to restrictive measures imposed by governments. In comparison to natural disasters (such as droughts), the pandemic disrupts demand and supply of food impacting the global supply chain, while droughts tend to be localized affecting only the associated sector or stakeholders (Cariappa et al., 2021).

Due to pandemic, consumers changed their behaviour patterns by reducing consumption of non-essentials, reduced market visits, stocking and consumption behaviour changed equally across intensity of incidence. As it is known, the food supply chain is a network that connects an agricultural system (the farm) with the consumer's table, including processes such as manufacturing, packaging, distribution, and storage (Chen et al., 2020). At the same time, demand implies the willingness and ability of consumers to pay money for a particular good or service, during any particular period. Thus, the demand for food has decreased due to uncertainty and the reduction of people's spending capacity, although this decrease is still slight; the situation could worsen if the pandemic continues for a long time, due to reduced income and job losses.

It should be noted that, the agriculture industry has been pivotal in uplifting poverty, improve incomes, and food security for the marginalized. 80% of the world's poor living in rural areas depends upon the farming, as per the

World Bank projection under pre-COVID-19 scenario, the development in agriculture is expected to feed 9.7 billion people by 2050, provide employment opportunity to poor working adults reducing extreme poverty. The industry which once accounted for 4% of the global GDP in 2018 is under stress of COVID-19 pandemic which shares concerns such as gap between prices for trading and delivery of agricultural commodities, disrupted supply chain and crunch of logistical resources, negative impact on farmer's health, shortage of workforce to undertake operations, and increasing operational costs for complying with precautionary norms. Secondly, the restrictions on movement disrupted the supply chains, hampering the uninterrupted flow of inputs for and outputs of agricultural activities (Carberry & Padhee, 2020). Uncertainty imposed by the crisis, restrictions on inter-state movements and absence of transportation disrupted the food supply chains and spiked food prices and affected farm operations.

Liquidity was the most significant impact of the pandemic on agri-food enterprises, while on-farm households saw their revenue decline. The role of governance is significant in risk management analysis and design by offering state funding to overcome the problems of agri-food SMEs and farm households in these countries. Additionally, agri-food entrepreneurship was greatly affected by the pandemic crisis on food secure and food adequacy and because of this governments worldwide have been forced to take restrictive measures in global food supply chains, transport, and labor force movement to reduce the disease's spread. Coordinated agricultural policy and programs are now needed so that the path to sustainable development is based on fair, green and healthy agri-food systems.

So, demand and supply for agricultural import and export are greatly affected due to mobility restrictions and reduced purchasing power. As cases of contagion increase, governments take more drastic measures to stop the spread of the virus, also influencing the global agricultural system. So, protective measures for the maintaining trade stability and food security resulted with the new impediments for the export procedures. Surely, the premise of any measure adopted should be to protect the health and food security of the population, to the detriment of economic growth, enhance agricultural production, boost agrarian export potential, although some governments go in the opposite direction.

The collapse of oil prices and the COVID-19 pandemic have increased the risk of poverty and socioeconomic instability for oil-reliant nations like Azerbaijan, which lacks the financial wherewithal to absorb these shocks. 3% of GDP was allocated from the state budget to the Ministers of the Cabinet to address the economic challenges

stemming from the pandemic. Measures have also been taken to address the challenges faced within the non-oil and gas sectors, such as construction, digital economy, transport, logistics, agriculture and domestic tourism (Cabmin, 2020b). As a result of some research, it became clear that during the crisis caused by the coronavirus pandemic, agricultural products showed the greatest stability in the exports of Azerbaijan. But one of the most serious problems is the dependence of agricultural products on Russian markets. Work should be accelerated to reduce dependence on the Russian market and diversify exports. In conclusion, according to calculations based on the cost-output model shows that the reintegration of Karabakh into the Azerbaijani economy will lead to an increase in agriculture of more than 10 percent in the medium term, which will in turn expand the country's export potential (Huseyn & Huseynov, 2021).

Anti-pandemic policy support measures on agriculture by Azerbaijani government

The global COVID-19 pandemic is having tangible repercussions on the agricultural sector. Appeared in Wuhan (China) at the end of 2019, COVID-19 quickly spread across the world, deeply disrupting activities essential to human needs, such as agriculture and food systems, and threatening the livelihoods of those who live of these activities.

On the other side, relevant indicators show the effectiveness of anti-pandemic measures of Azerbaijan than the major regional counterparts. So, in compare to pre-pandemic predictions, the highest increase in GDP growth (1.6 percent) for Azerbaijan compared to other four countries is predicted by IMF (Table 1).

