

# Ways to increase the export potential of agricultural products of Uzbekistan in a pandemic

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**Abstract.** The authors classify the agri-food production and exportation issues during the pandemic. The article provides the in-depth definition of agriculture producing processes and explores several issues of rural life. The authors discuss the modern prevalence of plantation protection, exportation of national agri-food products and food-stuff security system. Implementation strategies, and provides an extensive list of resources and references. In this article, the authors describe a major point of the government decrees and resolutions are due to improve lifestyles of people, and maximize the satisfaction of people for primary requirements, especially requirements for work during the pandemic. The authors conclude with a section, which addresses strategies for all government organizations. Overall, the article is worthwhile for everyone

interested in the subject matter, and provides a wealth of resources for researching this topic of growing concern.

**Keywords:** Agri-food, food chains, livestock, product net taxes, rural population,

## **1 Introduction**

In recent years, serious attention is being paid to increase the national income of the population by the government of Uzbekistan. Especially, many decrees and resolutions of the President and the government orders about preventing pandemic's negative impact on the agricultural sector were adopted in 2020. In fact, Uzbekistan is considered as a double-landlocked country and this is the main issue of selling national products to abroad. As a result, the amount of transportation costs for the delivery of these products to foreign countries increases.

Another main challenge facing agri-food producers today is eliminating the issue of rapid export of our agricultural products to foreign markets, as soon as possible, to solve a number of paperwork and barriers.

It is fact that the pandemic has led to food shortages in many developed countries around the world. The pandemic has led to a significant rise in food prices in local markets. Also, due to the panic among the population, the prices of the most important daily food products have risen sharply. Nowadays, a systematic program has been developed to address a number of this kind of similar problems, in our country. The government has to implement these tasks as a supervisor and a guardian, entrepreneurs as an executor.

According to the Resolution of the President of the Republic of Uzbekistan dated March 18, 2020 PQ-4643 on measures to further improve the management system of the agricultural and food sectors, the following tasks have been identified [1].:

- organization and ensuring the effective implementation of the reforms outlined in the Strategy of Agricultural Development of the Republic of Uzbekistan for 2020-2030;

- Reform and further development of the system of public administration in agriculture, the introduction of modern management mechanisms, the acceleration of digitization;

- Transformation of relevant ministries and agencies into clusters, cooperatives and farms, modern service organizations for land surveying, selection of crops, seeds and varieties, pest control, product market;

- wide introduction of market mechanisms in the agricultural sector, gradual abolition of the state order in cotton and grain, full involvement of the private sector in the sector, development of clusters, cooperatives and farming, reduction of state participation in the sector;

- Development of a system of laboratory testing and certification of agricultural products, export promotion, establishment of trade infrastructure and agro-logistics centers;
- creation of a favorable agribusiness environment for the production of competitive, high value-added agricultural and food products in international markets;
- Improving food safety and rations, ensuring the production of the required amount of food;
- Further development of important sectors of the agricultural sector, such as horticulture, viticulture, greenhouses, vegetables, livestock, poultry;
- timely financing of agro-technical measures, ensuring the financial stability of agricultural producers and financial support of the state;
- Ensuring the targeted use of funds allocated to the agricultural and food sectors from the budget and extra-budgetary funds;
- rational use of natural resources in agriculture, widespread introduction of water-saving technologies and re-use of decommissioned lands;
- assistance in the implementation of investment projects in the agricultural sector, the creation of new jobs, attracting foreign investment, increasing the export potential of the industry;
- Radical reform of agricultural research institutions and science, integration with the production of educational and consulting services, the creation of seed and breeding schools, the widespread introduction of advanced innovations.

Development of science and application of the experience of developed countries contributes to the improvement of production culture. So, by expert opinion, as a result of the introduction of "smart" technologies, according to the concept of "smart agriculture" in several countries (USA, Norway, Japan, Russia) was embodied in the use of aircraft, the use of sensors and sensors in animal husbandry, fisheries, as well as in the field growing grain, etc. Norway is one of the main suppliers of salmon on the world market. Japan to somehow solved an issue of the deficiency of sowing lands, relying on the development of automation and sensors, using them in agricultural production.

