



GEORGIA'S AGRICULTURE SECTOR

KEY TRENDS FOR 2012-2019

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CONTENTS

Executive summary	_____	4
Introduction	_____	7
Chapter I. General overview of agriculture sector of Georgia	_____	8
Chapter II. State budget expenses on the agriculture sector	_____	15
Chapter III. Agricultural products	_____	18
Chapter IV. Exports and imports of agricultural products	_____	31
Conclusion and recommendations	_____	38

EXECUTIVE SUMMARY

Transparency International Georgia studied trends in Georgia's agriculture sector in 2012-2019 and revealed the following findings:

- **In Georgia, 39% of all employees work in agriculture;** 659,000 persons are employed in this sector, most of whom work in their own small farms.
- **An agricultural household on average holds 1.4 hectares of land.** The scarcity of land hinders the development of large-scale farming and taking advantage of economies of scale.
- **Low labor productivity is the main reason of poverty for people employed in agriculture.** In 2018, the average labor productivity of agricultural workers was GEL 407 per month, which is five times lower than the average productivity of the country's economy.
- **In 2018, 33% (160,000 hectares) of arable land and the land for greenhouse and perennial were unused.** Pasture and mowing land is 300,000 hectares. Georgia has 788,000 hectares of agricultural land, out of which 488,000 hectares were arable or for greenhouse and perennial plants.
- **Georgia's agriculture is not attractive for foreign investment.** This was partly stemmed from the ban on selling agricultural land to foreign nationals.
- **In 2013-2019, GEL 1.5 billion was spent on agricultural development from the state budget of Georgia. In the same period, the average growth rate of agriculture was 1.5% and was three times lower than the average growth rate of the economy.**
- **Compared to 2012, in 2018, real agricultural output has increased by GEL 220 million. The real growth was only GEL 29 million, compared to 2013.** In nominal terms, GEL 3 billion worth of agricultural output was produced in 2018 in Georgia.
- **The share of agriculture in the economy tends to decline.** In 2018, this figure stood at 7.8%.
- **In 2018, wheat crop increased by 33% compared to 2012, while corn yield decreased by 27%.** In 2012, Georgia's total crop yield was 370 thousand tonnes, which is 6 thousand tonnes more than in 2018.
- **Harvest of main vegetables is declining.** Only cucumber yield has a growth trend.
- **Compared to 2012, in 2018, the crop area was reduced by 20%.** The highest reduction was in corn areas.

- **Despite a decline in total crop yields, there is a positive trend in almost every annual crop yield.**
- **88% of Georgia's fruit crops come from five sorts: grapes, apples, tangerines, peaches and nuts.** Grapes are 51% of the total fruit crops. Compared to 2012, in 2018, the tangerine and hazelnut crop declined, while the yield of grapes, apples and peaches increased.
- **In 2018, farmers and households in Georgia had 8% less livestock than in 2012.**
- **The decline in the quantities of livestock did not have a clear impact on livestock production. Meat production had an upward trend.** Unlike meat, milk production has decreased.
- **Compared to 2012, in 2018, the number of poultry increased by 32%, but after 2015 this figure has been declining.** In 2018, 635 million eggs were produced, which is 34% more than in 2012.
- **In 2018, Georgia exported food and beverages worth USD 760 million, which is 57% more than in 2012**
- **Growth in food and beverage exports in 2013-2018 was mainly driven by a USD 132 million increase in wine exports, out of which USD 115 million was Russia's share.** In 2018, Russia's share of Georgian wine exports rose to 58%, which significantly increased the impact of the Russian market as a lever on Georgia.
- **In contrast to exports, in 2018, the value of food and beverage imports has decreased by 6% from 2012.** However, the imports was still USD 260 million more than exports.
- **High dependence on imported Russian wheat raises certain concerns. In 2016-2017, almost 100% of imported wheat came from this country. In 2018, Russia's share fell to 84%.** Such a high dependence on wheat imports from Russia poses a certain danger. Halting of wheat import from Russia to Georgia for political reasons, will lead to a shortage of wheat for a certain time and increase the price of bread.
- **If we take specific countries, the largest export destination for Georgia's food and beverages is Russia.** More specifically, USD 244 million worth of Georgia's agricultural products were exported to this country in 2018, while in 2012, this number stood at only USD 3.3 million. In 2018, Russia's share in Georgian exports of food and beverages was 32%.
- **In 2018, USD 148 million worth of Georgian food and beverages were exported to the EU countries, representing 15% of total Georgian exports.**

This figure reached a maximum of USD 221 million in 2016.

- **Given the decline in the quantities of basic crops and livestock products, the growth of the export of food and beverages and the replacement of imports has been driven by the development of the local processing industry.** The share of processed products in exports has increased, the value of which is higher than that of raw materials.
- **As the data show, government programs were mainly social in nature rather than aimed at increasing the economic efficiency of the sector.** Many state programs have been implemented in the last 15 years to develop agriculture.

INTRODUCTION

Today services and industry are 95% of the world economy¹, but Georgian governments still rely on agriculture. As agriculture is considered a traditional and priority sector in Georgia, governments are trying to promote agricultural development, consequently, significant funds are being spent from the country's budget.

Due to the difficult socio-economic situation that was in the country in the first half of the 1990s, part of the population returned to the countryside to work in agriculture. In 1996, the share of agriculture in the country's economy was 34%, which gradually declined to 7.8% in 2018. In the 1990s, part of the population returned to agriculture for survival, but this situation still partially remains. About 41% of the population still depend on agriculture today, which is typical for poor countries.

Many state programs have been implemented in the last 15 years for the development of agriculture, however, as data shows, these programs were mainly social in nature rather than intended to increase the economic efficiency of the sector.

Agricultural products and processed food and beverages are the main export commodities for Georgia. This is another reason why this issue is interesting.

Since 2012, state funding for the agriculture sector has increased significantly. Today this trend remains. Therefore, it is interesting to see the impact of increased state funding on Georgia's agricultural development.

The main reporting period for the study is 2012-2018, although in some cases we have reviewed developments of earlier years and the first half of 2019. The Statistics Office of Georgia (Geostat) provided the data given in the report. Data on public finances are taken from the website of the Ministry of Finance.