Table 1. Comparison of forecasts during pandemic and post-pandemic measures.

GDP growth forecast for 2021	According to the April 2020 report, prepared during the pandemic	According to the forecast for April 2021, published after the implementation of pandemic measures	Differences
Azerbaijan	0,7	2,3	1,6
Kazakhstan	4,1	3,2	-0,9
Russia	3,5	3,8	0,3
Georgia	3	3,5	0,5
Turkey	5	6	1

Source: International Monetary Fund, "Global Economic Outlook" reports

The coronavirus pandemic is a global crisis that affects all countries and requires immediate and sustained international action. Short-term crises can feed on long-term problems, gaps, underinvestment situations and vulnerabilities. We are already seeing disruption in supply chains undermining agricultural production in Azerbaijan. At the same time, smallholder farmers, show that they are key players in ensuring that local populations have access to food despite the current disruptions in food systems. Almost 36% of the Azerbaijan's labour force work in agriculture, mostly on smallholder farms (SSCRA, 2020b). Economic growth in the agricultural sector contributes to reducing poverty and food insecurity two to three times more than the growth of other sectors. By making investments in smallholder agriculture, it is possible to revive food production and create jobs after a crisis and ultimately enable rural communities to get back on their feet.

In order to prevent the post-pandemic challenges the President of Azerbaijan signed the Order "On number of measures to reduce the negative impact of the Coronavirus (COVID-19) pandemic and the resulting sharp fluctuations in world energy and stock markets on the economy, macroeconomic stability, employment and entrepreneurship of the Republic of Azerbaijan". According to the decree working groups has been formed covering four main areas to eliminate the possible impact of the global pandemic on economic stability, reduce the negative impact on employment and entrepreneurship in the country, protect the social welfare of the population and ensure sustainable economic development. A large-scale economic stimulus program can be grouped as follows:

- providing support to the affected areas of economic activity and legal entities operating in these areas and individuals carrying out entrepreneurial activities without establishing a legal entity.
- social protection and state support of employees working in the affected areas of economy.
- strengthening the social protection of the poor
- support for the banking sector, support for the exchange rate of manat and the stability of consumer prices.
- implementation of additional measures to maintain macroeconomic stability.

On the other hand, there are fairly wide-ranging set of government support programs in Azerbaijan for particular agrarian businesses and major part of these programs continued and was expanded during the pandemic. The agricultural sector was in the focus of attention as a priority area during the pandemic and other support measures were implemented by government. For instance, 402.7

million AZN financial support has been provided to agricultural producers by the government, which is 63.3 mln. AZN or 18.7 percent more than from 2019's analogical indicators. On the other hand, from January 1st, 2020, in accordance with the new mechanism applied to provide subsidies to farmers, 6 new subsidies have been provided to agricultural producers. In order to form an agrarian insurance mechanism, the Law and Rules on Agrarian Insurance were adopted and the Agrarian Insurance Fund was established (Cabmin, 2020a).

Activities of three main entities that provide financial resources to agricultural businesses in Azerbaijan are the Entrepreneurship Development Fund (EDF), the Mortgage and Credit Guarantee Fund (MCGF) and the Agricultural Credit and Development Agency (usually known as AKIA). It is also important to highlight the role of the Central Bank of Azerbaijan in directing the banking response to Covid distressed lending.

EDF is the agency implementing 10% interest rate support for existing loans and the loan guarantee/interest support scheme for new loans, both aimed at Covid-affected sectors. In 2020, 126.9 million AZN was given to 908 entrepreneurs, including preferential loans for 870 small and medium-sized projects and these loans are predominantly oriented to SMEs (84 %). These loans are offered for the client through a network of 42 partner credit organisations (including banks, non-bank credit organisations, etc.), and once the loans are approved by the banks, then the bank applies for approval by the EDF. The EDF is usually offering soft loans at 5% or 6%. During the first 4 months of 2021, EDF provided 18.6 million AZN soft loans to 217 entrepreneurs through authorized credit organizations and 43% of these loans directed to agricultural sector (EDF, 2021). On the other side, MCGF lend to any sectors, but they have recently targeted sectors that are mostly affected by the pandemic and suggested that 90 million AZN of portfolio is pandemic related and agriculture was one of these prioritized sectors (Cabmin, 2020b).