Ukrainian scientist Curminov M. learned development of agriculture exports in the context of globalization. The subject of his research is an identification of the features of agricultural exports in developing countries, in terms of the possibility of achieving the global goals of sustainable development [2]. Another japan scientist Lizuka M. investigated at using innovation technologies in agriculture, especially in agri-food exportation sector [3].

Australian scientists Porfirio L., Newth D., and Finnigan J. learned impacts of climate change to the world agricultural trade [4].

Uzbek economists Yusupov Yu. and Nazirov A. emphasize, If exports are limited, the supply of this product in the domestic market will also grow. So,

prices will also be lower. If the barriers are removed, domestic supply will decrease and prices will rise. Economists also believe that the increase in food exports will affect the rise in prices in the domestic market(4). However, The State Statistics Committee of Uzbekistan has published preliminary data on the volume of exports of fruits and vegetables in 2018. This product increased by 36% (1.23 million tons) compared to 2017, by 37.5% (\$ 874.5 million). The government intends to maintain such a growth trend in the coming years. At the Food and Agriculture Forum in Berlin in January, Uzbekistan Foreign Trade Minister announced that Uzbekistan plans to increase agricultural exports to \$ 5 billion by 2021 [5].

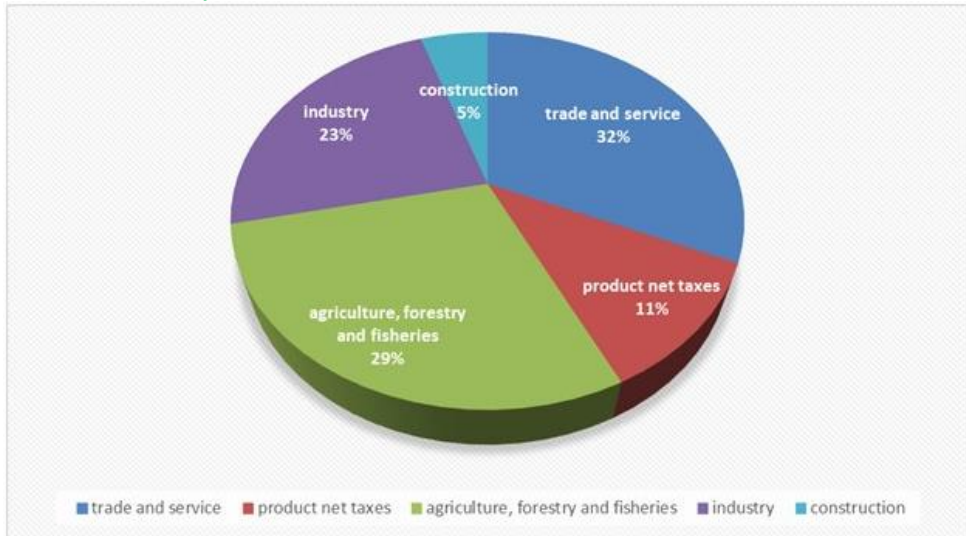
## **2 Materials and Methods**

Due to the sharp increase in demand for agricultural products in the world economy, the world's agricultural developed countries have an opportunity to supply and increase the volume of food and agricultural products on the world market. Many countries around the world had already begun to build up their reserves, given the level of preparedness for the second wave of the pandemic, which could lead to shortages of certain types of food.

The main attention of the government in the development of foreign trade in recent years is to further increase the volume of agricultural production and further enhance the image of Uzbekistan in world agriculture. Increasing the number of large refrigerated warehouses needed for storage and logistics of our products, which are grown in the agricultural sector and rapidly lose their quality and deteriorate. So, this is one of the main factors the development of this sector will have a positive impact on the development of our agricultural sector.

According to the data of The State Committee of The Republic of Uzbekistan on statistics, last year only 15% of Uzbekistan's more than 20 million tons of fruits and vegetables were processed and only 7-8% were exported. This year, it is planned to increase fruit and vegetable production in the country to at least 30 million tons. As if Uzbekistan exports the surplus agricultural products of its people at the level of international demand, it can earn billions of dollars a year [6].