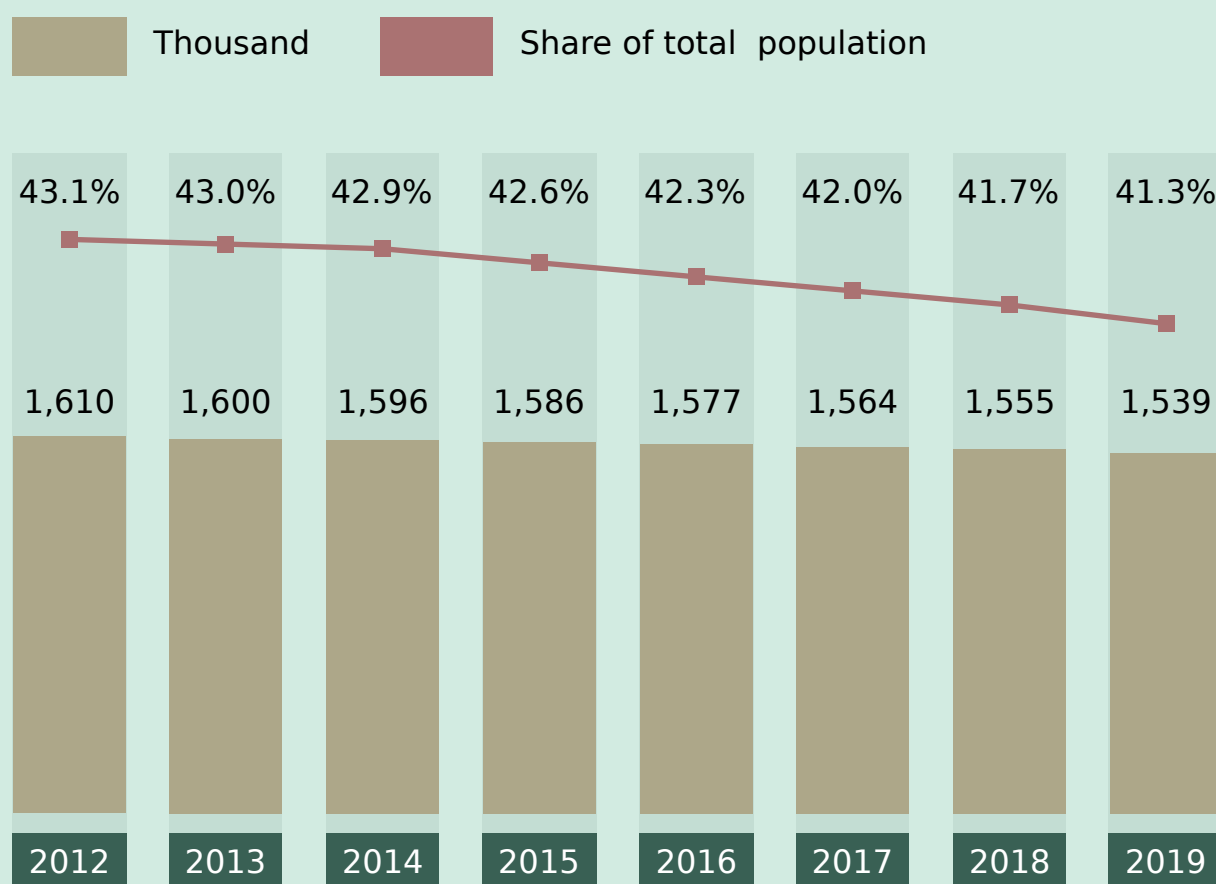
The study begins with a general overview of the Georgian agriculture sector. The next section reviews the funding allocated to this sector from the state budget. In the following chapters, the development of the agriculture sector is analyzed, including the results of state funding given both by size and growth rate of agriculture as a whole and by crops and livestock separately. The next chapter discusses Georgia's agricultural export and import figures and trends. The last chapter summarizes the results of the study and provides recommendations.

1 The World Bank, <http://wdi.worldbank.org/table/4.2>

CHAPTER I. GENERAL OVERVIEW OF AGRICULTURE SECTOR OF GEORGIA

As of January 1, 2019, there were approximately 1,539,000 persons living in rural areas of Georgia, which is 41.3% of the country's total population. The level of urbanization has been increasing over the last 7-8 years in Georgia. Compared to January 1, 2012, the share of the rural population decreased by 1.7% points (Figure 1).

Figure 1. The number of persons living in rural areas of Georgia, as of 1 January



Data source: Geostat

Geostat has been producing sectoral employment statistics since 2017, according to which 737 thousand persons were employed in agriculture in 2017. In 2018, this number decreased by 10.5% and reached 659 thousand. About 75% of those who work in agriculture are self-employed. According to the Geostat methodology, if a person is engaged in family farming in the village and receives even a nonmonetary benefit, he/she is considered an employed person.

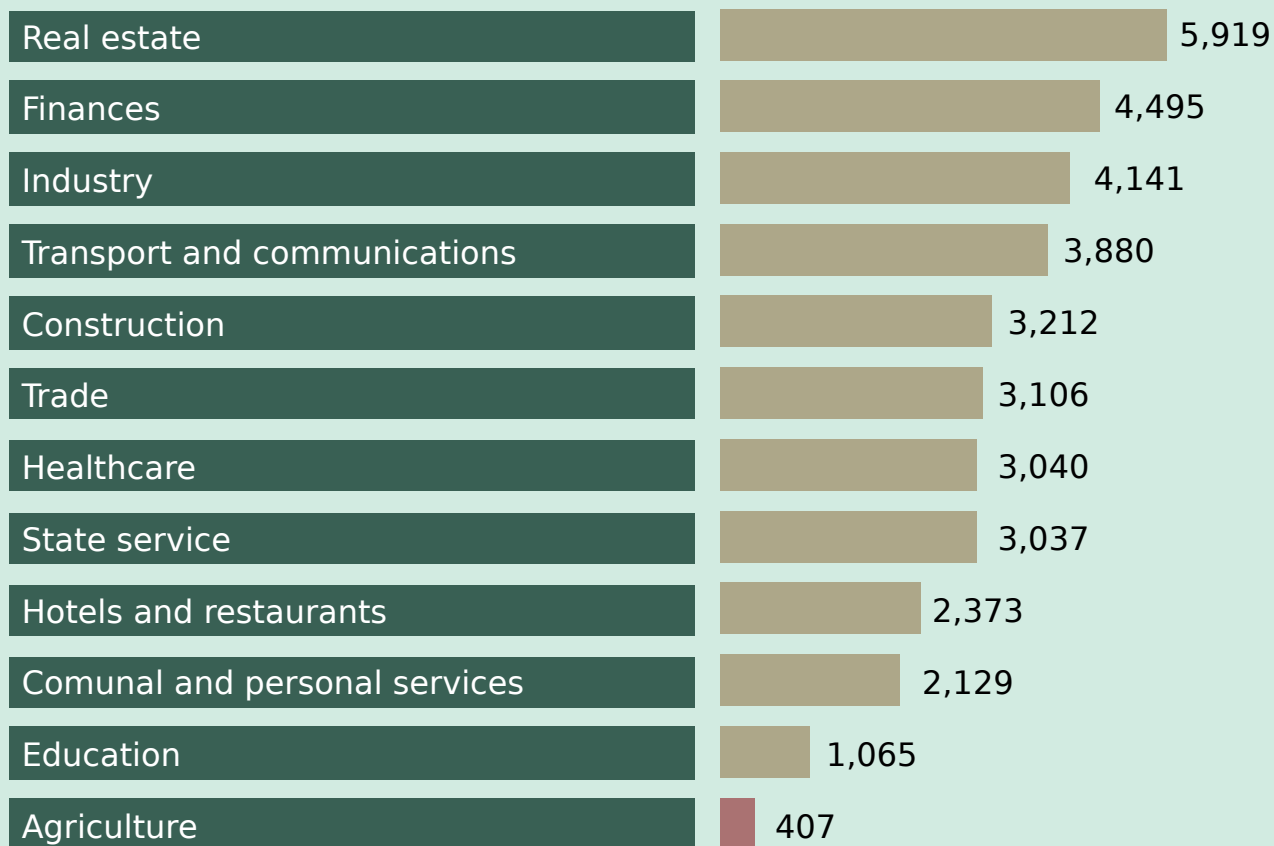
In 2018, 39% of the total number of employees in the country worked in agriculture while this sector accounted for only 7.8% of the country's economy. This means that the labor productivity of workers in agriculture is very low.