Surely, AKIA plays the main role in tackling with pandemics and giving financial support to agrarian sector. During the pandemic AKIA expanded its support for agriculture. AKIA provides a wide range of support in the agricultural sector, including support for agricultural projects, promotion of innovative practices in the sector and the development of sector-oriented Public Private Partnerships. But one of the most important roles is that, like EDF and MCGF, AKIA provides subsidized loans in the agricultural sector. In response to the pandemic, according to the Presidential Decree, "On the allocation of funds to improve the provision of agricultural producers with microcredits in the context of the coronavirus pandemic and in the subsequent

period” 30 million AZN was allocated to AKIA. On April 8th of 2020, the President amended decree “On Approval of the Regulations on the Agrarian Credit and Development Agency under the Ministry of Agriculture of the Republic of Azerbaijan” and it is the next support mechanism in direction to the protection of agricultural sector. With the new decree a new mechanism has been formed to provide credit guarantees in the agricultural sector and the most important features of the new changes are the possibility to increase the repayment period of microcredits in the agricultural sector by 1 year and 3 times.

According to official statistics, 4034 legal entities and individuals working in the agricultural sector were provided with preferential loans in the amount of 47653.0 thousand AZN through authorized credit organizations for the use of the AKIA’s funds, as well as secured microloans in the amount of 34426.0 thousand AZN were allocated to 3,418 legal entities and individuals in 2020. The loans were mainly directed to the development of livestock, agriculture, horticulture, beekeeping and greenhouses. At the same time, in order to finance the sale and leasing of agricultural machinery, technological equipment, sets of irrigation systems and equipment on preferential terms, 37,311.2 thousand AZN loans and 73,616.9 thousand AZN concessional amounts were allocated to 2,993 applications through authorized credit organizations (AKIA, 2020).

Results of our conducted interviews with the experts show that to mitigate the effects of the pandemic, government policies should mainly support the populations who need it most and take into consideration main export oriented agricultural sectors. Investments in rural agricultural programs can help empower people, mitigate the impact of severe events, increase the prosperity of rural communities, improve the sustainability of food systems and food security and foster resilience in fragile states. It should be taken into account that in compare to manufacturing and services sector, agricultural sector of Azerbaijan was under dual pressure of pandemic and as well as, irrigation problems in 2020. One of the main policymakers of the country Ayaz Museyibov argues that as a result of the government measures, agricultural sector afforded to maintain stability and government support to the sector neutralised catastrophic impacts of pandemic. On the other hand, in Ayaz Museyibov’s point of view, there will be need to design and implement new government support measures in post-COVID time, due to predicted specific challenges of this period.

Impact on agricultural output of the Republic of Azerbaijan

Regarding to see the results of how much economic growth in Azerbaijan has been affected by the pandemic can be clearly seen from the International Monetary Fund’s reports. The analysis of relevant reports show that the damage of the pandemic on economic growth in Azerbaijan was less than the regional counterparts (Table 2; 6.4 percent differences), for instance, from Georgia and Kazakhstan, but more from Russia and Turkey’s analogical indicators (International Monetary Fund, 2020).

Table 2. Impact of pandemic on GDP growth, comparison of pre-pandemic forecast and real GDP growth indicators

Benchmark countries	Pre-COV D-19 GDP growth predictions	Real GDP growth in 2020	Differences
Azerbaijan	2,1	-4,3	-6,4
Kazakhstan	3,9	-2,6	-6,5
Russia	1,9	-3,1	-5
Georgia	4,8	-6,1	-10,9
Turkey	3	1,8	-1,2

Source: International Monetary Fund, “Global Economic Outlook” reports

The decline in GDP caused by pandemic was severe with an aggregate reduction of 4% in real terms. Retail and wholesale trade, transport and logistics saw zero growth while agriculture, education and health services saw modest growth in 2020. Even in the case of agriculture, which generally seems to have grown, in spite of Covid and a drought, experts in the sector were able to highlight particular sub-sectors that had been harmed. With agricultural production being highly labour-intensive in Azerbaijan, shortages of workers due to the lockdowns show its affects on farming activities including land preparation, planting, crop maintenance, crop growth (weeding, fencing, and applying chemicals), harvesting, post-harvest handling, transporting and storing food. Additionally, there are impacts along different nodes of the agrifood value chains which affect supply chains for agricultural products, processing, packaging, transportation networks and distribution, importing or exporting fresh and processed food products.

It should be noted that SME companies in the agricultural sector were badly affected, as small producers could not transport goods into the cities during lock-downs, since they don’t use the big trucks (which were allowed to travel) for transporting goods. At the same time, larger producers have been affected badly. Chicken producers, for example, have been hit by the damaged wedding market, since

so much chicken is consumed at weddings. Similarly, greenhouse-producers who often export considerable quantities to Russia, were impacted by that market being closed at some point. According to the reports of the State Statistics Committee of the Republic of Azerbaijan on the results of 2020, the growth rate in the agricultural sector did not move to the negative zone (Table 3), but compared to the previous year, have slowed significantly (SSCRA, 2020b).

