# Regional Agri-Food Trade Development in the Eurasian Region: Armenia

# Contents

### *Abbreviation*

| | | |
|---|---|---|
| AMD | - | Armenian dram |
| CAGR | - | Compound annual growth rate |
| EAEU | - | Eurasian Economic Union |
| EEC | - | Eurasian Economic Commission |
| GDP | - | Gross National Product |
| HS Code | - | Harmonized System Codes |
| MFN | - | Most Favored Nation |
| NSC | - | National Statistical Committee of the Republic of Armenia |
| RCA | - | Revealed Comparative Advantage |
| SMEs | - | Small and Medium Enterprises |
| WITS | - | World Integrated Trade Solution |
| WTO | - | World Trade Organization |

## Clarifications

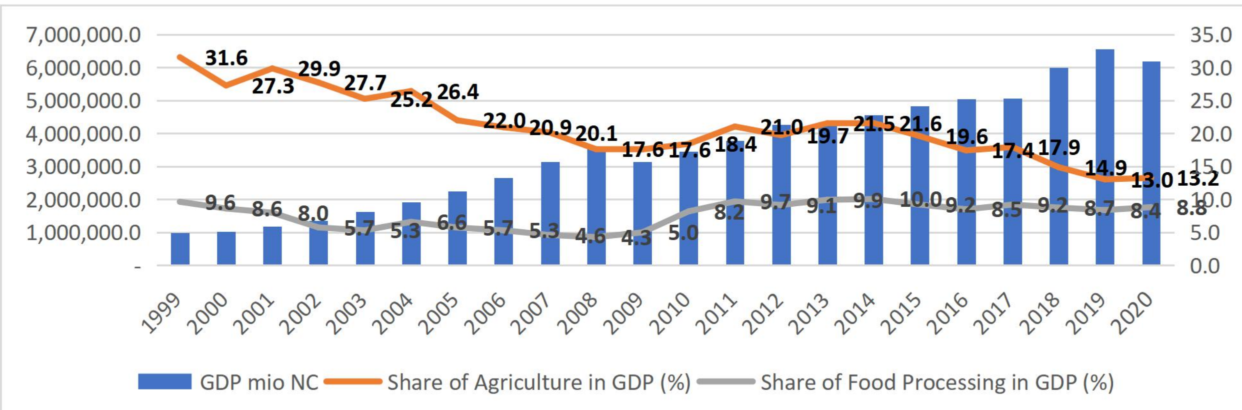
Agroindustry – sum of agriculture and food processing Sectors and their products.
HS Code – mainly two digit of HS Products Group 01-24 and 6 digit of HS Products Code

List of Two Digits
01 LIVE ANIMALS
02 MEAT & EDIBLE MEAT OFFAL
03 FISH & CRUSTACEANS
04 DAIRY, EGGS, HONEY, & ED. PRODUCTS
05 PRODUCTS OF ANIMAL ORIGIN
06 LIVE TREES & OTHER PLANTS
07 EDIBLE VEGETABLES
08 ED. FRUITS & NUTS, PEEL OF CITRUS/MELONS
09 COFFEE , TEA, MATE & SPICES
10 CEREALS
11 MILLING INDUSTRY PRODUCTS
12 OIL SEEDS / MISC.GRAINS / MED.PLANTS / STRAW
13 LAC, GUMS, RESINS, ETC.
14 VEGETABLE PLAITING MATERIALS
15 ANIMAL OR VEGETABLE FATS, OILS & WAXES
16 ED.PREP.OF MEAT, FISH, CRUSTACEANS, ETC
17 SUGARS & SUGAR CONFECTIONERY
18 COCOA & COCOA PREPARATIONS
19 PREPS.OF CEREALS, FLOUR, STARCH Or MILK
20 PREPS OF VEGS, FRUITS, NUTS, ETC.
21 MISC.EDIBLE PREPARATIONS
22 BEVERAGES , SPIRITS & VINEGAR
23 RESIDUES FROM FOOD INDUSTRIES, ANIMAL FEED
24 TOBACCO & MANUF. TOBACCO SUBSTITUTES

# 1. Introduction to Agriculture and Food Processing Sectors of Armenia

Agriculture has been and remains one of the most important sectors of the country in terms of contribution to GDP and rural employment. In 2020, the share of agriculture in the total GDP was 13.2%, while the rate of employment in the sector was 24.8%. The share of the next important sector directly related to agriculture, the food processing industry, in the total GDP of the country was 8.8% (see Graph 1). From Graph 1, it is clear that during after 2009, the share of Processed Food sector is increasing in the GDP of Armenia with the decrease of share of raw products production.

*Graph 1. Share of Primary and Processed Food in the GDP if Armenia by years (%)*

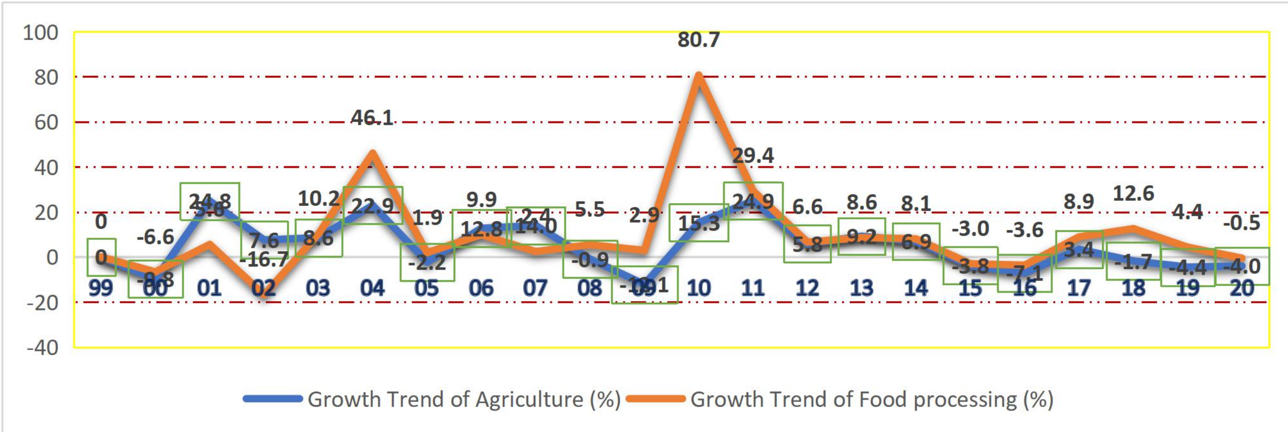



Source: NSC, www.armstat.am

Both agricultural and food processing sectors registered a 3.9% decline in 2020 compared to 0.5% in 2019 (source: NSC, Socio-Economic Situation of Armenia, January-December 2020 and Agriculture/Yearbook 2020) (see Graph 2). The major reasons for the negative tendencies in the sectors are the COVID-19 pandemic, the war between Armenia and Azerbaijan, and global economic negative trends.

The impacts will continue in 2021 as well with additional challenges, including inflation. Armenia is a net importer of all inputs used for land cultivation. Thus, price increases will have a destructive impact on the sector, unless the Armenian government takes appropriate measures to support the Armenian producers directly and indirectly to overcome the hard times for them and for the country overall.

*Graph 2. Graph 2. Trends of Agriculture and Food Processing industry of Armenia 1999-2020 (%)*




Source: NSC, www.armstat.am

The industry is still adapting to a market economy and efforts are focused on improving efficiency, competitiveness and diversification. Some local companies are competing both in domestic and in international food markets and are making investments to scale up production. Increased demand for Armenian agricultural products for export provided local farmers with an incentive to improve the efficiency of their operations and increase production. Currently, there are more than 1,600 companies operating in the sector involved with fruit and vegetable processing, dried fruit and spice processing, grape processing, dairy processing, meat processing and slaughtering, fish processing, bread baking, confectionary production, mineral and drinking water production, nonalcoholic beverage production, and alcoholic beverage production. The agriculture industry is more or less equally divided between crops and livestock subsectors. Livestock breeding is a core of the Armenian agricultural sector—95% of milk and almost 55% of meat for domestic consumption in Armenia is produced locally. Another important sector is commercial fish farming. Armenia has favourable climatic conditions for year-round fish farming. Furthermore, many vegetable, nut, fruit, and berry varieties easily grow in Armenia.

In 2019 the Armenian National Assembly approved the amendments and additions to the law on the Government Structure and activity according to which the Ministry of Agriculture merged with the Ministry of Economic Development and Investments and was renamed the Ministry of Economy. The main purpose was to increase the effectiveness of public administration.

There are several agricultural and food laws, the most important being the Law on Food Safety, Law on Veterinary Medicine, Law on Animal Feeding, Law on Phytosanitary Measures, Law on

Trade and Services, Law on Ensuring Sanitary and Epidemiological Safety of the Population, Law on Ensuring Uniformity of Measurements, Law On the Protection of Consumer Rights, Law on Standardization, and the Law on Conformity Assessment, and the Law on Organic Agriculture.

Moreover, a number of government bodies are responsible for agriculture policy and related issues. Consequently, the Ministry of Economy is responsible for policy issues with respect to agriculture. Other key bodies are the State Service for Food Safety and its subsidiary veterinary, phytosanitary, and food safety inspectorates, the National Body for Standards and Metrology under the Ministry of Economy, and the State Health Inspectorate under the Ministry of Health.

Armenia became a member of the Eurasian Economic Union (EAEU) in 2015. Although it has created new opportunities for agricultural exports to the EAEU market, the membership has also created some uncertainty and confusion, including documentation requirements, sanitary and phytosanitary requirements. Also, there are burdensome and time-consuming export procedures as well as unpredictable conditions at the border crossing between Georgia and Russia at Upper Lars, where delays can lead to the spoilage of agricultural products.

The Eurasian Economic Commission (EEC) is responsible for external trade policy and regulation for the EAEU member states, including tariffs, transit trade, contingency measures, technical regulations, and SPS measures. In 2018, the Customs Code of Armenia was replaced by the EAEU Customs Code. Under the EAEU Customs Code, all customs declarations and clearance procedures are done electronically using a single window system, with provisions for prior-to-arrival submission of customs declaration and automatic release of goods, normally within four hours of registration. As a result, Armenia had to harmonize tariffs with the common external tariff, although there are temporary exemptions for nearly 1,000 tariff lines with harmonization to be completed in 2022. Under the Treaty of Accession of Armenia to the EAEU, these goods may be imported into Armenia but cannot be re-exported to other member states without paying the difference.