Due to the growing demand for agricultural products in the world agricultural market, as well as the further development of the agricultural sector, which is one of the main sources of income of our national economy, is one of the main tasks of our government. In exporting our national agricultural products to developed countries such as Western Europe, China, Japan, South Korea and other countries, it is necessary to develop foreign marketing to work with large supermarket chains that pay special attention to product quality and origin.



**Fig 1.** Uzabekistan GDP by sectors in 2018

**Source:** [www.kun.uz](http://www.kun.uz)

Given the pie-chart above shows Uzbekistan gross domestic product by sectors in 2018. In the current economic crisis caused by the coronavirus pandemic, it is necessary to take reasonable measures to prevent its negative impact on the agricultural sector. It is necessary to reduce the regulatory role of the state in the agricultural sector of the national economy, including the introduction of market mechanisms, its further diversification and modernization, as well as, to continue work on attracting both, local and foreign direct and indirect investments.

In developed countries, the demand for agricultural products has increased by twice or three times. For example, one of the most developed countries in the world, the United Kingdom, has never had such a major demand in food and agricultural products in its economic history. From the first days of the pandemic, the local population was shocked by the shortage of food and agricultural products. The situation reached such a point that the issue of “food” became the first topical issue before the British government, as the shelves of shops in all major British cities were empty. Local people rushed to buy at least a “3-month supply of food” in stores due to “panic”. Even during the second World War, there was not so much “crisis” in Britain. Although the United Kingdom has asked for help in importing food from neighbouring European Union countries on the food issue, sufficient food stocks for each of the European Union has been a major issue during this period. Most importantly, each European Union country has tightly controlled the transportation of excess food from its territory. That’s why, the British government has formally asked South Africa, Egypt and India to increase the amount of the products consisted

of fruit and vegetables consumed by the population and to deliver them faster. Because the most important task was to get the United Kingdom out of the crisis and get rid of the "panic", as soon as possible.

During the COVID-19 pandemic a number of countries around the world have imposed temporary restrictions on the export of some agricultural products. For example, European Union countries have introduced a certain norm of export of some agricultural products and a temporary restriction on the export of some products. The neighbouring country -Republic of Kazakhstan has also introduced export quotas for wheat and flour from the 1<sup>st</sup> April in 2020. Typically, export quotas lead to a decrease in imports of these products to consumer countries. However, the negative impact of these restrictions will certainly not be as impressive for agriculturally developed countries [7].