Labor productivity is measured by the value-added (calculated in GEL) a person produces in a given time period. In 2018, the country's monthly Gross Domestic Product (total value added) per employee (both hired and self-employed) was GEL 2,020. Therefore, the average labor productivity of an employee was GEL 2,020 GEL per month. If we take only agriculture, the average labor productivity of an employee working this sector was only GEL 407 per month, which is five times lower than the average labor productivity of all sectors of the economy (Figure 2). Among other sectors, agriculture is in the last place by average labor productivity and it is 2.5 times less productive than even the second-worst performer - the education sector.

Low labor productivity is the primary reason of poverty in Georgian villages and agriculture. Employees in this sector cannot make enough money to escape poverty. It should be noted, however, that compared to 2017, in 2018, both nominal and real (inflation-adjusted) labor productivity in agriculture increased by 17% and 13%, respectively.²

² As we have statistics by sector only from 2017, we cannot say how the labor productivity has changed compared to 2016 and earlier years.

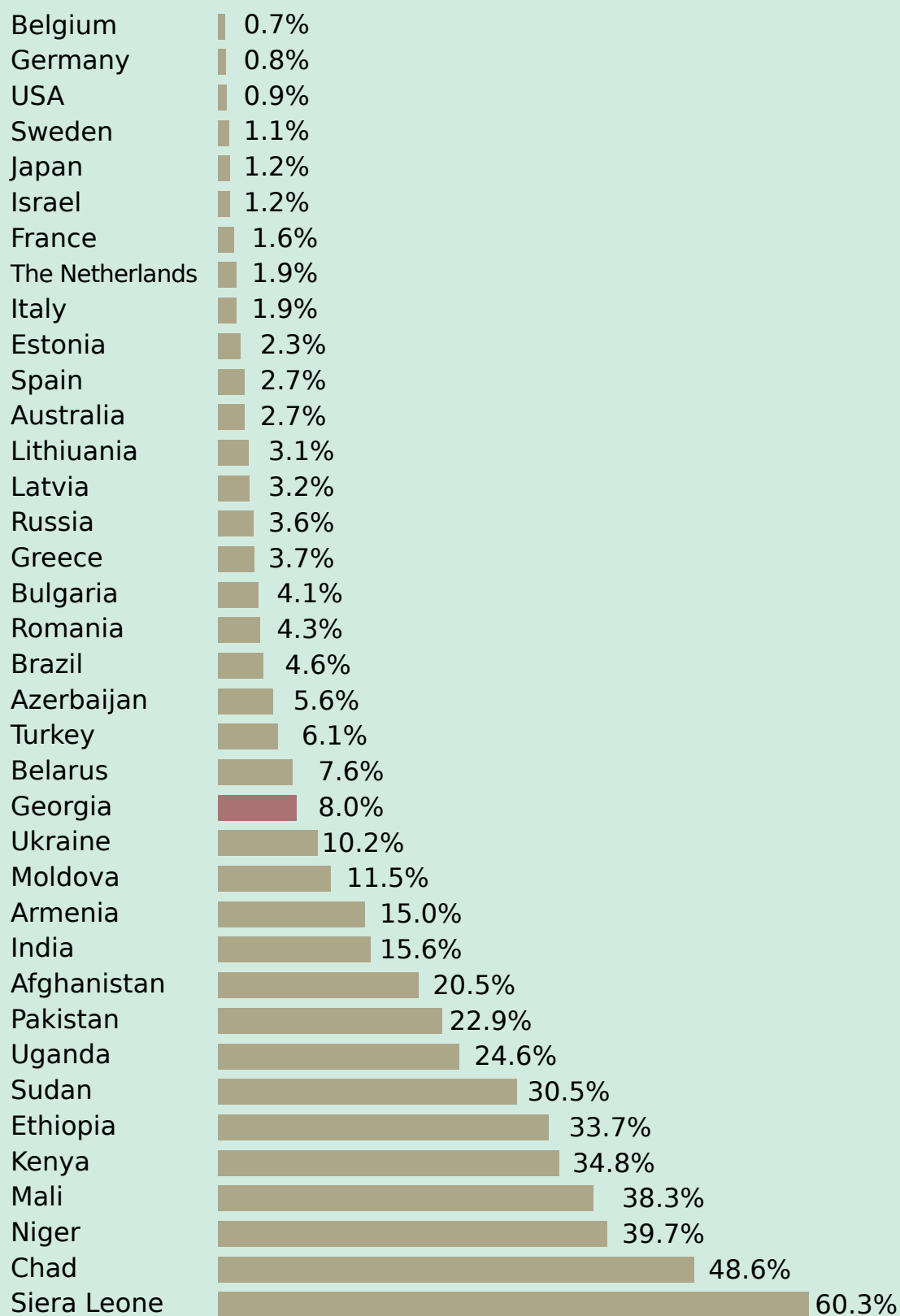
Figure 2. Average labor productivity per month in 2018, GEL



Data source: Geostat

Experiences from all wealthy countries of the world show that they have become rich mainly by the significant growth of industry and service sectors. At that time, the share of agriculture in the economy was declining, because other sectors were growing much faster (Figure 3).

Figure 3. Agriculture as a share of total economy, 2017



Data source: The World Bank

The large workforce is not the only reason for low labor productivity in agriculture. The underdevelopment of agricultural technologies is another reason for that. In Georgia, for example, an average of 2.7 tonnes of wheat and corn are harvested per hectare, while in Belgium, the Netherlands and Ireland this number reaches 9 tonnes.³

Another problem with Georgia's agriculture is a scarcity of land. Since Georgia is not a large country and at the same time, the level of urbanization is low, there is a small area of land available per agricultural households. According to the 2014 census conducted by Geostat, an average of 1.14 hectares of land per household was allocated in 2014.⁴ An agricultural household on average holds 0.6 hectares of arable land, 0.4 hectares for perennial plants, and 3.4 hectares for pasture and mowing.