Table 3. Agricultural production, 2019-2020.

Agricultural production, value	2019	2020
Agricultural products, million USD	4 610	4 958
Plant-growing	2 207	2 370
Cattle-breeding	2 403	2 589

Source: The State Statistical Committee of the Republic of Azerbaijan

On the other hand, according to official statistics, the growth rate in the agricultural sector in 2020 was 2 percent, which 3.5 times lower than the previous year's analogical indicator (7,2 percent) (Figure 1). Output of agricultural sector in actual prices was 4,9 billion USD, which is 2 percent higher than the 2019's analogical indicator (4,6 billion USD).

Decreasing tendency in cattle-breeding sector was slow in compare with plant-growing sector. Growth rate in cattle-breeding and plant-growing sectors were respectively, 3,1 percent and 0,8 percent in 2020, which are less than the 2019's same indicators. Thus, there were 3,5 percent and 11,7 percent growth, respectively, in cattle-breeding and plant-growing sectors in 2019 (SSCRA, 2019). To observe the results of pandemic and anti-pandemic measures, the indicators of 2021's first quarter can be more informative. It can be clearly seen from the Table 4, there is moderation in growth rate of general agricultural and cattle-breeding, plant-growing sectors.

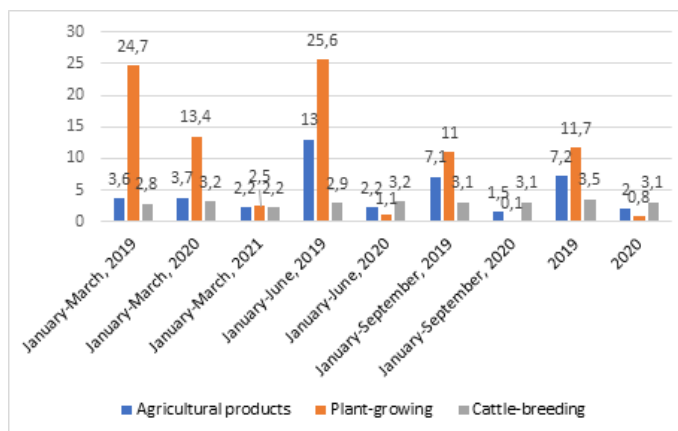


Figure 1. Growth in the agricultural sector and of key segments (%), 2019-2020.

Source: The State Statistical Committee of the Republic of Azerbaijan

Table 4. Production of agricultural products, 2019-2020.

Name of the product	Unit of measurement	January-December, 2019	January-December, 2020	Growth rate, %
Meat (live weight)	thousand tone	573,3	591,1	3,1
Milk	thousand tone	2150,8	2192,5	1,9
Eggs	number, million	1827,1	1906,2	4,3
Wool	thousand tone	16,1	16,1	0,2
Cacoon	tone	643,7	446,6	-30,6
Cereals, with corn	thousand tone	3538,5	3257,1	-8,0
Cotton	thousand tone	295,3	336,5	14,0
Sunflower	thousand tone	34,8	24,8	-28,8
Sugar beets	thousand tone	237,0	253,3	6,9
Tobacco	thousand tone	6,0	6,9	15,1
Potato	thousand tone	1004,2	1037,6	3,3
Vegetable	thousand tone	1714,7	1738,9	1,4
Watermelons and melons	thousand tone	447,6	448,1	0,1

Fruits and berries	thousand tone	1099,7	1133,1	3,0
Grape	thousand tone	201,8	208,0	3,1
Green tea leaves	tone	929,4	931,5	0,2

Source: The State Statistical Committee of the Republic of Azerbaijan

Production of all agricultural products, except grain (with corn), sunflower and cocoons, increased in 2020 (SSCRA, 2020a). Maintenance of modest growth rate of agricultural production shows that the results of pandemic did not affect agricultural production as it is expected. Surely, it should be noted that moderation of growth rate can be related to the support policies of Azerbaijani government and anti-pandemic measures in the global economy. According to the statistics, in compare to 2019's indicators, main growth tendency has been observed in eggs, cotton, sugar beets, tobacco, potato production, respectively, 4,3, 14, 6,9, 15,1 and 3,3 percent (SSCRA, 2020a). On the other hand, there were a sharp reduction in the production of cacao, sunflower and cereals (with corn). Thus, during 2019-2020 years, there were 30,6 percent, 8 percent and 28,8 percent decrease, respectively, in cacao, cereals (with corn) and sunflower production. Furthermore, except the eggs, the volume of all agricultural products were increased in the 1st quarter of 2021 (Agrarian Research Center, 2021). It should be noted that, total demand for eggs globally is estimated to have risen across the world after the Covid-19 lockdowns began. Before pandemic, the demand for eggs rose during Easter and declined afterwards. However, in 2020, the demand for cartoned shell eggs remained above normal in the American and European markets.