Thus, membership to the EAEU has resulted in increases of tariffs. Currently, the applied average tariff has increased from 2.7% to 7.5%, and the percentage of non-ad valorem tariffs has increased from 0.5% to 13%. The average tariff on agricultural products increased from 6.6% to 12.8% in 2018 and remains higher than the overall applied MFN average. Animals and animal products, fats and oils, and prepared food and beverages are the categories subject to the highest import duties.

All goods exported from Armenia outside the EAEU are subject to customs declarations. Since there is no border with the other EAEU member States, land and sea transportation between Armenia and other EAEU member states is carried out through customs transit procedures. Goods can be declared at the customs offices where the goods are located.

The EAEU member states have concluded separate treaties concerning export duties, according to which each member state of the EAEU establishes its own list of goods to which export duties may apply. Armenia's export duties are equal to zero.

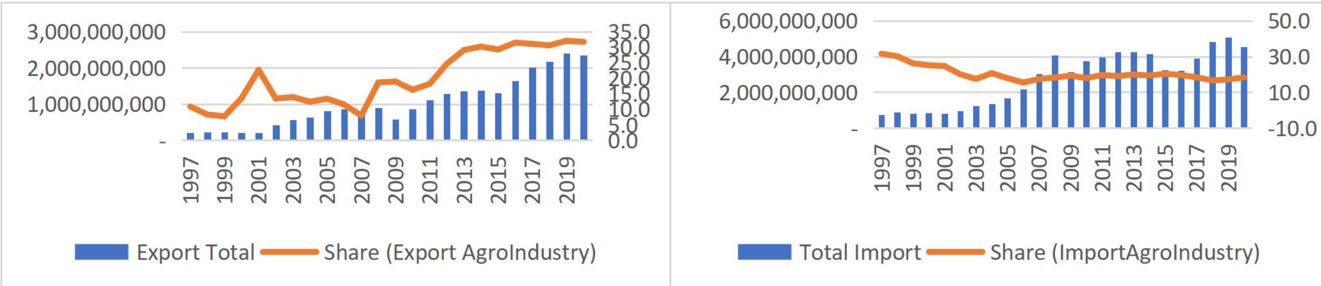
Over 30% of primary employment is in the agroindustry in the country, making it essential to address the structural issues preventing the expansion of the sector, including land fragmentation and limited adoption of advanced technologies.

The industry lacks highly specialized experts (although there are several trainings and courses suggested by different NGOs and the Agrarian University), which is a strong obstacle to reaching the export potential of the industry. Another obstacle is the lack of information about the export markets.

The global economic slowdown reflected on the Armenian economy as well, especially the demand for Armenia's exports. In 2020, the volume of commodity exports amounted to 2,356 million US dollars, decreasing by more than $50 million or 2.1% compared to the previous year. The share of agriculture and processed food products in total exports constituted almost 31.7% for the same period, with the leading sector of food processing 23.5%. The export of agricultural and processed food products decreased as well in 2020 by 2.3% mainly due to the decrease in exports of processed foods by 13%, while the exports of animals and vegetables and fruits registered 52.6% and 39% increases in exports, respectively (See Graph 3 and Pie 1).

The major products for export are fish and crustaceans, mollusks and other aquatic invertebrates; live animals; edible fruit and nuts; peels of citrus fruits or melons; edible vegetables and certain roots and tubers; tobacco and manufactured tobacco substitutes; and beverages, spirits, and vinegar. The last two products groups have the biggest share in total agriculture and processed food exports as well as in total exports from Armenia (see Pie 1).

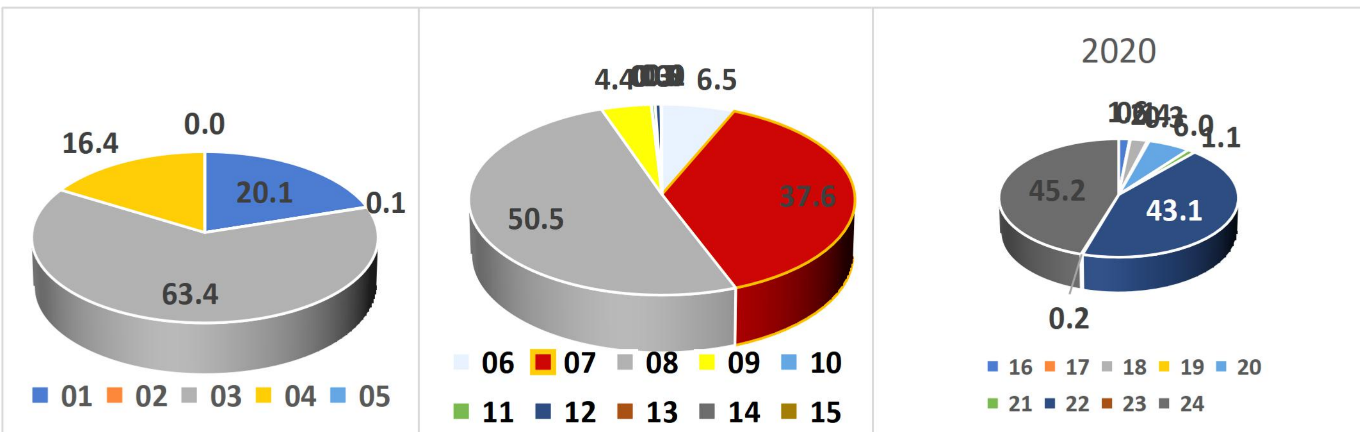
*Graph 3. Share of Import and Export of Agroindustry Products within Total Import and Export of Armenia 1997-2020 (% and $)*




Data source: UN Comtrade

The major export market for Agroindustry Products is the EAEU with Russia at the lead (see Appendix 1).

Pie 1. Share of HS Code: 01-05, 06-15 and 16-24 in the of Export their Group in Armenia 2020 (%)




Data source: UN Comtrade

Armenia's total imports decreased significantly by nearly 10.5% in 2020. Animal and processed food imports decreased by 12% and 10%, respectively. The import of fruits and vegetables registered a 7.8% increase (See Appendix 2).

Considering the high importance of the sector for the Armenian economy, as it has a large share in employment and is the source of income for a large sector of the population (especially in disadvantaged zones), the policy implemented in the agricultural sector is aimed at improving the efficiency of the branch and its sectors, introducing modern technologies, industrializing, further developing of agriculture, creating favorable conditions for agricultural operators, increasing their real incomes, raising the level of food security of the country, and promoting exports of the products of agricultural sector through increasing product competitiveness.

## 2. *Agri-food export policies in the Eurasian Post-Soviet countries: Armenia*

### 2.1 Why promote agri-food product exports?

The agriculture and food processing industries have great input in the economy of Armenia, while the Armenian market is small for economies of scale for domestic producers. Exports are more than essential both for the producers and for the economy. At the same time agriculture and food products are becoming increasingly differentiated making entrance to other markets comparatively easy.

However, there are several strong opportunities in Armenia for the development of the agriculture industry, including:

- Increase in the assortment of vegetables and fruits with extremely diversification. Nearly the full assortment of vegetables, fruits, and berries growing in Armenia is being spread, including beans, okra, black and red pepper, carrot, pumpkin, horse-fennel, lily and other wild plants, nearly the full assortment of berries, pomegranate, quince, plum, cherry, sweet cherry, green walnut, rosehip, mulberry, and others.
- Cultivation of non-traditional vegetable crops in Armenia in recent years. These vegetables include broccoli, kohlrabi, Brussels sprouts, Beijing and Chinese cabbage, arugula, artichoke, fennel, asparagus, and others. Diversification and production of non-traditional vegetables create a new base for export.
- A solid base for manufacturing high-value organic products of organic agriculture.
- Existence of traditionally developed high-quality alcoholic beverages, especially brandy and wine.
- Solid conditions for Agro and Ecotourism development in Armenia.

At the same time, demand for agricultural products in the world market has positive trends and it will be sustained, although at  slower pace due to negatives changes in the world economy, which means that export for these types of products will always be demanded.

During the last 10 years, larger-scale investment has been made on the construction of modern greenhouses and advanced drip irrigation systems both my private (domestic and foreign) and public sector, leading to increased productivity in the sector.

The Armenian government has made substantial efforts to improve customs procedures through the introduction of e-government services. Important steps to tackle the fragmented nature of the agricultural sector were made with the adoption of the law on co-operatives.

Armenia enjoys GSP trade preferences with the EU, USA, Canada, Switzerland, Norway and Japan.

Overall, export promotion of products of the agroindustry is essential to the economy, especially for Armenia, a small landlocked country that lacks essential natural resources and heavy industry in its economy.

### 2.2 Documents defining strategic directions of export development

The 2020-2030 strategy ensuring the economic development of the Armenian agricultural sector approved by the Government of Armenia in 2019 sets the major keystones of the country's agrarian policy. The vision of the strategy is to have sustainable, innovative, high value-added agriculture in harmony with the environment, ensuring protection of natural resources, producing organic products, and creating conditions for the well being of the people living in the village for the next 10 years, with the following priorities:

- Increasing the competitiveness and productivity,
- Assuring food safety,
- Improving food security and nutrition,
- Developing local market and increasing export opportunities,
- Developing human and institutional capacities with the sector,
- Supporting sustainable development of the rural communities,
- Promoting digital agriculture and technology innovations.

The following expenses have been envisaged by the state budget for the mid-term program:

- Subsidizing the loan interest rates and compensation mechanisms;

- Supplying the technical means through affordable mechanisms, such as financial lending and leasing;
- Promoting intensive cultivation implemented by modern technologies;
- Introducing modern technologies for irrigation;
- Supporting hail protection nets;
- Introducing compensation mechanisms of greenhouse enterprises and “smart” livestock buildings;
- Promoting development of viticulture and winemaking;
- Implementing state assistance programs aimed at developing animal breeding techniques;
- Introducing advanced technologies in raising livestock;
- Implementing a pilot agricultural insurance project;
- Enhancing the information and consultation sector;
- Organizing seed breeding and seed preservation activities;
- Implementing seed quality inspection and state-funded testing of sorts and varieties;
- Introducing plant protection measures;
- Implementing anti-epidemiological measures against infection diseases of farm animals;
- Using free-range grazing lands.