Small-scale farming usually does not allow the farmer to take advantage of economies of scale and significantly reduce the average cost of production. In addition, small agricultural households usually are not focused on getting a profit and do not consider their work a commercial activity.

TI Georgia has requested information from three ministries (a) Economy and Sustainable Development, b) Justice, c) Environment and Agriculture on Georgia's agricultural land area for 2006-2018, but we have not received a response from any of the ministries. Geostat census results from 2014 show that, in 2014, there were 788,000 hectares of agricultural land in Georgia, out of which 488,000 hectares were arable or for greenhouse and perennial plants. In addition, Geostat reported that in 2018, the crop area was 207,000 hectares and the perennial crops were planted on 121,000 hectares. Therefore, 160,000 hectares (33%) out of the 488,000 hectares available for crop production were unused. Pasture and mowing land is 300,000 hectares, but there are no statistics on how many hectares are actually used for this purpose.

Another possible factor hindering Georgia's agriculture development may be the restriction of the sale of agricultural land to foreign nationals and companies. Before 2017, the Georgian Law on Agricultural Land Ownership has regulated the cases when a foreign citizen could acquire land. Since 2017, the Constitution has been covering this topic. Back in 2013, the Georgian parliament passed a law banning foreigners from buying agricultural land, but in the same year, an Austrian citizen appealed to the Constitutional Court. As a result, this law was considered unconstitutional. After that, the Ministry of Economy and Sustainable Development arbitrary restricted the sale of state-owned agricultural land to foreign nationals. Individuals could sell the land to foreigners, but as agricultural land was fragmented, large farmers could not buy them. On June 15, 2017, the Parliament of Georgia announced a moratorium and again banned selling of land to foreign nationals before the proposed amendments to the Constitution came into force. Under the current constitution, agricultural land, as a resource of particular importance, may be the sole property of the state, a

3 The World Bank data, <https://bit.ly/2rCXsQq>

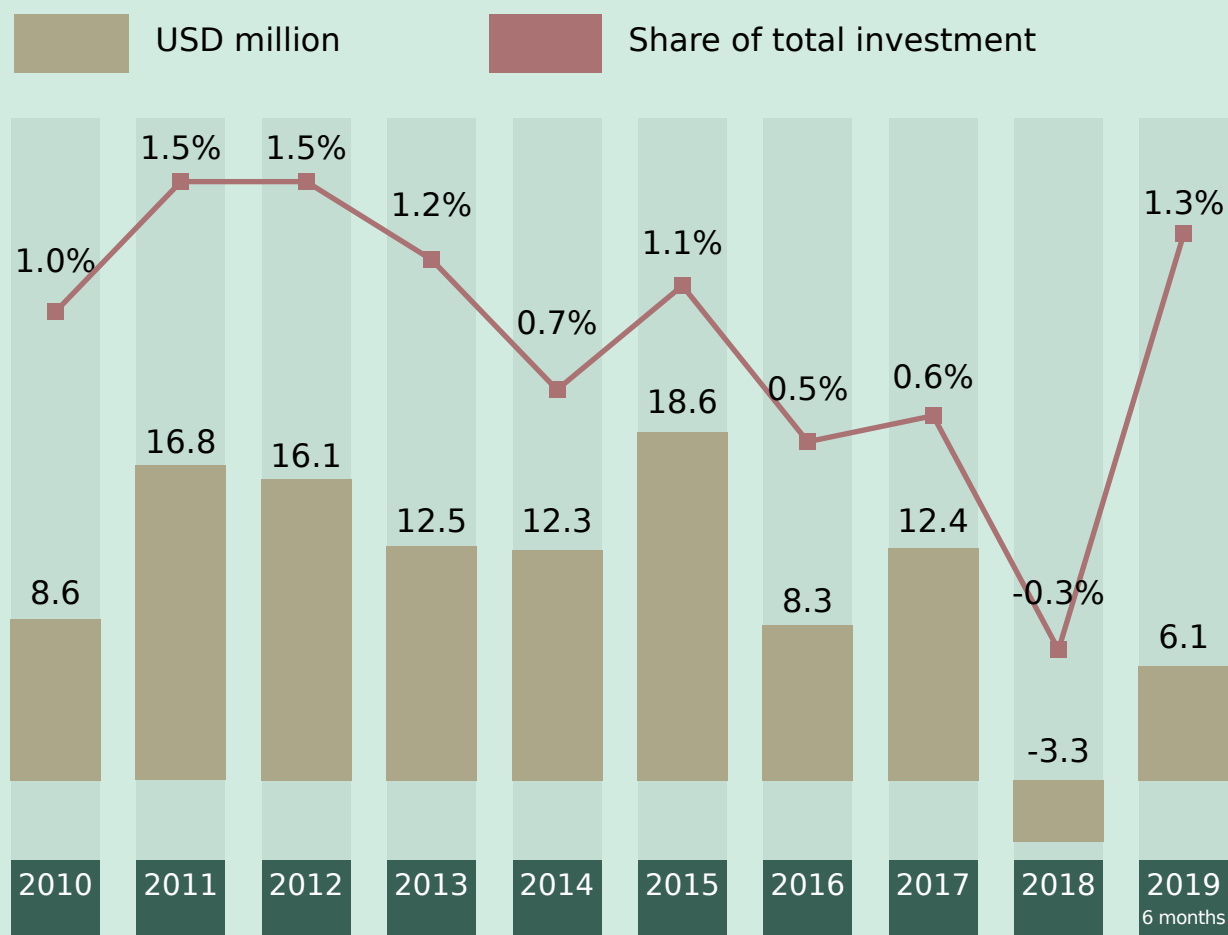
4 The results of 2014 agricultural census, <https://bit.ly/32rObAL>

self-governing unit, a citizen of Georgia or a union of Georgian citizens. The Law on Agricultural Land Ownership also set the exceptions from this ban.

Prohibition of the sale of land to foreigners may hinder foreign investment, new knowledge and technology in the field. However, it is also noteworthy that Georgian agriculture was not an attractive investment destination for foreigners even before the restrictions. In 2013, foreign nationals owned about 0.7% of Georgia's total agricultural land.⁵ In 2010-2012, the FDI in agriculture averaged USD 14 million annually, representing an average of 1.3% of the total FDI. In 2013-2017, the sector attracted an average of USD 13 million FDI annually, which was an average of 0.8% of the total FDI. In 2018, the balance was negative, foreign investment in agriculture declined by USD 3.3 million, likely due to the replacement of foreign investors by residents of Georgia in previous years.