Additionally, production of meat (in live weight) reached to 130,4 thousand tonnes, milk to 484 thousand tonnes, and vegetable to 80,4 thousand tonnes (Table 5).

Table 5. Production of agricultural products, 1st quarter of 2021 and 2020.

Name of product	Unit of measurement	January-March, 2021	January-March, 2020	Growth rate, %
Meat (in live weight)	thousand tone	130.4	126.6	103.0
Milk	thousand tone	484.0	475.6	101.8
Eggs	number, million	463.7	485.3	95.6

Vegetable	thousand tone	80.4	79.3	101.4
-----------	---------------	------	------	-------

Source: The State Statistical Committee of the Republic of Azerbaijan

According to Ramil Huseyn, one of the well-known agrarian specialists, pandemic did not have tremendous negative effect on production in agricultural sector as predicted. However, Azerbaijani export observed challenges in 2020 due to some export constraints. Especially, tomato export ban from Russia shows again how export diversification in the country is important and vital issue for the future perspectives of agrarian sector.

Impact on general trade indicators of the Republic of Azerbaijan (including agrarian)

The COVID-19 outbreak seriously disrupted agricultural trade. Lockdowns and limits on the mobility of people reduced the movement of goods domestically and internationally. Lockdowns also reduced the availability of labor force at ports to unload ships and conduct a variety of trade processes, such as physical inspections, testing and certifications (OECD, 2020). Due to pandemic, some countries introduced temporary export restrictions, which reduced international trade even further. Domestic economic disparities arising from the pandemic downturn may also prompt new trade barriers, motivated by the need to protect domestic workers.

At the same time, according to the statistics of many international organizations (such as OECD, IMF), from 2022 onwards, agricultural trade is expected to pick up again and grow at similar rates as before the COVID-19 outbreak, but like the GDP recovery path, agricultural trade is not expected to completely return to baseline levels (OECD, 2020). Global agricultural exports in 2020-21 are projected to drop over 1% in volume terms compared to the baseline due to the decline in demand and will only partially recover over the medium term (OECD/FAO, 2020).

Considering the actual details of current situation, world trade volume (goods and services) observed 8.5 percent sharp decrease in 2020. Exports of Advanced Economies and Emerging Market and Developing Economies experienced 9,5 percent and 5,7 percent dropping, accordingly, in 2020. At the same time, 8,4 and 6,5 percent increase in world trade volume, accordingly in 2021 and 2022 is predicted by IMF (International Monetary Fund, 2020).

Export value of Azerbaijan was 4,1 billion USD in the first quarter of 2021. Additionally, 501,5 million USD non-oil export was realized during this period. Non-oil export value

is 70,6 million USD or 16,4 percent more than the analogical period of 2020. At the same time, share of non-oil export in total export of the country in the first quarter of 2021 reached to 12,1 percent with the increasing by 2 percent in compare to analogical period of 2020. Main non-oil export products in appropriate period consisted of cotton, gold and persimmon.

Impact on main exported agricultural products

According to our survey, more than 70 percent of exporters mentioned that pandemic did not have negative effects except tomato import embargo imposed by Russia to Azerbaijan. Additionally, more than 50 percent of exporters expressed the urgency of simplification of custom procedures. On the other hand, Head of “One Window Export Support Center” Nijat Hajizada stated that export procedures was optimized in last 5 years. Thus, their Center began to issue some export documents based on “one window” principle and they created additional opportunities for exporters to obtain export documents through electronic portals. On the other side, our analysis based on the World Bank’s latest Doing Business report (2020) shows that in terms of time and cost of documentation required for exports, Azerbaijan lags behind Europe and Central Asia and according to Border Trade indicator ranks 83rd out of 190 countries in the world. For instance, the time spent on export documentation in Azerbaijan is 16 times higher than in neighboring Georgia and in terms of export documentation costs, it should be noted that unlike Azerbaijan, participants in the foreign trade process in Georgia are exempt from any costs for export documentation (World Bank, 2020).