The strategy also outlines the action plan for the for the next three years (2020-2022), focusing on increasing agricultural production, developing rural areas, and increasing Armenia's competitiveness in the global economy.

In parallel, the organizations operating in Armenia’s agricultural product processing industry have been tasked with increasing the work efficiency and the competitiveness of manufactured products and diversifying the production portfolio. Some developing companies are successfully competing in both domestic and CIS member state markets as well as international food markets and are making investments for further developments in production.

The Armenian government places importance on developing the sector. It has implemented policy reforms and provision of benefits (subsidized lending facilities, tax and customs exemptions, etc.). For example, in order to increase the production volumes, ensure the quality and safety requirements in compliance with international standards, enhance the competitiveness, and increase the exportation volumes in the industry, the Armenian government adopted a decree dated July 19, 2018 on the state assistance program for leasing (financial lending) of new technologies and equipment worth up to 450 million AMD in the food and agricultural sector. Loans are provided for up to eight years, with a 20% down payment and 4% interest rate. At the same time, the decree stipulates that businesses operating in the border areas and receive social assistance have a 0% interest rate.

Extensive work is being done regarding the implementation of legislative reforms in the food processing sector and additional functions arising from Armenia's membership to the Eurasian Economic Union, particularly legislative and institutional reforms, which will contribute to the development of the sector, rapid integration with the EEU, and increased trust in the quality and safety of food products manufactured in Armenia. It will substantially stimulate the increase in volumes for production and exportation.

In order to enhance the contractual relations between the processors and farming enterprises on acquisition of raw materials, to provide stable guarantees to farming enterprises on the sale of raw materials, and expedite the processing of payments to farming enterprises for acquisition of raw materials, in 2017 a program for subsidizing the interest rates of loans provided to the food processing sector for purveyance of agricultural raw materials was implemented. The program supports enterprises processing fruits, vegetables, and grapes. In 2019-2020, the program also included milk collection and the acquisition of farm animals by slaughterhouses.

Another project titled "On the state assistance for development of the sheep and goat breeding in Armenia for 2019-2023" was approved in September 2019.

To place importance on the development of new sorts of seeds, plants, and animals, the Armenian government, within the framework of "Assistance to development of seed production of cereals, grass-and-legumes, and fodder crops" project, provides assistance to four seed production enterprises in order to implement sorting and upgrading works for autumn-sown wheat, spring-sown barley, lentils, chickpeas, peas, alfalfa, and melilot varieties as well as to select new varieties of plants for farming enterprises for a high and sustainable yield.

Three more projects are conducted by the Ministry of Economy of Armenia:

- "State assistance for introduction of small and medium-size greenhouse enterprises," which has targeted greenhouse enterprises and their production volumes to increase to increase the operation area of them.
- "State assistance for establishment of vineyards, intensive fruit and berry orchards cultivated in Armenia with modern technologies."
- "Subsidizing the interest rates on loans provided for introduction of hail protection nets in agriculture of the Republic of Armenia," which aims to develop intensive gardening in the country, where new intensive orchards of walnut, almond, pistachio, apple, apricot, pear, and plum are continuously being established.

Thus, the Armenian government does not only implement activities to promote export, but also wants to increase productivity across the sector within its financial capabilities as well as promote cooperation between domestic raw food producers and other food processors.

## 2.3 Main objectives of agri-food export programs in Eurasian countries: Armenia

> "We foresee large reserves in expanding mutual supplies of food. It is hardly logical to import vegetables, fruit, milk, and meat products from distant countries, placing orders with foreign suppliers when our own producers are ready and willing to work and enter a common Eurasian market with products that are not inferior and, in fact, often superior in quality."
>
> Vladimir Putin

Удален[Christian Garbis]: .

According to the Government Program of Armenia of 2019, the main objective of the government policy for the period of 2019-2024 is inclusive economic growth. However, Armenia's participation in global value chains is low and remains far below the international average. The main objectives of agri-food export programs implemented and/or supervised by the Armenian government are the following:

- Increased competitiveness of locally produced farm products,
- Substitution of imported agro-products, and
- Development of an export-oriented food and agricultural sector.

In addition, the Armenian government aims to promote zonal specialization, efficient distribution of production, development of production and technical services, and the application of new technologies to reduce agricultural risks.

Along with the task of creating a competitive and efficient agriculture that is based on new technologies and science, the Armenian Government has set the following goals:

- Support the development of cooperative agriculture;
- Create educational, scientific and research, industrial clusters and contribute to enhancing cooperation between them;
- Support the introduction of agricultural and food system equipment, new technologies, as well as food safety systems;
- Implement state support programs aimed at developing local seed breeding and seed production, intensive agriculture, and livestock breeding;
- Contribute to the development of agrotourism;
- Ensure the introduction of an effective system for prevention of animal and plant diseases;
- Ensure the introduction of an insurance system in the agricultural sector;
- Define the main principles, methodology, and strategy of agricultural assistance.

Statistics show that Russia is the major trade partner for all EAEU member countries. No cooperation exists based on the specialization of each member country in their advantageous agro-products in order to increase efficiency and productivity, not only in each member country but also overall in the EAEU. This was also stated in the document on Agro-industrial Policy of the Eurasian Economic Union of 2015. Few activities were completed to target this issue.

The EAEU is the largest importer of agricultural and food products. Most products imported from other countries could be produced within the EAEU and traded between the member countries. At the same time, the national agricultural development programs of the member states do not reflect the increasing level of integration within the Customs Union and the development forecasts of the agricultural sector do not fully reflect the potential of the common market. Thus a systematic document needs to be drafted that defines the main directions of the Agro-industrial Policy of the Member States, which had to "be based on the national priorities and include mechanisms aimed at the balanced development of production and agricultural markets, the provision of equal access to the common agricultural market, the intensification of investment, the increase of the efficiency and competitiveness of the agricultural sector and the achievement of food security on this basis" (Agro-industrial Policy of the Eurasian Economic Union, http://www.eurasiancommission.org/ru/Documents/APK_ing_n.pdf, p. 26).

It is already clear that the Covid-19 pandemic will change the global economy, including global value chains. Armenia has a chance to implement quick structural changes in the economy to improve its role in global value chains in order to foster development. Without quick structural changes the country may find itself in an even worse situation than before 2020.

Now, Armenian food producers are looking to expand their export market into the Middle East.

### 2.4 State Support for exports

*Level and structure of state support for agri-food exports*

Several government programs exist to support agriculture in Armenia; however, the value of support is quite low relative to the value of production at 1% for Green Box support and 0.5% for Amber Box support.

When considering the low level of economic activity in the areas close to the border and in disaster zones, and the significant challenges in generating income encountered by the rural households, the aim of distributing loans to SMEs is to support business development in the aforementioned areas, assist rural households in transitioning from self-sufficient businesses to income generating ones, create new jobs, and ensure access to economic opportunities for all.

The Loan Guarantees Provision program allows entrepreneurs to get loans in terms of insufficient pledge amount and low liquidity, which is particularly specific for the SMEs operating in the aforementioned areas. The program allows entrepreneurs to qualify for loans by guaranteeing up to 70% of the principal of the loan and the interest rates for up to five years with a maximum amount of 15 million AMD. The annual interest rates for the loans provided by the Small and Medium Entrepreneurship Development National Center of Armenia partner banks through Loan Guarantees Provision program are lower than those offered in the market.

Several programs have been already launched to increase the level of agriculture intensification, mitigate damages to agriculture from climate disasters, introduce modern irrigation methods, replace low-yield gardens with high-yield orchards, and increase the volume of agricultural processing products, Other programs will be launched in the coming years. Since 2017 the following actions have been taken:

- The state support program on financial leasing of agricultural machinery[1], which aims to supply agricultural machinery to agricultural operators with affordable terms[2] and create favorable conditions for commodity production and the efficient use of agricultural land.
- The program on subsidizing interest rates of loans provided to the agriculture sector[3] and the program on subsidizing interest rates of loans provided to the food processing sector[4].
- Beginning in 2018, the program on subsidizing interest rate of loans provided for installation of anti-hail networks[5].
- The program on subsidizing interest rates of loans provided for introduction of drip irrigation systems[6].
- The state support program on intensive orchards[7].
- The program on financial leasing of agri-food equipment[8].

1 Approved by the Government Protocol Decision N11 of 16 March 2017.
2 Two percent leasing interest rate.
3 Approved by the Government Protocol Decision N39 of 14 September 2017.
4 Approved by the Government Protocol Decision N53 of 21 December 2017.
5 Approved by the Government Protocol Decision N37 of August 31, 2017
6 Approved by the Government Protocol Decision N53-13 of December 21, 2017
7 Approved by the Government Protocol Decision N53-11 of December 21, 2017
8 Approved by the Government Decision N893-L of July 19, 2018

The amount of support for agriculture in 2019 was 22,590 million AMD, which is a 15.9 % decrease from 2018. The major part of support went to irrigation (74.8%). Nine percent was spent on interest rate subsidies, 7.6% went to veterinary and anti-epidemic activities, and 1.1% went to expenses for food safety and sanitary services. Measures to support agriculture in Armenia were fully consistent with the country's commitments to the WTO. In 2018, their total value was no more than 1.4% of the total value of agricultural products produced, while the permissible maximum level of support for measures included in the WTO yellow basket reached 5%.

Several government and non-government bodies in Armenia are engaged in export support activities, including the Ministry of Economy, "Export Insurance Agency of Armenia" CJSC, Chamber of Commerce, Export Promotion Council, Enterprise Armenia, and others.

Overall, the major methods of support include non-financial support, such as co-financed expenditures to support the participation of organizations and individual entrepreneurs in international exhibitions, seminars, discussion as well as business and distributional targeted visits, and trainings on export markets.

According to separate agreements on export duties among EAEU member states, each member state establishes its own list of goods to which export duties may apply. For Armenia, the applied rate of exports duties for all goods was zero during the review period. Exported goods are also exempt from excise tax. Armenia does not provide subsidies contingent on export performance.