**Table 1.** Ranking of EU main agri-food trade partners and Uzbekistan

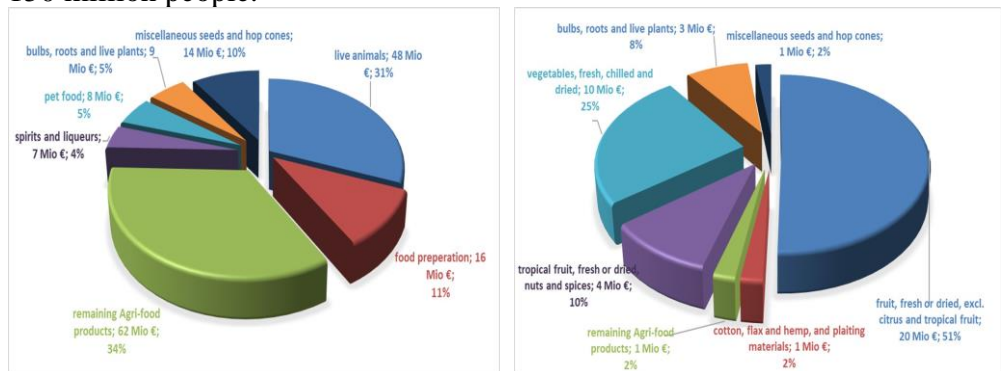
	<b>Top Destinations: 2019</b>	<b>Value Mio €</b>	<b>% Share Extra- EU</b>		<b>Top Origins: 2019</b>	<b>Value Mio €</b>	<b>% Share Extra-EU</b>
<b>1</b>	United Kingdom	41 215	22.7	<b>1</b>	United Kingdom	16 750	13.8
<b>2</b>	USA	21 851	12.0	<b>2</b>	Brazil	10 760	8.8
<b>3</b>	China	14 491	8.0	<b>3</b>	USA	10 182	8.4
<b>4</b>	Switzerland	8 376	4.6	<b>4</b>	Ukraine	7 024	5.8
<b>5</b>	Japan	7 280	4.0	<b>5</b>	China	5 331	4.4
<b>6</b>	Russia	7 027	3.9	<b>6</b>	Switzerland	4 598	3.8
<b>7</b>	Norway	4 457	2.5	<b>7</b>	Argentina	4 365	3.6
<b>8</b>	Saudi Arabia	3 649	2.0	<b>8</b>	Turkey	4 197	3.5
<b>9</b>	Canada	3 549	2.0	<b>9</b>	Indonesia	3 882	3.2
<b>10</b>	Turkey	3 413	1.9	<b>10</b>	Ivory Coast	3 265	2.7
<b>11</b>	Australia	3 000	1.6	<b>11</b>	India	2 609	2.1
<b>12</b>	South Korea	2 969	1.6	<b>12</b>	Morocco	2 299	1.9
<b>13</b>	Hong Kong	2 797	1.5	<b>13</b>	Peru	2 254	1.9
<b>14</b>	Algeria	2 493	1.4	<b>14</b>	Vietnam	2 161	1.8
<b>15</b>	Ukraine	2 455	1.4	<b>15</b>	Canada	2 044	1.7
<b>16</b>	United Arab Emirates	2 387	1.3	<b>16</b>	South Africa	2 002	1.6
<b>17</b>	Israel	2 014	1.1	<b>17</b>	Colombia	1 934	1.6
<b>18</b>	Singapore	1 943	1.1	<b>18</b>	Chile	1 928	1.6
<b>19</b>	Egypt	1 879	1.0	<b>19</b>	Malaysia	1 766	1.5
<b>20</b>	Brazil	1 799	1.0	<b>20</b>	Thailand	1 616	1.3
<b>89</b>	<b>Uzbekistan</b>	163	0.1	<b>95</b>	<b>Uzbekistan</b>	39	0.0



Rest of the World	42 783	22.4	Rest of the World	30 677	24.2
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**Source:** AGRI-FOOD TRADE STATISTICAL FACTSHEET  
European Union – Uzbekistan, 2020.

From the table showed above, Uzbekistan has to improve It’s agri-food export value with EU countries. Russia and Kazakhstan have been the main importers of Uzbek agricultural products for many years. Therefore, it is desirable to build new markets, trade and logistics centers in the remote regions and territories of Russia, which has a huge territory and a population of about 150 million people.



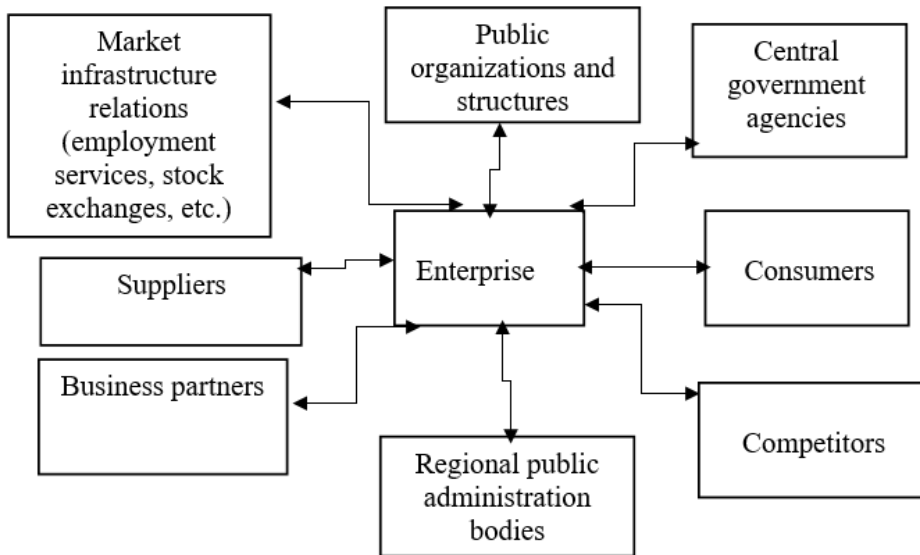
**Fig. 2.** Top European union Agri-food exports to Uzbekistan in 2019

**Source:** Agri-Food Trade Statistical Factsheet, European Union – Uzbekistan, 2020.

The two pie-charts above describes EU and Uzbekistan export-import structure in 2019. As well as the need to further develop the exchange of agricultural products between European Union and Uzbekistan. Especially, Uzbekistan has to diversify structure of export products and increase the value of turnover.