5 Transparency International Georgia, Ban on land sales – stories from large foreign farmers, <https://bit.ly/2Pjq5ut>

Figure 4. FDI in Georgia's agriculture

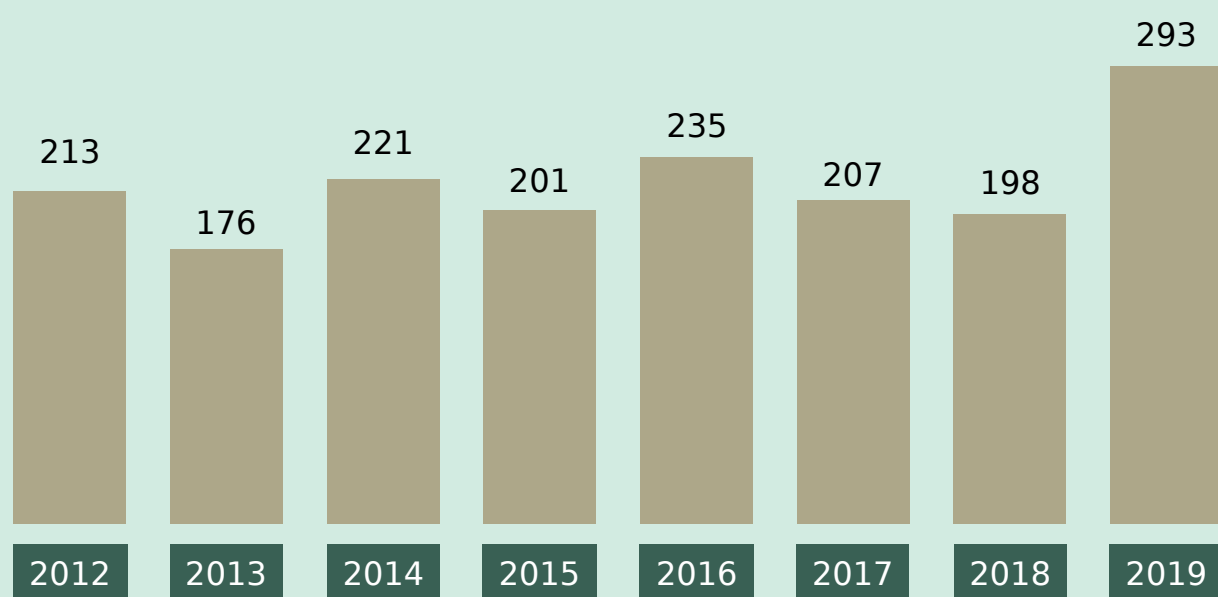


Data source: Geostat

CHAPTER II. STATE BUDGET EXPENSES ON THE AGRICULTURE SECTOR

In 2013-2019, the central government of Georgia spent GEL 1.5 billion in total to support agriculture development. The largest amount - GEL 293 million - was spent in 2019 (Figure 5).

Figure 5. Funding of the agriculture sector from the state budget, GEL million



Data source: The Ministry of Finance, Functional classification of the state budget

With the allocated GEL 65 million, the modernization of melioration systems was the largest agricultural program in the 2019 state budget. The program aims at rehabilitation of reservoirs, irrigation and drying systems, technical operation of melioration infrastructure and providing melioration equipment.

GEL 64 million was allocated for food safety and plant protection program. The goal of the program is to ensure state control of food safety, prevention of animal diseases, compulsory measures and laboratory studies, identification and registration of animals, fight against brown marmorated stinkbug etc.

The unified program for agriculture projects incorporated several sub-programs. The largest funding - GEL 57 million was allocated to the concessional agriculture loan sub-program. The purpose of the loan (leasing) is to fund primary and processing agricultural enterprises, to create new enterprises and expand existing ones, to increase primary agricultural production, to reduce the cost of bank loans for

agricultural enterprises and to increase accessibility. According to the Ministry of Agriculture, 139 new enterprises were created and 880 existing ones were reequipped within the framework of this sub-program.

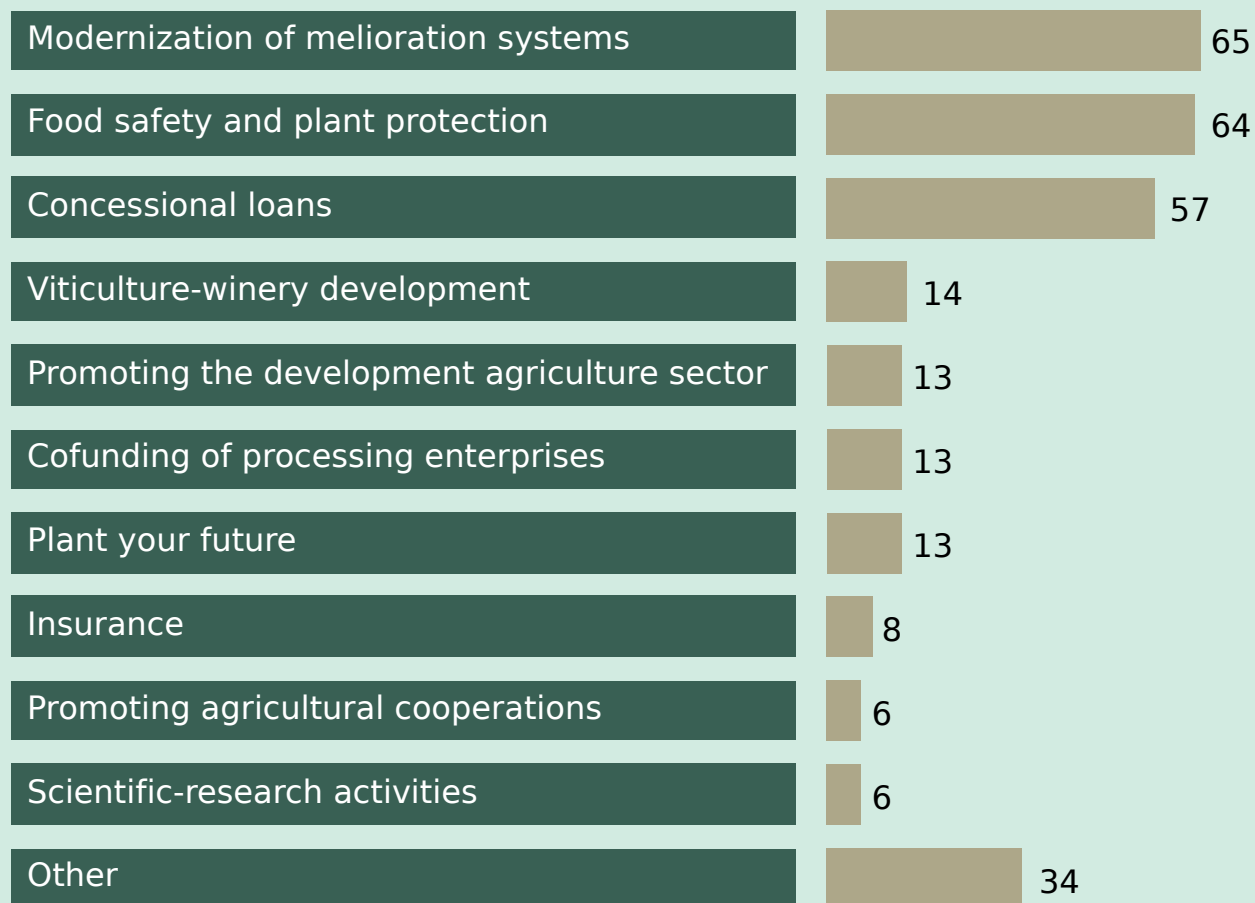
Up to GEL 14 million was allocated for the viticulture-winery development program in 2019. The main goal of the program is to increase the popularity of Georgian wines. Consequently, this program provides funds for international and local wine tasting, competitions, exhibitions and press tours, advertising campaigns, etc. The program also supports the registration of vineyard areas, the introduction of cadaster and the promotion of the sale of grapes.