The Armenian government is prioritizing incentives for greenhouses construction and operation, which have been exempt from VAT since the beginning of 2015.

There are also several foreign and international organizations that are involved in industry development, including the Austrian Development Agency, Swiss Cooperation Office, IFC, FAO, and others. Financing projects include European Neighborhood Program for Agriculture and Rural Development, Community Agricultural Resource Management and Competitiveness II project, Rural Economic Development – New Economic Opportunities (Center for Agribusiness & Rural Development), and Fund for Rural Economic Development in Armenia.

Several tax privileges are directly and/or indirectly related to the agricultural industry, including the following:

- Taxpayers are excluded from VAT if their businesses do not exceeding 58.35 million AMD in the preceding calendar year, regardless of the type of business.

- Agricultural production taxpayers are exempt from profit tax to the extent of income from agricultural production, and income derived from the realization of fixed assets and other assets if the income does not exceed 10% of gross income. Agricultural production includes:

  - ✓ grain crops
  - ✓ forage crops
  - ✓ plants and vegetables
  - ✓ other food of vegetable origin
  - ✓ fruits and berries
  - ✓ trees and seeds
  - ✓ cattle
  - ✓ poultry
  - ✓ fish production

### 2.5 Support policies for primary agriculture vs. food processing

*Are policymakers focusing on primary agri-food or food processing exports?*

Overall, the Armenian government is focused on both primary and processed food production. As mentioned above, the state primarily offers non-financial direct support, while indirect supports goes to infrastructure development, mainly to irrigation due to Armenia's geographical location. At the same time, the Armenian government stresses cooperation between primary and processed food producers to solve the aforementioned challenges.

### 2.6 Competitiveness

*How do policymakers connect agri-food export promotion with competitiveness?*

Processed food dominates in terms of export volumes of Armenia, which were 23.5% in 2020 and included alcoholic beverages, fish, cheese, canned fruits, jams, coffee, and mineral water. Production and export of frozen fruits and vegetables is also developing with high rates (annually 150% on average for last 10 years) although the value is small (nearly $300,000 in 2020). Russia continues to be the major export market. Agriculture and processed food products were 31.7% of total exports in 2020.

Armenia showed a comparative advantage in 10 product group within agriculture related 24 HS Product group in the world market. The biggest indicator is for Beverages and Tobacco (see Table 1).

*Table 1. Revealed comparative advantage Indicator of Armenia and CAGR for 2015 and 2020 in the World Market*

| Product Code | Description | RCA – 2020 | RCA-2015 | CAGR |
|---|---|---|---|---|
| | **World** | | | |
| 01 | Live animals; animal products | 3.99 | 1.74 | 29.71 |
| 03 | Fish and crustaceans, mollusks and other | 4.06 | 3.51 | 8.46 |
| 04 | Dairy produce; birds' eggs; natural honey; edible | 0.69 | 1.10 | 6.72 |
| 06 | Live trees and other plants; bulbs, roots | 1.37 | 1.65 | 17.36 |
| 07 | Edible vegetables and certain roots and tubers | 3.64 | 1.25 | 36.68 |
| 08 | Edible fruit and nuts; peel of citrus fruit or melons | 2.99 | 2.09 | 22.28 |
| 09 | Coffee, tea, mat and spices | 0.86 | 1.27 | 1.84 |
| 20 | Preparations of vegetables, fruit, nuts or other | 3.80 | 4.47 | 7.58 |
| 22 | Beverages, spirits and vinegar | 13.58 | 20.92 | 4.04 |
| 24 | Tobacco and manufactured tobacco substitutes | 57.17 | 34.55 | 14.02 |

*Source: WITS*

Russia is the major export market among EAEU member countries for “the Made in Armenia” Agri- food products, and Armenia has revealed comparative advantage in 8 products group among 24 of HS Product Code. The interesting fact is that all products group registered positive CAGR for last 5 years except HC Product Code 04 of export (see Table 2).

*Table 2. Revealed comparative advantage Indicator of Armenia and CAGR for 2015 and 2020 in Russian Market*

| Product Code | Description | RCA - 2020 | RCA-2015 | CAGR |
|---|---|---|---|---|
| | Russia | | | |

| | | | | |
|---|---|---|---|---|
| 03 | Fish and crustaceans, mollusks and other | 28.24 | 9.17 | 31.97 |
| 04 | Dairy produce; birds' eggs; natural honey; edible | 3.75 | 7.71 | -12.11 |
| 06 | Live trees and other plants; bulbs, roots and the | 1.59 | 2.61 | 27.37 |
| 07 | Edible vegetables and certain roots and tubers | 15.22 | 5.80 | 29.15 |
| 08 | Edible fruit and nuts; peel of citrus fruit or melon | 6.95 | 2.53 | 40.89 |
| 20 | Preparations of vegetables, fruit, nuts or other | 7.83 | 8.57 | 14.78 |
| 22 | Beverages, spirits and vinegar | 16.92 | 46.15 | 17.32 |
| 24 | Tobacco and manufactured tobacco substitutes | 9.63 | 5.39 | 21.24 |

*Source: WITS*

In second place is Kazakhstan, where Armenia registered revealed comparative advantage in product groups among the HS Code 24 product groups (see Table 3).

*Table 3. Revealed comparative advantage Indicator of Armenia and CAGR for 2015 and 2020 in Kazakhstan market*

| Product Code | Description | RCA - 2020 | RCA-2015 | CAGR |
|---|---|---|---|---|
| | Kazakhstan | | | |
| 16 | Preparations of meat, of fish or of crustaceans | 130.60 | 1.51 | 32.98 |
| 20 | Preparations of vegetables, fruit, nuts or other | 15.75 | 38.99 | -22.40 |
| 22 | Beverages, spirits and vinegar | 79.69 | 35.74 | 29.40 |

*Source: WITS*

In third place is Belarus with 2 product groups followed by Kyrgyzstan with 1 product groups.

*Table 4. Revealed comparative advantage Indicator of Armenia and CAGR for 2015 and 2020 in Belarus and Kyrgyz Markets*

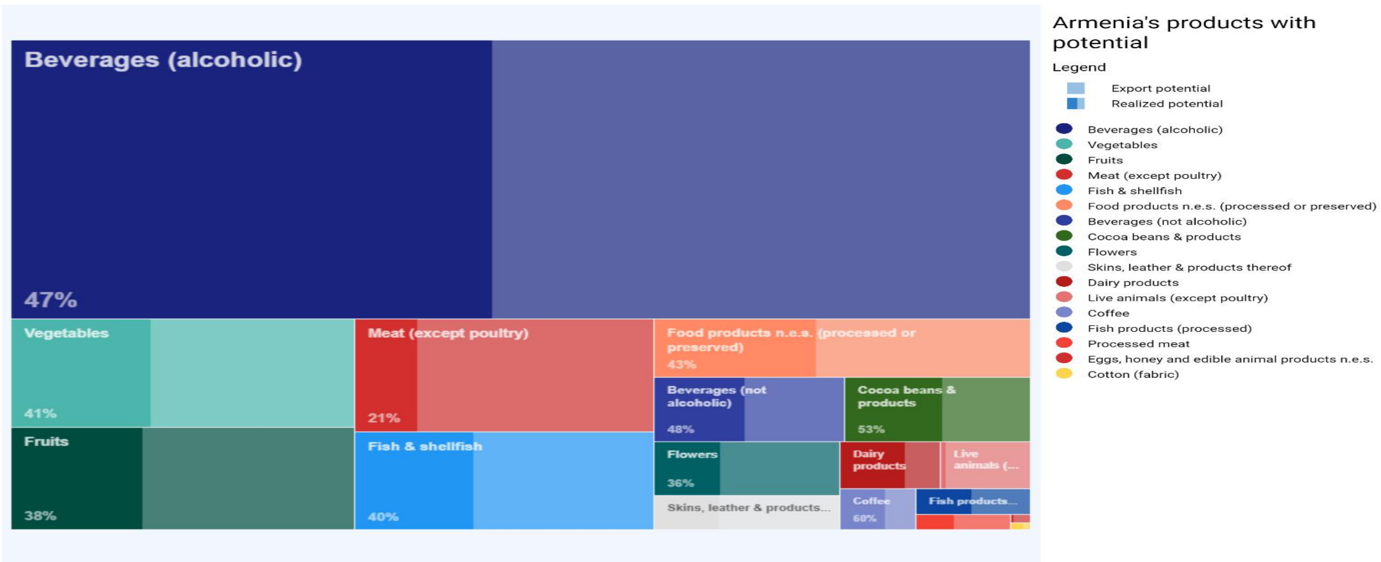
| Product Code | Description | RCA - 2020 | RCA-2015 | CAGR |
|---|---|---|---|---|
| | Belarus | | | |
| 20 | Preparations of vegetables, fruit, nuts or other p | 6.07 | 3.68 | 29.57 |
| 22 | Beverages, spirits and vinegar | 39.58 | 82.89 | 26.32 |
| | Kyrgyzstan | | | |
| 22 | Beverages, spirits and vinegar | 5.73 | 25.87 | 1.70 |

*Source: WITS*

Another potential export assessment is presented by the ITC, the results of which are presented in Figure 1. According to the mapping, Armenia's agroindustry potential is not fully used by all sub-sectors of the agroindustry. Only beverages, both alcohol and non-alcohol, fish products, dairy products (especially cheese), and coffee products are using their export potential by half or more percent.

Armenia is a net food importer. Domestic agriculture cannot entirely satisfy demand for a range of items such as meat and poultry, wheat, vegetable oil, sugar, flour, soft drinks, wine, rice, vegetable oils, and high-value grocery products, although for pears, apricots, apples, peppers, eggplant, garlic, tomatoes, cucumbers, cabbage, potatoes, grapes, fish, lamb and goat, cherry, and palms, the degree of self-sufficiency is higher than 100 percent in Armenia (see Appendix 3).

*Figure 1. ITC Export Potential Map: Armenia 2020*




*source: ITC Export Potential Map, https://exportpotential.intracen.org*

Another important fact, that for pears, apricots, apples, peppers, eggplant, garlic, tomatoes, cucumbers, cabbage, potatoes, grapes, fish, lamb and goat, cherry and palms, the degree of self-sufficiency is higher than 100 percent in Armenia.