The World Bank provided Uzbekistan with \$ 500 million for the implementation of a project to modernize agriculture. The project will be financed with funds from the International Bank for Reconstruction and Development and the International Development Association in the amount of \$ 276 million and \$ 224 million, respectively [8].

In addition, it is very important that the external environment of agricultural producers is properly established. In particular, it is advisable to establish and strengthen corporate relationships with public organizations, stock exchanges, suppliers and consumers (Fig. 3).



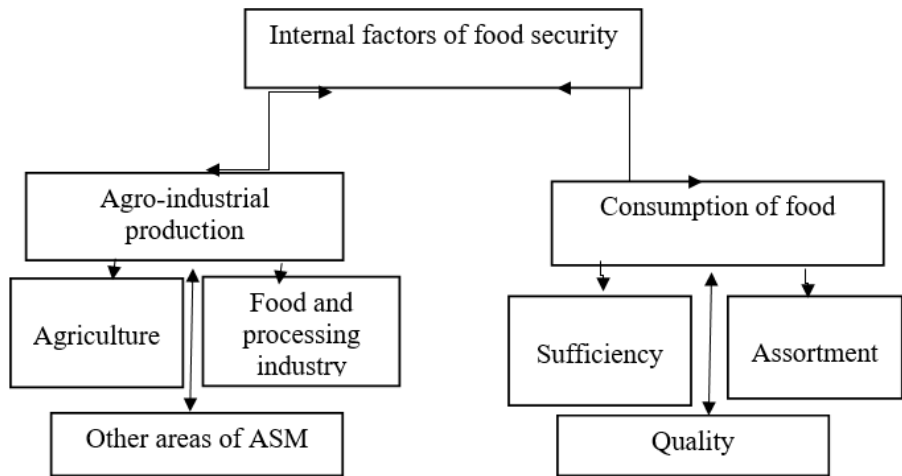
**Fig. 3. Organizational and economic relations of agro-food enterprises with the external environment**

**Source:** Author's development.

In the context of modernization of the country, as a result of consistent work on reforming the food industry and agriculture, optimizing the land allotted to farms, increasing the purchase prices for cotton and grain, structural changes are taking place in the agricultural sector of our economy. Ensuring food security means meeting the food needs of the population based on scientific and technological advances through the efficient and rational use of available resources in the region [9]. It is also understood that food products comply with sanitary, veterinary, phytosanitary norms and regulations. In conclusion, today, when food security is becoming more and more important around the world, the necessary conditions are being created and targeted measures are being taken to ensure the food security of the population of our country. In the context of the pandemic, it is desirable to ensure food security in order to increase the export potential of agricultural products in Uzbekistan. Therefore, it is important to identify internal factors in ensuring food security. Because it plays an important role in increasing the potential of food exports. We divide the internal factors of food security into two (Fig 4):

1. Agro-industrial production
2. Consumption of food

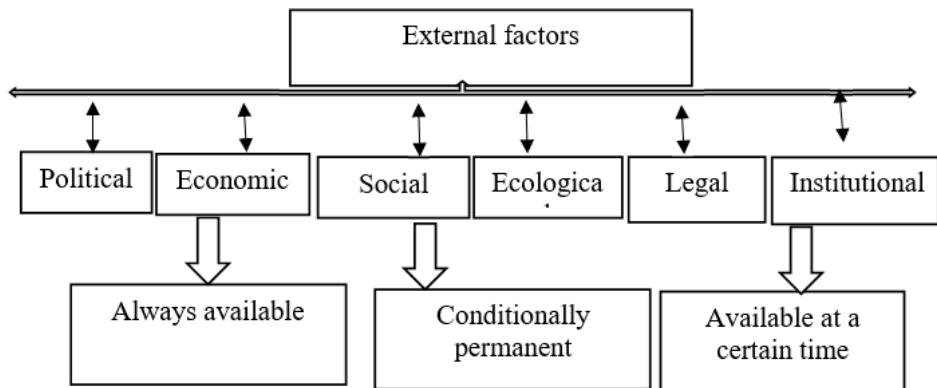




**Fig. 4. Internal factors of food security of the country**

Source: Author's development.