In 2019, GEL 13 million was allocated for the co-financing of agricultural product processing enterprises with the aim of creating modern processing and storage capacities. About 50 enterprises were created within the program.

In 2019, GEL 13 million was allocated for the “plant you future” subprogram aimed at developing planting farms and promoting intensive development of orchards. According to the Ministry of Agriculture, 5,400 hectares of fruit orchards and two planting farms have been already created.

Relatively small amounts are allocated to other programs and sub-programs, which cover different areas (Figure 6).

Figure 6. State-funded agricultural programs in 2019, GEL million

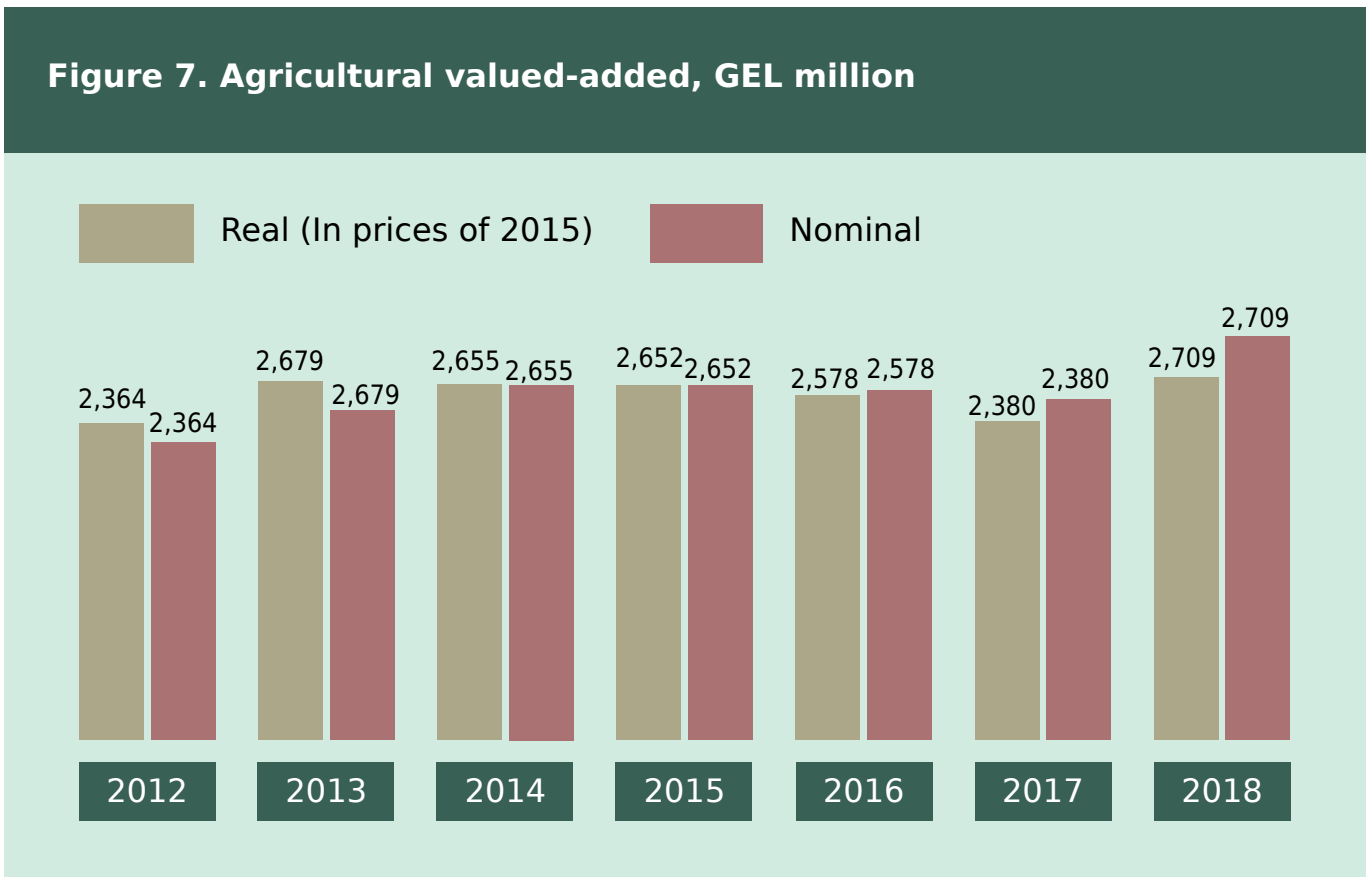


Data source: The Ministry of Finance

In 2013-2016, GEL 339 million was spent on the funding of small-scale farmers' spring agricultural works, which mainly included free plowing and planting. In 2013, Cartu Fund, the private charity fund, fully covered the expenses of GEL 192 million and nothing was spent from the state budget. Since 2014, small-scale farmers' spring agricultural works have been financed from the state budget: GEL 50 million was spent in 2014, GEL 46 million - in 2015 and GEL 51 million - in 2016. Since 2017, this program has been canceled.

CHAPTER III. AGRICULTURAL PRODUCTS

Agriculture is the fifth largest sector of the Georgian economy. It lags behind the trade, industry, construction, and real estate activities. In 2018, about GEL 3 billion of agricultural output was produced in Georgia, which is 7.8% of the total economy. In nominal terms, agriculture has increased by GEL 689 million in 2012-2018, though GEL 470 million of growth was due to inflation and GEL 220 million was real growth. The real growth reflects the material prosperity generated by the creation of more products. In real terms, the growth of the agricultural sector from 2013 to 2018 was only GEL 29 million (Figure 7).