## 3. *Food processing, primary production and export: Armenia*

### 3.1 Should Eurasian countries develop food processing?

Overall, the shares of primary and processed food productions in the GDP for the last 10 years more or less were the same. In 2020, the share of primary production was 13.2% (819 million AMD) and 8.8% (618 million AMD) for processed food production in Armenia (see Appendix 4). For the same time period both sectors registered a decrease of 4% and 0.5%, respectively, although the primary food production had negative trends during last five years (see Appendix 4).

Based on statistics presented in the Appendixes, it is clear that both sectors had to be focused upon. The open market conditions should be guaranteed as well to create conditions for competition and increasing the quality of domestically produced foods.

Taking into consideration that the economies of Eurasia supplement each other, food processing had to be stressed alongside primary production. After a detailed mapping of all member countries advantages in the agroindustry including technology and equipment, the Eurasia can start to produce competitive food products for other countries to become one of the major suppliers in the world market.

It had to be strengthen especially with the EAEC as according to the EEC, the rational allocation of resources and use of potential benefits from the development of industrial cooperation is beneficial for all EAEU member countries. This will reduce budgetary and industrial enterprise costs for the production of agricultural machinery necessary for the country's agro-industrial complex as well as ensure the joint entry of the EAEU enterprises into the markets of the other countries.

### 3.2 Policies (if any) on food processing development

In Armenia, currently are major activities related to the food processing development, including promoting cooperation between raw food producers and food processing companies and including four sub-sectors of food processing industry into the Export-Led Strategy.

As a result of these two activities, one success case is the wine production and export in Armenia, which has shown a steady increase during last 10 years. Grape farmers were sure that their yields would be purchased by the wine and brandy producing companies operating in Armenia. At the same time, the Armenian government promotes Armenian wines in different regional and international fairs and supplies the market information in the targeted countries. The results were vivid, including the following:

- Investment increase in the wine production
- Quality increase of wines
- Deployment of new technologies and equipment
- Increase of production and productivity

- Increase of exports
- Diversification of the wines (berry wines, etc.) production of other low-level alcoholic beverages, etc.

### 3.3 Primary agriculture as a source of raw materials for food processors

A number of constraining factors limit potential production expansion in Armenia's agriculture sector related to the link between primary and door processing production, including:

- Relatively small landholdings. Although, there are 335,000 farms operating in the agriculture sector, with an average landholding of around 1.4 hectares per household, relatively small landholdings do not allow for an efficient and diversified production system, involving both crops and livestock.
- Soil degradation. Almost 70% of Armenia's territory is classified as agricultural land, while only approximately 15% of the total territory is arable.
- Unsustainable pasture management and underutilization in the livestock sector.
- Unstable supply of meat and dairy from domestic producers.
- Fragmented land ownership and cultivation with small plot sizes.
- High dependence on climatic issues.
- Economies of scale.

These and other factors hinder the stable and high-quality supply of raw materials for food processing.

Above, several activities were presented, but they are still small with weak implementation. The major issue is related the unsatisfying finance capabilities of Armenian economy and lack of strategically and business-oriented crisis managers in the government.

### 3.4 Recommendations for policy adjustments

There are several urgent adjustments, among which are:

- Overcoming of consequences of the Covid-19 pandemic.
- Further development of the agricultural cooperation.
- Increasing the level of food safety, provision of minimum levels to the food security and the main agro-food self-sufficiency within the Eurasia.
- Continuing development of export-oriented agriculture.
- Increasing the productivity of land utilization.

- Creating solid base to promote the organic agriculture and eco and gastro tourism.
- Promoting investments of leading agro-technical technologies.
- Creating appropriate laboratories to make products appropriate to the World market standards.
- Continuing promotion of greenhouse farming.

Other ways to promote primary production is to improve access to market information as well as to establish brand names or differentiate products in important markets.

## *4 Conclusions and policy recommendations on export development*

Policy recommendations include strategic and operational.

Strategic recommendations include the following:

- ✓ Policy measures
- ✓ Infrastructure and logistics support
- ✓ Holistic approach to boost exports
- ✓ Greater involvement of state governments in Agroindustry exports
- ✓ Mitigation of agricultural risks
- ✓ Creating solid base for specialization of Eurasian countries based on each country's existing and potential advantages

Operational recommendations include the following:

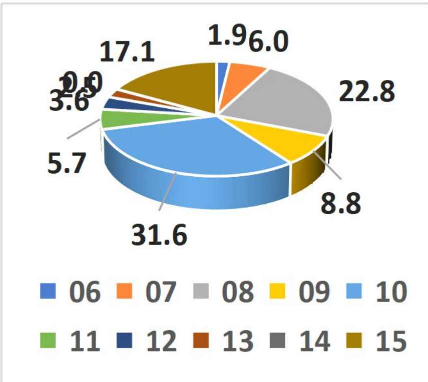
- ✓ Focus on clusters promoting value added exports
- ✓ Marketing and promotion of "Brand Armenia"
- ✓ Attract private investments into production and processing
- ✓ Establishment of Strong Quality Regimen as well as Research & Development Centers
- ✓ Development of animal breeding and implementation of complex measures for herd reproduction with the improvement of the veterinary system, an increase in productivity of veterinary measures as well as development of the fodder base, and the creation of small workshops of condensed fodder throughout the regions of Armenia
- ✓ Assistance for the development of cattle-breeding trade organizations
- ✓ Promoting investment of leading technologies and increasing production competitiveness
- ✓ Marketing assistance and development of contract relations with raw material producers
- ✓ Development of agricultural industrial-technical services and increasing the saturation of industrial equipment
- ✓ Improvement of the educational and consultative system in the agrarian sphere

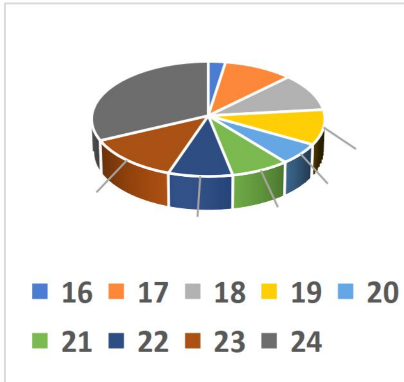
Appendix 1. The major export markets of Agroindustry Products of Armenia in 1997, 2007 and 2020 (%)

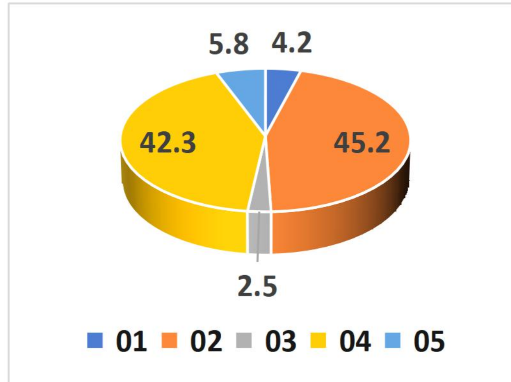
| | Country | 1997 | Country | 2007 | Country | 2020 |
|---|---|---|---|---|---|---|
| Live animals | Unspecified | 100 | Georgia | 73.1 | UAE | 2.9 |
| | | | Iran | 26.9 | Iran | 0.4 |
| | | | | | Iraq | 29.8 |
| | | | | | Jordan | 5.5 |
| | | | | | Kuwait | 19.4 |
| | | | | | Lebanon | 10.2 |
| | | | | | Qatar | 31.7 |
| | | | | | Russian | 0.1 |
| Fish & crustacean, mollusks & other | Belgium-Luxembourg | 35.3 | Italy | 3.4 | Belarus | 1.5 |
| | Germany | 13.1 | Spain | 6.4 | Russia | 97.6 |
| | Russia | 26.1 | Germany | 8.3 | Others | 0.9 |
| | Ukraine | 25.5 | Ukraine | 10.2 | | |
| | | | Russia | 17.4 | | |
| | | | France | 21.4 | | |
| | | | Luxembourg | 30.0 | | |
| | | | Others | 3.0 | | |
| Dairy prod; birds' eggs; natural ho | | | UAE | 2.3 | Georgia | 3.2 |
| | | | Georgia | 28.1 | US | 7.5 |
| | | | Russia | 51.3 | Russia | 88.7 |
| | | | US | 18.3 | Others | 0.5 |
| Live tree & other plant; bulb, root | Russia | 100 | Georgia | 100.0 | Russian Federation | 93.5 |
| | | | | | Georgia | 5.6 |
| | | | | | Others | 0.9 |
| Edible vegetables and certain roots | UAE | 32.1 | UAE | 0.0 | Latvia | 1.1 |
| | Georgia | 66.2 | Switzerland | 3.2 | Russia | 97.6 |
| | Russia | 1.7 | France | 1.5 | | |
| | | | Luxembourg | 26.5 | | |
| | | | US | 3.4 | | |
| | | | Russia | 65.3 | | |
| Edible fruit and nuts; peel of citr | UAE | 4.9 | Poland | 2.9 | Russia | 98.6 |
| | Latvia | 2.0 | Russia | 94.0 | Others | 1.4 |
| | Russia | 91.1 | Ukraine | 1.7 | | |
| | | | Others | 1.4 | | |
| | Country | 1997 | Country | 2007 | Country | 2020 |
| Prep of vegetable, fruit, nuts or o | Bulgaria | 2.2 | France | 1.5 | UAE | 1.9 |
| | Canada | 1.9 | Georgia | 2.0 | Belarus | 1.1 |
| | Germany | 47.9 | US | 10.2 | Belgium | 1.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Georgia | 4.7 | Ukraine | 30.3 | France | 1.4 |
| | Russia | 27.9 | Russia | 50.8 | France | 1.4 |
| | US | 13.6 | Others | 5.1 | Georgia | 4.3 |
| | Others | 1.9 | | | Kazakhstan | 1.0 |
| | | | | | Russian Federation | 69.5 |
| | | | | | United States | 11.9 |
| | | | | | Others | 6.1 |
| Beverages, spirits and vinegar. | Lithuania | 1.2 | Estonia | 1.0 | Iran | 1.1 |
| | Ukraine | 3.2 | Georgia | 1.0 | Kazakhstan | 1.5 |
| | Russia | 92.5 | Belarus | 2.2 | US | 3.4 |
| | Others | 3.1 | US | 3.2 | Belarus | 4.8 |
| | | | Unspecified | 3.3 | Ukraine | 5.7 |
| | | | Ukraine | 5.5 | Russia | 75.8 |
| | | | Russia | 79.7 | Others | 7.7 |
| | | | Others | 4.1 | | |
| Tobacco and manufactured tobacco | Georgia | 100.0 | Netherlands | 1.0 | Afghanistan | 1.4 |
| | | | Jordan | 1.2 | Georgia | 3.2 |
| | | | Other Asia, nes | 2.5 | Ukraine | 3.3 |
| | | | Vietnam | 2.7 | Russia | 4.6 |
| | | | Unspecified | 3.7 | UAE | 11.4 |
| | | | Japan | 4.1 | Syria | 12.1 |
| | | | Sweden | 6.3 | Iraq | 62.5 |
| | | | Turkmenistan | 7.5 | Others | 1.5 |
| | | | Georgia | 12.0 | | |
| | | | Russia | 19.9 | | |
| | | | US | 35.2 | | |
| | | | Others | 3.9 | | |