External factors of food security of the country are also very important, as these factors are directly involved in the export of agricultural food products. In our view, we include external factors: political, economic, social, environmental, legal, and institutional factors (Fig. 5).



Source: Author's development.

**Fig. 5. External factors of food security of the country**

The assessment of agricultural food potential in the country can be assessed using a number of formulas. In our opinion, we will introduce the basic formulas.

Attracting foreign investment into the country's economy should include the introduction of new technologies into production, ensuring the production of competitive products and providing them with long-term incentives for foreign markets for services.

The assessment of the crisis situation in the foreign economic sphere during the period under review is based on a number of indicators, the main of which are [10]:

- The ratio of total exports to GDP in the analyzed period is determined by Formula 1

$$K_{eksp} = \frac{V}{GDP} * 100\% \quad (1)$$

here

$K_{eksp}$  - total exports at the end of the analyzed period, billion soums

V- The ratio between the volume of exports and imports of products in the analyzed period is determined by formula 1.

$$K_{e.i.} = \frac{V_{ex}}{V_{imp}} * 100\% \quad (2)$$

here

$V_{ex}$  - at the end of the analyzed period, the volume of exports and imports, respectively, amounted to bln. sum;

$V_{imp}$  - The ratio of public external debt to GDP in the analyzed period is determined by formula 2.

$$K = \frac{V_{tshk}}{GDP} * 100\% \quad (3)$$

here

$V_{tshk}$  - external debt at the end of the analyzed period, bln. sum;

- The share of imports in domestic consumption in the analyzed period is determined by Formula 3.

$$K = \frac{V_{imp}}{GDP} * 100\% \quad (4)$$

Social security is the system of relations in which the vital interests of the state, the individual, society and the state are realized, and the ability to create the conditions for the elimination of the threat of negative influences. The assessment of social security should be carried out in two directions:

- living standards of the population;
- the level of the labor market.

The overall assessment of the living standards of the population is based on three main indicators:

- The share of the population whose income is less than the minimum subsistence level ( $K_d$ ) is determined according to formula 5.

$$K_d = \frac{N_{min}}{N_a} * 100\% \quad (5)$$

here

$N_{min}$  - population of the country with income below the subsistence level in the analyzed period, thousand people;

$N_a$  - The total population in the analyzed period, thousand people.

- The ratio of the average per capita wage to the subsistence minimum ( $K_r$ ) is determined by formula 6.

$$K_r = \frac{D_{sr}}{P_y} \quad (6)$$

here

$P_y$  - minimum subsistence for the analyzed period, soums;

$D_{sr}$  - Average per capita income in the analyzed period, UZS.

- The ratio of the income of the 10% of the highest income groups to the 10% of the lowest income groups ( $K_{Dx}$ ) is determined by formula 7.

$$K_{Dx} = \frac{D_m}{D_e} \quad (7)$$

here

$D_m$  - average monthly income of 10% of the highest income groups in the analyzed period, soums;

$D_e$  - The average monthly income of the lowest income groups in the analyzed period was 10%, UZS.

Food security is understood as the ability of the state to produce the required quality and range of products and to balance the consumer market with domestic production in terms of supply and demand, and the capacity of agricultural enterprises, suppliers, processing and trade enterprises in this regard. In the broadest sense, it is the state's food policy and its strategy aimed at creating a system of current and future conditions for sound governance, dynamic development of the agricultural sector and strengthening the economy [11].

Quantitative indicators of production of the most important types of food and raw materials sufficient to meet the domestic consumption of the population should be formed on the basis of science-based funds, reserves and export potential. At the same time, medical and biological standards and standards of expediency of consumption should be taken into account when calculating food safety indicators. The biological and environmental safety of food consumption should be based not only on the economic benefits of production, but also on the bio-environmental rules, which in turn is the most important factor in determining the strategy for the development of the consumer market.