Data source: Geostat

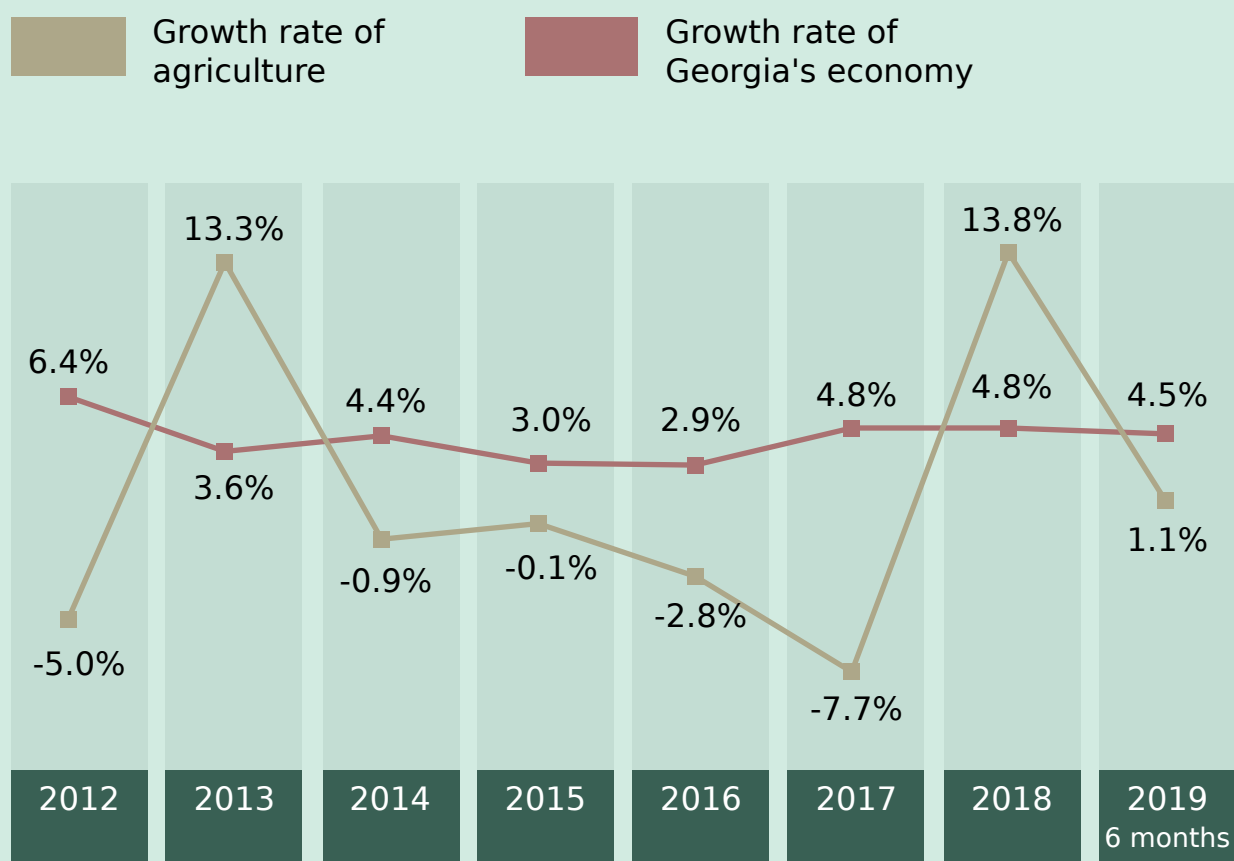
From 2012 to the first half of 2019, the Georgian economy grew by an average of 4.3% annually. In the same period, the average real growth rate of agriculture was 1.5%, which is 3 times less than the average growth rate of the economy.

During the study period, agricultural output grew only in 2013, 2018 and the first half of 2019, compared to the previous years. High growth rates were recorded in 2013 and 2018 (Figure 8). The high growth rate in 2013 was caused by the free plowing and planting state program that had a one-time effect. In addition, since 2013 the Russian market has been opened for Georgian agricultural products and in 2013 exports to

Russia increased by 300%. Export growth was also the main reason for the 13.8% growth in 2018.⁶

In 2014-2017, agricultural production has been declining each year. This was due to the reduced funding of the free plowing and planting program and its consequent cancelation as well as to the worsened economic situation in the region, especially in Russia.

Figure 8. Growth rates of the agriculture sector and economy



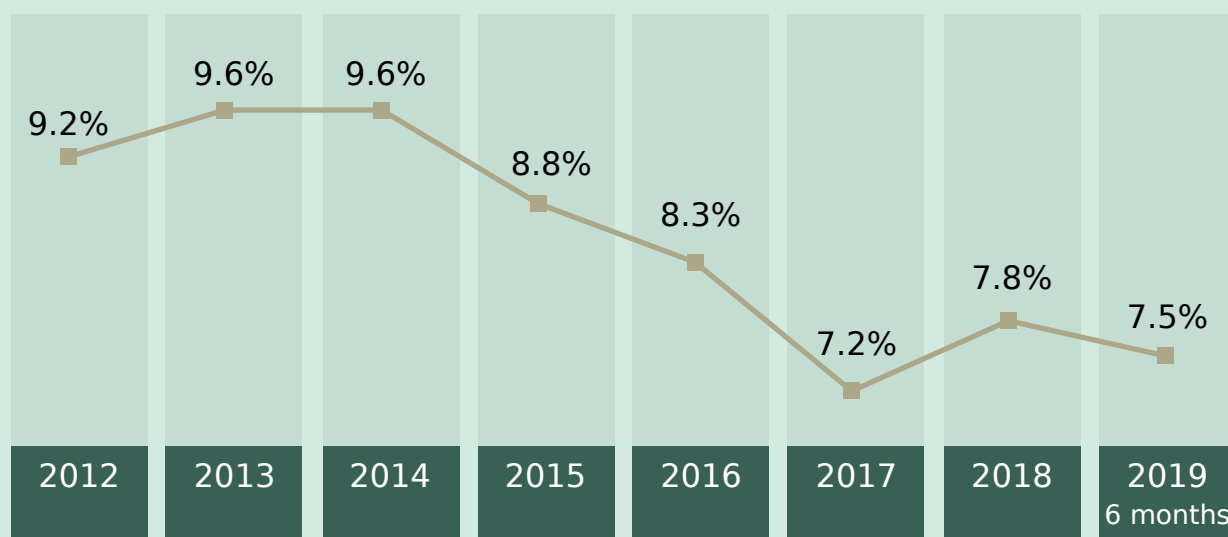
Data source: Geostat

As the growth of the agriculture sector is significantly below the average growth rate of the economy, the share of agriculture in the Georgian economy decreases every year. In 2018, this figure dropped to 7.8% from 9.6% of 2013. In 2019, it continued to

⁶ It is noteworthy that since November 2019, the National Statistics Office of Georgia has moved to a new methodology for the National Accounts System, which has had an impact on the growth rate in the agricultural sector. According to the methodology in place until November, there was a 0.7% growth in agriculture in 2018. The new methodology has improved data sources and increased the share of non-observable economies in agriculture, which had not previously belonged to the sector.

decline and fell to 7.5% in the first half of the year (Figure 9). Although agriculture is considered a strategic sector, and significant state resources are being spent to help this sector, the decline of its share means that in future agriculture will have less of an impact on the growth of Georgia's economy and population.