General descriptive statistics show that pandemic did not affect dramatically tomato export in Azerbaijan (Figure 2). Thus, if 189,3 million USD or 174 thousand tonnes of tomato has been exported in 2019, 201,4 million USD or 189 thousand tonnes of tomato has been exported in 2020. Hence, it can be clearly seen that export both in terms of value and volume increased during pandemic. On the other side, trends show that tomato export in 4 quarters of 2020 was more than analogical periods of 2019. These upward trends can be related to Turkish-Russian tomato crisis, which forced Russian government import this product from other countries. In this situation, significance of Azerbaijani tomato increased for Russian consumers. Moreover, trend show us decrease in tomato export value in the end of 2020 was more sharp than the 2019. Additionally, there is less export in the first quarter of 2021 (21,3 million USD) than the analogical periods of 2019 (25,5 million USD) and 2020 (43,9 million USD). The

recent reductions in export can be explained with the negative consequences of pandemic (SSCRA, 2021a).

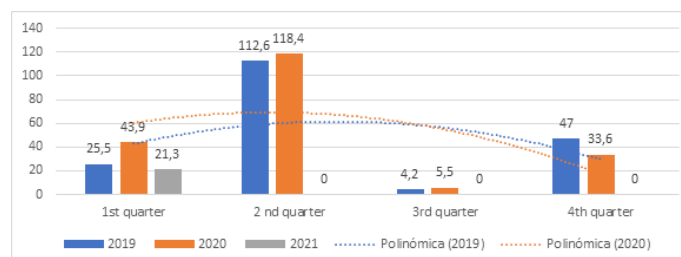


Figure 2. Tomato export trend in Azerbaijan, 2019-2021.

Source: The State Customs Committee of the Republic of Azerbaijan

On the other side, it is known that Russian Federation Phytosanitary Agency (Rosselkhoznadzor) banned import of Azerbaijani tomato since December 10th, 2020 (Sputnik Azerbaijan, 2020). It is also known that Azerbaijani market totally depends on Russian market in tomato export. Thus, the share of Russian market in export of Azerbaijani tomato was more than 99 percent in 2015-2019 periods (Trade Map, 2021). This fact also illustrated the relations between reductions of tomato export of Azerbaijan and Russian import prohibition and actualized to diversify channels of tomato export.

Cotton (fibre), one of the main export products of non-oil sector of Azerbaijan, saw the highest value (122 million USD) since the gaining independence (Figure 3). In general, as a result of oil crisis in 2015, importance of some agricultural products and their production and export facilities increased due to support policies by government. In the result, export of cotton increased more than 20 times during the last 6 years (SSCRA, 2021b).

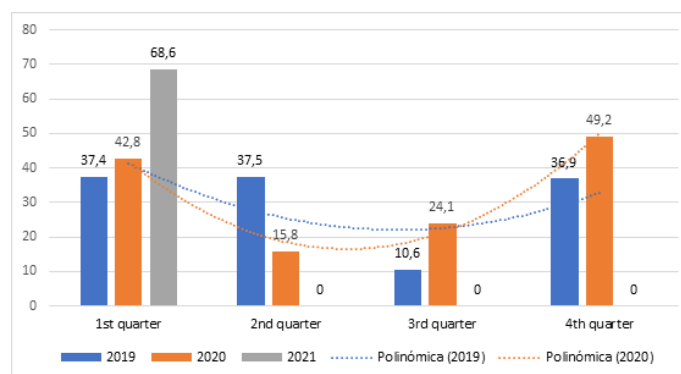


Figure 3. Cotton export trend in Azerbaijan (million USD), 2019-2021

Source: The State Customs Committee of the Republic of Azerbaijan

Unlike tomato, there are some differences in cotton export between pre and pandemic periods. Especially, export of cotton dropped drastically to 15,8 million USD in the second quarter of 2020. On the other hand, trends show that trend is more upward at the end of 2020 in compare to the analogical period of 2019. At the same time, export value of cotton is higher in the first quarter of 2021 than the pre-2018 years (SSCRA, 2021a).

Another important agricultural export product of Azerbaijan is persimmon. Export value of persimmon was 91,5 million USD and hold 4,9 percent in non-oil export of the country in 2020. From the descriptive statistics it can be clearly seen that export of this product in compare to previous year decreased by 12 percent (Figure 4). On the other hand, statistical trend reveals that export of persimmons rised dramatically in the first quarter of 2021. Thus, the value of persimmon export in the first quarter of 2021 was 31,8 million USD, which was twice higher than the previous year's same indicators (SSCRA, 2021a).