Appendix 2. Share of Import of Agroindustry Products in the Products Groups in 2020 (%)




Appendix 3. Production, Import and Self-Sufficiency

| | | 2005 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|
| **Wheat** | **Production, thous. tons** | 258.4 | 183.5 | 362.7 | 350.4 | 176.4 | 187.5 | 112.6 |
| | **Import, thous. tons** | 335.6 | 365.7 | 383.4 | 323.8 | 374 | 417.2 | 325.6 |
| | **Degree of self-sufficiency,%** | 43.5 | 33.5 | 49.5 | 53.2 | 33.2 | 31.5 | 25.9 |
| | **Export thous. Tons** | 0.4 | 1.1 | 13 | 15.7 | 19.2 | 8.9 | 3.3 |
| **Rye** | **Production, thous. tons** | 0.6 | 0.3 | 0.1 | 0 | 0.3 | 0.8 | 0.2 |
| | **Import, thous. tons** | 0.4 | 0.2 | 0.3 | 0.4 | 0.5 | 0.4 | 0.3 |
| | **Degree of self-sufficiency,%** | 60 | 60 | 25 | 6.4 | 39.6 | 65.6 | 35.7 |
| | **Export thous. Tons** | 0.7 | 0.4 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 |
| **barley** | **Production, thous. tons** | 110.8 | 118.6 | 187.3 | 197.1 | 92.9 | 124.2 | 68.3 |
| | **Import, thous. tons** | 6 | 37.3 | 7.2 | 15.5 | 18.6 | 21.9 | 29.4 |
| | **Degree of self-sufficiency,%** | 95.4 | 76.3 | 96.6 | 93 | 83.8 | 85.3 | 70.3 |
| **Oats** | **Production, thous. tons** | 0.7 | 2.6 | 8.5 | 9.4 | 5.9 | 4.9 | 3.4 |
| | **Import, thous. tons** | 0 | 0.3 | 0.6 | 0.7 | 0.8 | 0.8 | 0.7 |
| | **Degree of self-sufficiency,%** | 100 | 89.7 | 93.4 | 93.1 | 87.9 | 85.6 | 83.4 |
| **Corn** | **Production, thous. tons** | 14.1 | 12.8 | 21.7 | 21 | 10.4 | 7.6 | 4.7 |
| | **Import, thous. tons** | 35.9 | 48.6 | 51.9 | 37.1 | 48.8 | 69.9 | 68.2 |
| | **Degree of self-** | 28.2 | 20.8 | 29.5 | 36.1 | 17.6 | 9.8 | 6.5 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **sufficiency,%** | | | | | | | |
| Rice | Production, thous. tons | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Import, thous. tons** | 17.5 | 12.6 | 9.9 | 9.3 | 9.9 | 10.2 | 11.7 |
| | **Degree of self-sufficiency,%** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other granules | Production, thous. tons | 7.3 | 4.2 | 15.4 | 19.3 | 11.6 | 9.4 | 5.8 |
| | **Import, thous. tons** | 5 | 2.5 | 1.5 | 2 | 2.2 | 1.9 | 3.4 |
| | **Degree of self-sufficiency,%** | 59.3 | 62.7 | 91.7 | 90.6 | 98.1 | 82.9 | 63.4 |
| **Potatoes** | **Production, thous. tons** | 564.2 | 482 | 607.7 | 606.3 | 547.4 | 415.1 | 404.1 |
| | **Import, thous. tons** | 1.4 | 3.2 | 7.3 | 7.8 | 7.6 | 8.7 | 12.5 |
| | **Degree of self-sufficiency,%** | 99.8 | 100.2 | 102.1 | 101.3 | 102.6 | 102.6 | 101.1 |
| | **Export thous. Tons** | 0.3 | 4.4 | 20 | 15.7 | 21.7 | 19.1 | 17 |
| **Vegetables and melon** | **Production, thous. tons** | 781.6 | 840.1 | 1294.4 | 1204.8 | 1076.8 | 755 | 749.5 |
| | **Import, thous. tons** | 16.2 | 22.6 | 26 | 19.5 | 27 | 38.9 | 48.9 |
| | **Degree of self-sufficiency,%** | 101.7 | 98.3 | 100.3 | 103.3 | 102.5 | 104.7 | 102.4 |
| | **Export thous. Tons** | 29.4 | 7.8 | 29.7 | 58.3 | 53 | 72.9 | 66.7 |
| **of which: cabbage** | **Production, thous. tons** | 107.2 | 114.3 | 141.8 | 134.5 | 117.1 | 89.5 | 79.5 |
| | **Import, thous. tons** | 0 | 0.1 | 5.8 | 0.4 | 0.9 | 1.6 | 2.5 |
| | **Degree of self-sufficiency,%** | 100 | 101.6 | 102.1 | 99.9 | 99.8 | 100.6 | 100.8 |
| **Cauliflower** | **Production, thous. tons** | 5.6 | 9.9 | 15.5 | 13.2 | 16.8 | 14.9 | 15.1 |
| | **Import, thous. tons** | 0 | 0 | 0 | 0.1 | 0 | 0.2 | 0.3 |
| | **Degree of self-sufficiency,%** | 100 | 100 | 103.3 | 100.8 | 107.2 | 108.6 | 111 |
| **Cucumber** | **Production, thous. tons** | 64.4 | 63.3 | 92.1 | 84.9 | 74.3 | 50.6 | 44.1 |
| | **Import, thous. tons** | 1 | 1.3 | 1.1 | 0.7 | 1.5 | 1.9 | 3.2 |
| | **Degree of self-sufficiency,%** | 98.6 | 98.4 | 103.5 | 101.6 | 100.6 | 101.6 | 117.7 |
| | **Export thous. Tons** | 0.1 | 0.3 | 4.2 | 2 | 1.9 | 2.7 | 9.8 |
| **Tomatoes** | **Production, thous. tons** | 234.9 | 251.9 | 320.2 | 298.1 | 234.2 | 138.1 | 158.8 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Import, thous. tons** | 1.4 | 0.7 | 2.4 | 1.6 | 1.9 | 9.8 | 13.5 |
| | **Degree of self-sufficiency,%** | 113.2 | 100.6 | 100.5 | 115.5 | 113.7 | 129 | 111.6 |
| | **Export thous. Tons** | 28.8 | 2.3 | 4.1 | 41.7 | 30.1 | 40.9 | 30 |
| **Carrot** | **Production, thous. tons** | 17.1 | 20.4 | 24.6 | 24.2 | 18.8 | 16.7 | 13.2 |
| | **Import, thous. tons** | 0 | 0 | 0.8 | 1.7 | 2.1 | 3 | 3.7 |
| | **Degree of self-sufficiency,%** | 100 | 102 | 96.9 | 93.4 | 89.8 | 84.9 | 78.1 |
| | **Export thous. Tons** | 0 | 0.4 | 0 | 0 | 0 | 0 | 0 |
| **Bow** | **Production, thous. tons** | 48.8 | 38.3 | 52 | 53.9 | 48.9 | 39.3 | 37 |
| | **Import, thous. tons** | 5.7 | 10.5 | 6.9 | 5.3 | 5.1 | 4.4 | 5.6 |
| | **Degree of self-sufficiency,%** | 89.5 | 78.5 | 88.3 | 91.5 | 90.8 | 91.2 | 86.9 |
| | **Export thous. Tons** | 0 | 0 | 0 | 0.3 | 0.1 | 0.6 | 0 |
| **Garlic** | **Production, thous. tons** | 8.7 | 8.8 | 13.2 | 14.2 | 12.6 | 10.5 | 10.1 |
| | **Import, thous. tons** | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| | **Degree of self-sufficiency,%** | 98.9 | 98.9 | 98.5 | 99.3 | 98.9 | 99 | 106.1 |
| | **Export thous. Tons** | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 |
| **Eggplant** | **Production, thous. tons** | 0 | 0 | 77.3 | 78.6 | 84.5 | 51.3 | 43.9 |
| | **Import, thous. tons** | 0 | 0 | 0 | 0.1 | 0.1 | 0.3 | 1.2 |
| | **Degree of self-sufficiency,%** | 0 | 0 | 100.1 | 100.4 | 100.5 | 99.9 | 99.2 |
| | **Export thous. Tons** | 0 | 0 | 0.1 | 0.4 | 0.4 | 0.2 | 0.8 |
| **Pepper** | **Production, thous. tons** | 0 | 0 | 80.2 | 79.9 | 83.3 | 50.1 | 48.8 |
| | **Import, thous. tons** | 0 | 0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.7 |
| | **Degree of self-sufficiency,%** | 0 | 0 | 100.4 | 100.8 | 101.5 | 103.3 | 100 |
| | **Export thous. Tons** | 0 | 0 | 0.4 | 0.8 | 1.5 | 2 | 0.7 |
| **Green pea** | **Production, thous. tons** | 0.6 | 0.2 | 0.6 | 0.8 | 0.7 | 1.2 | 0.6 |
| | **Import, thous. tons** | 2.2 | 2.4 | 2.6 | 2.3 | 4.4 | 3.9 | 4 |
| | **Degree of self-** | 21.4 | 7.7 | 18.8 | 25.8 | 13.5 | 22.7 | 12.3 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **sufficiency,%** | | | | | | | |
| **Green beans** | **Production, thous. tons** | 0 | 0 | 18 | 17.2 | 18.9 | 17.8 | 15.2 |
| | **Import, thous. tons** | 0 | 0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 |
| | **Degree of self-sufficiency,%** | 0 | 0 | 100 | 99.8 | 99.9 | 99.9 | 99.3 |
| | **Export thous. Tons** | 0 | 0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 |
| **Vegetable crops** | **Production, thous. tons** | 117.8 | 132.5 | 286.8 | 236.1 | 215.8 | 126.8 | 128 |
| | **Import, thous. tons** | 0.4 | 0.4 | 0.1 | 0.3 | 0.9 | 2 | 2.2 |
| | **Degree of self-sufficiency,%** | 99.7 | 99.8 | 100.2 | 100 | 100.1 | 98.7 | 98.9 |
| | **Export thous. Tons** | 0 | 0.1 | 0.7 | 0.3 | 1.2 | 0.3 | 0.8 |
| **Fruit and berries (except grapes)** | **Production, thous. tons** | 315.6 | 128.5 | 377.1 | 242.6 | 361.6 | 343.4 | 290.6 |
| | **Import, thous. tons** | 29 | 40.6 | 34.7 | 44.2 | 55.2 | 88 | 90.6 |
| | **Degree of self-sufficiency,%** | 95.1 | 79.8 | 102.1 | 98.1 | 109.7 | 108.9 | 104 |
| | **Export thous. Tons** | 12.6 | 8 | 42.3 | 39.6 | 87.2 | 116 | 101.7 |
| **of which: apples** | **Production, thous. tons** | 0 | 56.5 | 127 | 62.6 | 116.1 | 109.9 | 81.7 |
| | **Import, thous. tons** | 0 | 2.6 | 1.1 | 2.4 | 5.3 | 5 | 4 |
| | **Degree of self-sufficiency,%** | 0 | 96.2 | 100.6 | 101.8 | 99.7 | 105.9 | 114.6 |
| | **Export thous. Tons** | 0 | 0.3 | 1.9 | 3.5 | 4.9 | 11.1 | 14.4 |
| **Pear** | **Production, thous. tons** | 0 | 16.6 | 19.7 | 13.1 | 18.2 | 14.2 | 12.5 |
| | **Import, thous. tons** | 0 | 0.1 | 0.1 | 0.2 | 0.9 | 4.5 | 2.6 |
| | **Degree of self-sufficiency,%** | 0 | 99.4 | 111.8 | 116.8 | 101.1 | 98.6 | 100.8 |