Taking into account the severity of the food crisis, the aggregate indicator can be determined by three main criteria:

- The level of per capita satisfaction of needs for agricultural products, including bread and bakery products, potatoes, vegetables, milk and dairy products, eggs, meat, is determined in accordance with Formula 8 in accordance with medical standards.

$$K_{nr} = \frac{P_{xl} \cdot \alpha_{xl} + P_{kart} \cdot \alpha_{kart} + P_{mol} \cdot \alpha_{mol} + P_{ov} \cdot \alpha_{ov} + P_{ya} \cdot \alpha_{ya} + P_{m} \cdot \alpha_{m}}{H_{xl} \cdot \alpha_{xl} + H_{kart} \cdot \alpha_{kart} + H_{mol} \cdot \alpha_{mol} + H_{ov} \cdot \alpha_{ov} + H_n \cdot \alpha_n + H_m \cdot \alpha_m} \cdot 100\% \quad (8)$$

### 3 Results

In the video conference dedicated to the agricultural sector under the leadership of the President of the Republic of Uzbekistan Sh. Mirziyoyev on September 21, 2020 with the participation of heads of ministries and departments, the head of the government ordered to increase agricultural exports to \$ 3 billion cooperation with the Baltic States, Ukraine, Georgia and Eastern Europe. It is mentioned that systematic work will be organized in the delivery of products to new markets [12].

On October 20, 2018, the Cabinet of Ministers adopted a resolution “On measures to implement national goals and objectives in the field of sustainable development until 2030”.

The resolution of the President of the Republic of Uzbekistan “On additional measures to ensure food security, rational use of available resources, state support of agriculture during the coronavirus pandemic”:

- introduction of decommissioned lands with available groundwater reserves, introduction of the following procedure for their allocation to the population on preferential terms for the cultivation of agricultural products;

- sell the agricultural lands to the people, first of all who needs to social protection, maximum 1 hectare only for agriculture, as an exception, for 10 years for rent or in pre-payment condition to private business entities for 5 hectares for 10 years by e-auction way;

- based on the rent agreement between the initiator and the governors on the allocation of these lands, the decision of the district governor is made, which provides for the use of water-saving technologies and priority planting of vegetables, melons, potatoes, legumes and oilseeds, orchards and vineyards.

#### **4 Discussion**

Moreover, in the decree of The President of The Republic of Uzbekistan, № PQ-4575 about the strategies of the development of agriculture of The Republic of Uzbekistan for 2020-2030, in 2020 some orders, in food security system, are going to be implemented. Such as, “Development and implementation of state policy on food security” sphere, from October 2020, a system of interventional procurement will be gradually introduced in order to provide the population with uninterrupted supply of grain products and prevent sharp price fluctuations [13].

The gradual reduction of state order volumes for grain from the 2021 harvest, including the introduction of market mechanisms that ensure free competition in the purchase and sale of grain.

The execution of such measures will lead to a growth in the incomes of local farmers and agri-enterprisers by increasing their production efficiency and expanding their export potential. To achieve these goals, it is important to expand financial and technical assistance as a result of economic cooperation between our country and international financial companies. In particular, the

financial support of the World Bank and the Asian Development Bank is very important for the development of our national economy [14].

### **Conclusion**

In conclusion, the state and international organizations provide a lot of support to entrepreneurs engaged in the export of agricultural products and the population engaged in this field in our country. This can be learned from the ideas discussed above [15]. Entrepreneurs, who produce agricultural products, have been provided with many benefits by the resolutions of the President and local authorities, especially in the context of a pandemic. In such a difficult situation, the works being done to ensure food security is much commendable in our country. Only if the planned works were done in a timely manner, the negative impact of the pandemic on the economy would be reduced.

It is advisable to introduce the following mechanisms to provide food to the poor and low-income groups and increase their export potential:

- creation of additional jobs and allocation of subsidies (in addition to existing income);

- Strengthen support for small business development, promote employment and job creation;

- stimulate consumer demand;

- Centralized distribution of food products at discounted prices;

- creation of a solid base, infrastructure and communications in rural areas;

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