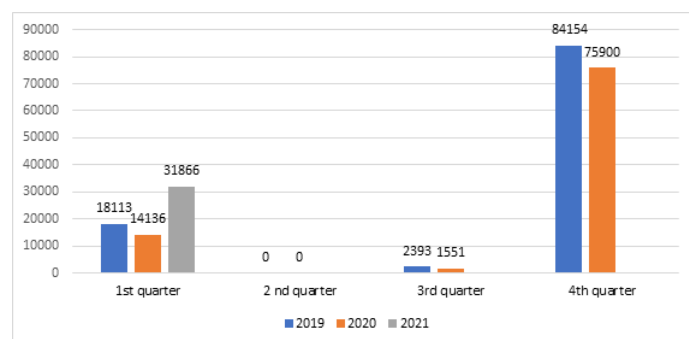


Figure 4. Persimmon export trend in Azerbaijan (thousand USD), 2019-2021

Source: The State Statistical Committee of the Republic of Azerbaijan

It should be noted that most interviewed experts and exporters come to this results that new supportive tools should be created for the export of agricultural products in the country. Preferential trade agreement with the Turkey can be shown is one of the examples to these new tools. According to this agreement, Azerbaijan and Turkey will mutually trade some products on preferential terms and persimmon is one of these products which obtained discounted terms for export to Turkey.

COVID-19 pandemic not only affected main agricultural export products of Azerbaijan, it also has negative effects on processed vegetable and fruit products. Processed vegetable and fruit products have a great significance for the Azerbaijani export in terms of both trade and agricultural diversification policies. According to The State Customs Committee of the Republic of Azerbaijan, in the

first quarter of 2021, 4,9 thousand tonnes in volume, 5,9 million in value processed vegetable and fruit products have been exported to foreign countries. These numbers are about equal with the previous year's indicators. On the other hand, due to decrease of general export value in compare to analogical period of 2020, processed vegetable and fruit products took place amongst main exported products in the first quarter of 2021 (SSCRA, 2021a).

Detailed analysis of the economic costs and the magnitude of estimated impacts of pandemics show the requirement for a well-coordinated international response to the crisis. It is obviously clear that one country cannot tackle with the pandemic and its impacts on agricultural sector. Global crisis requires a global response and there is a need for global collaboration not just on health, but also on trade, agriculture and macroeconomic policies. Covering Azerbaijani practice, there is an opportunity today not just to respond effectively to the current crisis, but to freeing up financial resources for investments in a more productive, sustainable and resilient agricultural system able to meet new challenges. This, together with accompanying regulatory reforms, can help build an enabling environment for the entire agricultural system that is aligned with natural resource limits, a changing climate, market demand, technological developments, and "low probability, high impact" catastrophic risks.

CONCLUSIONS

Our research shows that pandemic did not have enormous effects on agricultural production and export as predicted. On the other hand, measures to deepen the processing of agricultural products and diversify exports, especially access to the markets of the European Union and the Gulf countries, should be expanded and these nuances should be taken into account in the long-term non-oil export strategy. According to econometric calculations of Rashad Huseyn, one of the well-known economists of the country, liberation of Azerbaijani lands will boost economic growth and it will positively impact agrarian sector and its export potential (expected value added of 360-450 million manats of agricultural production). On the other hand, according to agrarian expert Abdulrahim Dadashov, there are plans to establish new intensive fruit and berry gardens in about 2 thousand hectar land and it will strongly impact agricultural export. Especially, Agdam-Fuzuli regions have a huge potential for plant-growing, vice versa Kalbajar-Lachin-Gubadli is expected to be one of the main cattle-breeding centers of Azerbaijan.

Thus, in light of COVID-19, ensuring that the agricultural system is more sustainable and resilient is now an even more urgent priority and COVID-19 pandemic provides an

opportunity to learn more about chokepoints and vulnerabilities in the agrarian system. According to our analysis and surveys in order to strengthen the resilience of the agricultural sector to a range of future shocks and enhanced export potential some issues should be taken into consideration: 1) ensure that support measures intended to provide temporary relief to farmers and other food system stakeholders are consistent with wider socio-economic policies, reach vulnerable socio-economic groups and contain clear exit strategies; 2) the requirements for the agrarian system to be resilient to a range of extreme weather events; 3) work with stakeholders and international organisations to identify weaknesses, choke points and vulnerabilities in agriculture and food systems; 4) critical services need to be strengthened in order to increase preparedness for systemic risks and identify opportunities to strengthen networks between public and private stakeholders to make investments; 5) invest in data systems at the local, national and global levels so that real time information can be made available for decision makers, and help to increase confidence in supply during crises; 6) strengthen government communication strategies to improve consumer trust in the safety and reliability of the agro-food system; 7) consider wider opportunities to re-purpose agricultural support in ways that provide clear public goods, in particular in the form of climate change mitigation and improved environmental outcomes; 8) secure and build on positive trade facilitation steps that have been taken to reduce distortions at the border, to reinforce the role that global markets can play in ensuring securing and stable food supplies, 9) design new government policies to enhance agricultural sector and diversify export products and markets; 10) expand and design new preferential trade agreements with the main trade partners; 11) enhanced agricultural activities in liberated zones based on intensive farming methods.