| | **Export thous. Tons** | 0 | 0 | 2.1 | 2.1 | 1.1 | 4.3 | 2.7 |
| **Quail** | **Production, thous. tons** | 0 | 0.7 | 2.3 | 1.4 | 2.1 | 2.3 | 1.6 |
| | **Import, thous. tons** | 0 | 0.1 | 0 | 0.1 | 0 | 0.1 | 0.1 |
| | **Degree of self-sufficiency,%** | 0 | 91.4 | 98.8 | 96.1 | 100 | 97.9 | 97.7 |
| **Apricot** | **Production, thous. tons** | 0 | 7.7 | 116.3 | 62.1 | 87.3 | 104 | 68.1 |
| | **Import, thous. tons** | 0 | 0.3 | 0.3 | 0.1 | 0.1 | 0.6 | 0.1 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Degree of self-sufficiency,% | 0 | 128.3 | 119.3 | 109.9 | 165 | 179.5 | 183 |
| | Export thous. Tons | 0 | 2 | 19.1 | 5.7 | 34.5 | 46.7 | 31 |
| **Peaches** | Production, thous. tons | 0 | 23.8 | 49.9 | 50.1 | 73.2 | 52.2 | 62.7 |
| | Import, thous. tons | 0 | 0.2 | 0 | 0.1 | 1.3 | 4.1 | 2.9 |
| | Degree of self-sufficiency,% | 0 | 99.8 | 104.6 | 114.9 | 114.4 | 110.8 | 113.4 |
| | Export thous. Tons | 0 | 0.2 | 2.2 | 6.6 | 10.5 | 9.3 | 10.2 |
| **Cherry** | Production, thous. tons | 0 | 1.7 | 14.4 | 12.1 | 8.4 | 12.5 | 12.8 |
| | Import, thous. tons | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 |
| | Degree of self-sufficiency,% | 0 | 129.1 | 117.1 | 108.6 | 134.2 | 160.8 | 184.3 |
| | Export thous. Tons | 0 | 0.4 | 2.1 | 1 | 2.1 | 4.7 | 6.5 |
| **Plums** | Production, thous. tons | 0 | 4 | 18 | 15.7 | 24 | 21.2 | 23.2 |
| | Import, thous. tons | 0 | 0.3 | 0.1 | 0.1 | 0.4 | 0.3 | 0.4 |
| | Degree of self-sufficiency,% | 0 | 96.1 | 112.9 | 104.9 | 143.7 | 154.1 | 122.8 |
| | Export thous. Tons | 0 | 0.2 | 2.2 | 0.8 | 7.7 | 7.8 | 4.7 |
| **cherry** | Production, thous. tons | 0 | 1.6 | 4.1 | 3.8 | 4.1 | 4.7 | 3.2 |
| | Import, thous. tons | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Degree of self-sufficiency,% | 0 | 109.3 | 123 | 126.9 | 128.4 | 124.3 | 174.4 |
| | Export thous. Tons | 0 | 0.1 | 0.8 | 0.8 | 0.9 | 0.9 | 1.4 |
| **Nuts** | Production, thous. tons | 0 | 2.9 | 5.4 | 4.1 | 5.3 | 3.3 | 3.4 |
| | Import, thous. tons | 0 | 0 | 0.1 | 0 | 0.2 | 0.2 | 0.3 |
| | Degree of self-sufficiency,% | 0 | 98.7 | 99 | 99.6 | 97.7 | 94.9 | 92.9 |
| **Thil (hazelnut)** | Production, thous. tons | 0 | 0.3 | 0.5 | 0.4 | 0.4 | 0.3 | 0.4 |
| | Import, thous. tons | 0 | 0.1 | 0 | 0 | 0.8 | 1.1 | 0 |
| | Degree of self-sufficiency,% | 0 | 68.5 | 96.4 | 98.2 | 98.1 | 69.5 | 102.2 |
| | Export thous. Tons | 0 | 0 | 0 | 0 | 0.8 | 0.9 | 0.1 |
| **Fig** | Production, | 0 | 0.5 | 1.4 | 1.5 | 0.9 | 1.2 | 1.5 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **thous. tons** | | | | | | | |
| | **Import, thous. tons** | 0 | 0 | 0 | 0 | 0.2 | 0.4 | 0.5 |
| | **Degree of self-sufficiency,%** | 0 | 99.7 | 98.8 | 100.6 | 112 | 127.4 | 187.9 |
| | **Export thous. Tons** | 0 | 0 | 0 | 0 | 0.3 | 0.6 | 1.2 |
| **Berries** | **Production, thous. tons** | 0 | 10.1 | 13.3 | 11.5 | 16.3 | 12.1 | 12.6 |
| | **Import, thous. tons** | 0 | 1.5 | 2.1 | 3.5 | 6.5 | 12.1 | 15 |
| | **Degree of self-sufficiency,%** | 0 | 88.8 | 90.5 | 130.5 | 118.1 | 69.2 | 64.6 |
| | **Export thous. Tons** | 0 | 0.2 | 0.7 | 6.2 | 9 | 6.7 | 8.2 |
| **Legumes** | **Production, thous. tons** | 4.4 | 4.5 | 5.7 | 5.3 | 4.5 | 3.3 | 3.7 |
| | **Import, thous. tons** | 3.1 | 6.3 | 4.1 | 3.3 | 4.5 | 5.4 | 6 |
| | **Degree of self-sufficiency,%** | 58.7 | 41.7 | 58.2 | 61.6 | 49.7 | 38.6 | 38.2 |
| **of which: peas** | **Production, thous. tons** | 0.2 | 0.2 | 0.4 | 0.4 | 0.5 | 0.4 | 0.7 |
| | **Import, thous. tons** | 1.6 | 3.5 | 1.4 | 1 | 1.4 | 1.4 | 2.3 |
| | **Degree of self-sufficiency,%** | 9.3 | 4.5 | 25 | 28.6 | 25.7 | 23 | 23 |
| **Beans** | **Production, thous. tons** | 4.1 | 4.2 | 5 | 4.7 | 3.7 | 2.6 | 2.7 |
| | **Import, thous. tons** | 0 | 0.2 | 0.5 | 0.3 | 0.6 | 0.7 | 0.5 |
| | **Degree of self-sufficiency,%** | 99.3 | 94.5 | 90.9 | 94.8 | 86.4 | 83.1 | 86.2 |
| **Lentils** | **Production, thous. tons** | 0 | 0 | 0.1 | 0 | 0.1 | 0.2 | 0.1 |
| | **Import, thous. tons** | 1.2 | 2.4 | 1.9 | 1.6 | 2.2 | 2.8 | 2.7 |
| | **Degree of self-sufficiency,%** | 1.9 | 1.5 | 2.6 | 1.8 | 4.2 | 7.1 | 4.5 |
| **Peas** | **Production, thous. tons** | 0.1 | 0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 |
| | **Import, thous. tons** | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.5 | 0.5 |
| | **Degree of self-sufficiency,%** | 19.8 | 12.1 | 14.8 | 17.3 | 36.7 | 20.9 | 13.8 |
| **Vegetable oil** | **Production, thous. tons** | 0.3 | 1 | 2 | 1.5 | 1.2 | 0.6 | 0.4 |
| | **Import, thous. tons** | 19.1 | 23.6 | 23.8 | 25.4 | 26.7 | 28.8 | 28.7 |
| | **Degree of self-sufficiency,%** | 1.5 | 4.1 | 7.8 | 5.6 | 4.3 | 2.2 | 1.5 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Sugar** | **Production, thous. tons** | 1.9 | 32.5 | 53.2 | 54.1 | 48.6 | 58 | 60 |
| | **Import, thous. tons** | 102.5 | 61.2 | 8.8 | 7.5 | 28.8 | 30.2 | 25.2 |
| | **Degree of self-sufficiency,%** | 1.8 | 35.8 | 89.6 | 91.4 | 65.2 | 68.6 | 73 |
| | **Export thous. Tons** | 1 | 2.9 | 2.6 | 2.4 | 2.9 | 3.7 | 3 |
| **Eggs** | **Production, thous. tons** | 28.5 | 38.6 | 36.3 | 38.2 | 37.6 | 40 | 39.6 |
| | **Import, thous. tons** | 0.2 | 0.5 | 0.2 | 0.2 | 0.7 | 0.2 | 0 |
| | **Degree of self-sufficiency,%** | 101.8 | 99.2 | 99.5 | 99.4 | 98.2 | 99.5 | 100 |
| | **Export thous. Tons** | 0.7 | 0.2 | 0 | 0 | 0 | 0 | 0 |
| **Milk** | **Production, thous. tons** | 594.6 | 600.9 | 728.6 | 754.2 | 758.2 | 697.7 | 667.9 |
| | **Import, thous. tons** | 113.7 | 94.3 | 132.6 | 143.1 | 149 | 145.6 | 146.1 |
| | **Degree of self-sufficiency,%** | 86.3 | 87 | 93 | 88.6 | 91.2 | 86.8 | 84.3 |
| | **Export thous. Tons** | 19.6 | 4.5 | 77.6 | 46.5 | 75.4 | 39.2 | 21.9 |
| **Beef** | **Production, thous. tons** | 34.4 | 48 | 63.6 | 68.1 | 70.8 | 68.8 | 68.1 |
| | **Import, thous. tons** | 11.2 | 8.7 | 5.4 | 5.6 | 6.7 | 8.4 | 7.6 |
| | **Degree of self-sufficiency,%** | 76.8 | 85.1 | 92.3 | 92.5 | 91.5 | 89.2 | 90.4 |
| | **Export thous. Tons** | 0.8 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.4 |
| **Pork** | **Production, thous. tons** | 9.4 | 7.9 | 17.5 | 18 | 16.6 | 16.3 | 16.1 |
| | **Import, thous. tons** | 7.2 | 11.4 | 13 | 10.3 | 12.4 | 14.6 | 13.3 |
| | **Degree of self-sufficiency,%** | 57.3 | 41.1 | 57.8 | 64.1 | 58 | 53.3 | 55.5 |
| | **Export thous. Tons** | 0.2 | 0.1 | 0.2 | 0.2 | 0.4 | 0.3 | 0.4 |
| **Lamb and goat** | **Production, thous. tons** | 7.6 | 8.2 | 9.8 | 10.3 | 11 | 10.8 | 10.7 |
| | **Import, thous. tons** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Degree of self-sufficiency,%** | 100 | 100 | 107.7 | 133.8 | 138.9 | 128.6 | 113.8 |
| | **Export thous. Tons** | 0 | 0 | 0.7 | 2.6 | 3.1 | 2.4 | 1.3 |
| **Poultry** | **Production, thous. tons** | 4.6 | 5.4 | 9.5 | 9.7 | 10.6 | 12.3 | 12.4 |
| | **Import, thous.** | 20 | 38.3 | 34.2 | 24.4 | 36.7 | 34.2 | 44.9 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **tons** | | | | | | | |
| | **Degree of self-sufficiency,%** | 18.7 | 12.4 | 21.8 | 28.5 | 22.5 | 26.6 | 21.7 |
| | **Export thous. Tons** | 0 | 0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| **Fish** | **Production, thous. tons** | 1 | 6.5 | 23.3 | 20.1 | 17.1 | 17.2 | 18.3 |
| | **Import, thous. tons** | 7.1 | 2.8 | 2.9 | 2.6 | 3.7 | 3.3 | 3.7 |
| | **Degree of self-sufficiency,%** | 13.9 | 82.3 | 114.2 | 108.6 | 101.8 | 109 | 113.1 |
| | **Export thous. Tons** | 0.9 | 1.4 | 5.8 | 4.2 | 4 | 4.7 | 5.8 |
| **Grapes** | **Production, thous. tons** | 164.4 | 222.9 | 309.2 | 178.8 | 210 | 179.7 | 217.5 |
| | **Import, thous. tons** | 3.7 | 3.8 | 2.8 | 3.8 | 8 | 7 | 8.2 |
| | **Degree of self-sufficiency,%** | 98.2 | 101.1 | 101.2 | 119.3 | 106.4 | 104.8 | 103.6 |
| | Export thous. Tons | 0.7 | 6.3 | 6.5 | 32.7 | 20.7 | 15.3 | 15.7 |

source: NSC, www.armstat.am

## Appendix 4. Statistics on Agroindustry of Armenia

| | Variable | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Value of gross agricultural output (GAO) (mio LCU, in constant prices) | 285000 | 333000 | 281173.4 | 427832 | 636.7 | 945.4 | 878.5 | 908.6 | 892.9 | 852.8 | 819.312 |
| 2 | Value of crop GAO (bln LCU) | 141 | 228 | 136.2 | 288 | 392.7 | 550 | 486.7 | 469.3 | 415.8 | 410.4 | n/a |
| 3 | Value of livestock GAO | 144 | 105 | 145 | 205 | 244 | 395.4 | 391.8 | 439.3 | 477.1 | 442.4 | n/a |
| 4 | Agricultural land (1000 ha) | | 1527.1 | | 2 045.7 | 2100.9 | 2 045.7 | 2 045.5 | 2 043.8 | 2 044.5 | 2044.2 | n/a |
| 5 | Arable land (1000ha) | 437.1 | 483.5 | 460.1 | 469.7 | 448.5 | 446.7 | 446.4 | 446 | 445.6 | 444.8 | n/a |
| 6 | Sown land (1000ha) | | 351.9 | 303.2 | 331.8 | 283.6 | 337.5 | 353.4 | 294.5 | 242.3 | 227.9 | n/a |
| 7 | Labor (1000) | 289.1 | 534.7 | 564.6 | 507.6 | 457.4 | 379 | 338.1 | 317.1 | 271.1 | 235.6 | n/a |
| 8 | Livestock (1000 units) | 2137.2 | 1200.6 | 1109.4 | 1277.6 | 1205 | 1588.2 | 1665.8 | 1569 | 1427.5 | 1418.8 | 1476.5 |
| | | n/a | 4029.2 | 5364.5 | 6139.3 | 5339.6 | 5733.7 | 5608.6 | 5383.2 | 5833.9 | 5570.9 | 6044.6 |
| 9 | Feed (1000 Mcal) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 10 | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 11 | Fertilizer (kg/ha) | n/a | n/a | n/a | 22.69231 | 24.2029 | 52.95449 | 110.4951 | n/a | n/a | n/a | n/a |
| 12 | Feed (ha) (Forage crops, total ) | 251.3 | 119.7 | 61.6 | 60.9 | 65.5 | 78.2 | 85.6 | 76.3 | 61.6 | 58.6 | n/a |
| 13 | center | 974.7 | 870.6 | 533.6 | 1093.6 | 1333.2 | 1337.3 | 1242.1 | 994.8 | 856.7 | 688.7 | n/a |
| 14 | GDP (mio LCU) | 8876.5 mio ruble | 522256.3 | 1031338 | 2242881 | 3460203 | 4828626 | 5043633 | 5067294 | 6005058 | 6551850 | 6183742.1 |
| 15 | Total Import | 2.64E+09 | 6.74E+08 | 8.4E+08 | 1.69E+09 | 3.74E+09 | 3.25E+09 | 3.21E+09 | 3.89E+09 | 4.84E+09 | 5.07E+09 | 4539388244 |
| | Import Animals (01-05) | n/a | 63301000 | 31789052 | 42678441 | 1E+08 | 1.06E+08 | 96634695 | 1.3E+08 | 1.32E+08 | 1.49E+08 | 131277470 |
| | Import Vegetables (06-15) | n/a | 85578000 | 1.11E+08 | 1.15E+08 | 2.62E+08 | 2.31E+08 | 2.1E+08 | 2.35E+08 | 2.72E+08 | 2.84E+08 | 306395702 |
| | Import Processed Agri (16-24) | n/a | 51472000 | 67848663 | 1.44E+08 | 3.08E+08 | 3.25E+08 | 3.23E+08 | 3.5E+08 | 4E+08 | 4.37E+08 | 393452048 |
| 16 | Export Total | 2E+09 | 2.71E+08 | 2.04E+08 | 8.06E+08 | 8.68E+08 | 1.31E+09 | 1.64E+09 | 2E+09 | 2.18E+09 | 2.41E+09 | 2355762330 |
| | Export Animals (01- | n/a | 140000 | 290923 | 6904304 | 10284700 | 43269844 | 36110621 | 57487083 | 50407550 | 51321282 | 78311852 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 05) | | | | | | | | | | | |
| | Export Vegetables(06-15) | n/a | 909000 | 515196 | 4849705 | 9016441 | 33099653 | 62315201 | 46126316 | 66328947 | 81494055 | 113256727 |
| | Export Processed Agri (16-24) | n/a | 12595000 | 26779162 | 95901660 | 1.22E+08 | 3.07E+08 | 4.18E+08 | 5.18E+08 | 5.48E+08 | 6.37E+08 | 554557339 |
| 17 | exchange rate* | n/a | n/a | 498.7 | 570.4 | 496 | 530.6 | 531.9 | 545.3 | 570.7 | 538 | 558.3 |
| | | n/a | 405.3858 | 539.5 | 457.7 | 373.7 | 477.9 | 480.5 | 482.7 | 483 | 480.4 | 489 |
| | | n/a | 85.35667 | 19.1 | 16.2 | 12.3 | 7.9 | 7.2 | 8.3 | 7.7 | 7.4 | 6.8 |

source: NSC, www.armstat.am, WITS, UNCOMtrade, cba.am