REFERENCES

- Agrarian Research Center. (2021). *Agricultural impact*. <https://atm.gov.az/pdf/bulleten-mart-202180.pdf?v=60>
- AKIA. (2020). *About the work done by the Agrarian Credit and Development Agency under the Ministry of Agriculture of the Republic of Azerbaijan during 2020*. <http://akia.gov.az/az/single/104>
- Cabmin. (2020a). *Report of the Prime Minister of the Republic of Azerbaijan on the activities of the Cabinet of Ministers in 2020*. <https://nk.gov.az/az/article/1458/print/>
- Cabmin. (2020b). *Special Action Plan of Cabinet of Ministries according to the Presidential Decree No. 1950 of March 19, 2020*. <https://nk.gov.az/az/document/4367/>
- Carberry, P., & Padhee, A. K. (2020). Containing COVID 19 impacts on Indian agriculture. *Agri-Buzz. ICRISAT-April, 18*, 2020. <https://www.icrisat.org/containing-covid19-impacts-on-indian-agriculture>
- Cariappa, A. A., Acharya, K. K., Adhav, C. A., Sendhil, R., & Ramasundaram, P. (2021). Impact of COVID-19 on the Indian agricultural system: A 10-point strategy for post-pandemic recovery. *Outlook on Agriculture, 50*(1), 26–33. <https://doi.org/10.1177/0030727021989060>
- Chen, S., Brahma, S., Mackay, J., Cao, C., & Aliakbarian, B. (2020). The role of smart packaging system in food supply chain. *Journal of Food Science, 85*(3), 517–525. <https://doi.org/10.1111/1750-3841.15046>
- FAO. (2020). *As more go hungry and malnutrition persists, achieving Zero Hunger by 2030 in doubt, UN report warns*. <https://www.fao.org/news/story/en/item/1297810/icode/>
- Huseyn, R., & Huseynov, R. (2021). Assessing the impact of the coronavirus pandemic on agricultural export. *Azerbaijani Journal of Agricultural Economics, 5*(3), 19–30.
- International Monetary Fund. (2020). *World Economic Outlook, October 2019. Global Manufacturing Downturn, Rising Trade Barriers*. <https://www.imf.org/en/Publications/WEO/Issues/2019/10/01/world-economic-outlook-october-2019>
- OECD. (2020). *The Impact of COVID-19 on Agricultural Markets and GHG Emissions*. Organisation for Economic Co-operation and Development Paris, France. https://read.oecd-ilibrary.org/view/?ref=1059_1059106-6g8ilorf1&title=The-impact-of-COVID-19-on-agricultural-markets-and-GHG-emissions
- OECD/FAO. (2020). *OECD-FAO Agricultural Outlook*. OECD Agriculture Statistics. <http://dx.doi.org/10.1787/agr-outl-data-en>
- Sputnik Azerbaijan. (2020, December 8). *Russia banned the import of tomatoes and apples from Azerbaijan*. <https://sputnik.az/20201208/Rusiya-Azrbaycandan-pomidor-v-alma-idxalna-qadaa-qoydu-425673207.html>
- SSCRA. (2019). *Macroeconomic indicators of the country's economic and social development in January-April 2022*. <https://www.stat.gov.az/news/macroeconomy.php?page=5&arxiv=1?lang=en>

- SSCRA. (2020a). *Agriculture, forestry and fishing*. <https://www.stat.gov.az/source/agriculture/?lang=en>
- SSCRA. (2020b). *Labor market*. <https://www.stat.gov.az/source/labour/>
- SSCRA. (2021a). *Statement on the state of foreign trade*. <https://customs.gov.az/az/faydali/gomruk-statistikasi/xarici-ticaretin-veziyyeti-haqqinda/>
- SSCRA. (2021b). *Trade*. <https://www.stat.gov.az/source/trade/>
- Trade Map. (2021). *Trade statistics for international business development*. International Trade Center. https://www.trademap.org/Country_SelProductCountry_TS.aspx?vpm=1%7c031%7c%7c%7c%7c0702%7c%7c%7c4%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1
- World Bank. (2020). *Business Enabling Environment (BEE)*. <https://www.doingbusiness.org/en/reports/global-reports/doing-business-2020>