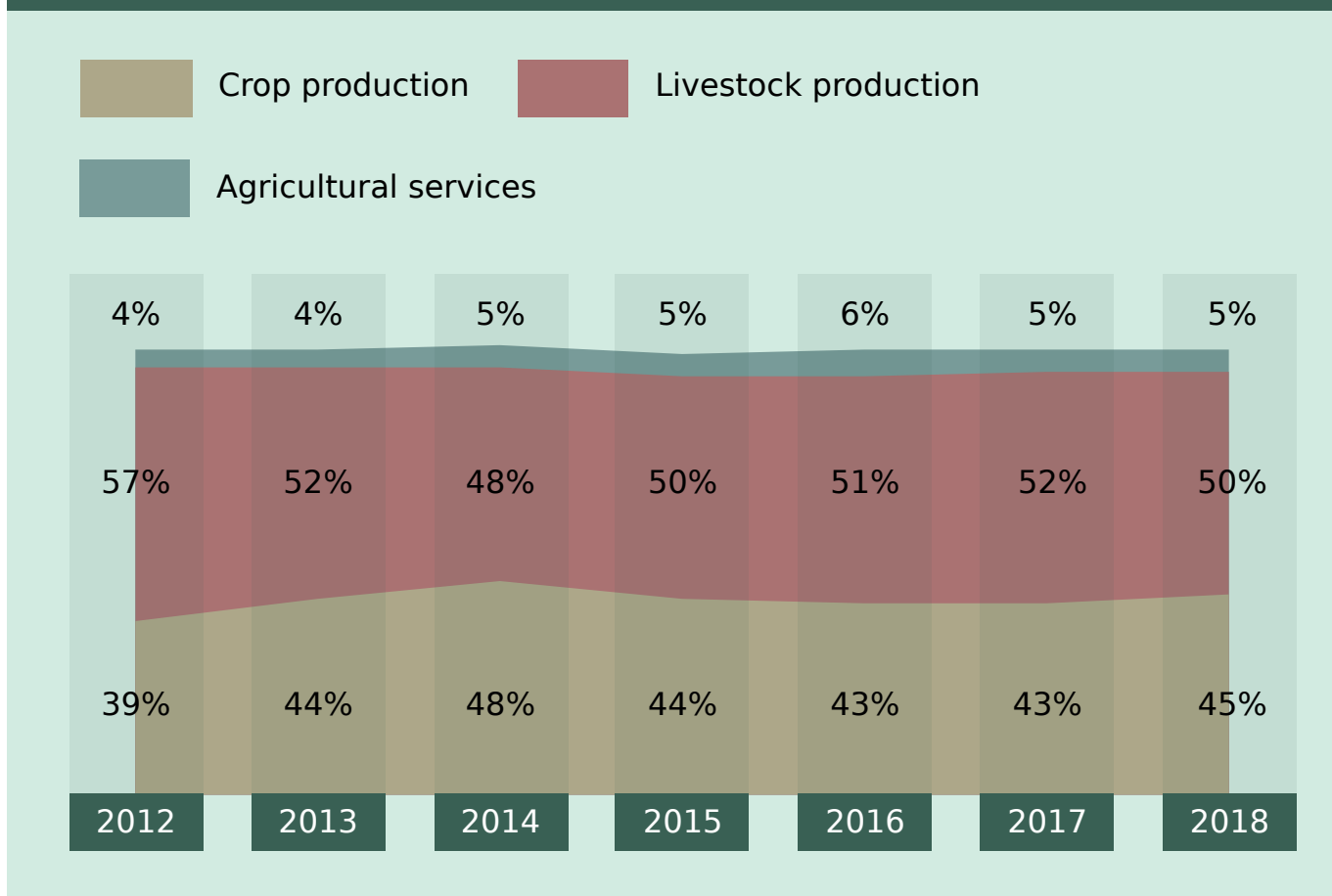
Figure 9. Agriculture as a share of Georgia's economy



Data source: Geostat

Agriculture consists of two main sub-sectors: production of *crops* and *livestock*. In Georgia, livestock has a larger share than crops. However, the share of livestock has declined in recent years. In 2018, the crop production amounted to GEL 1.8 billion, while the livestock output was GEL 2 billion, which is 1.1 times more than crops. In 2012, livestock was 1.5 times larger than crop production (Figure 10).

Figure 10. Share of sub-sectors in agricultural production



Data source: Geostat

1. CROP PRODUCTION

Crops can be divided into two main parts: a) annual crops and b) perennial crops. Annual crops include the production of grains and vegetables (including watermelon, melon, and pumpkin).

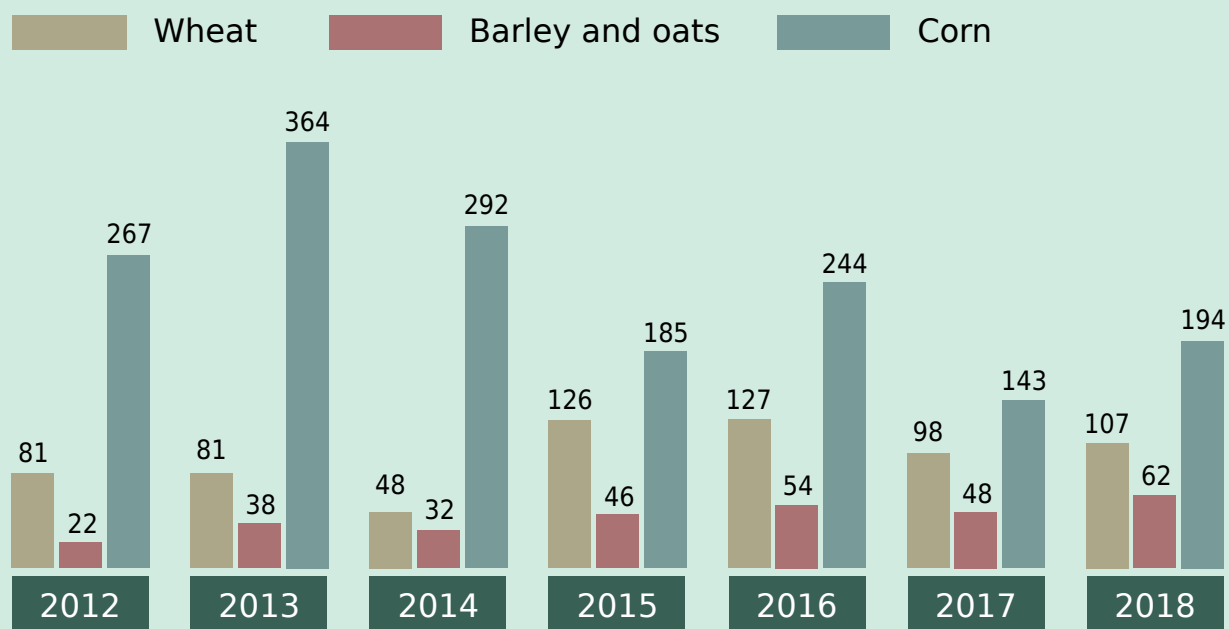
In 2012, Georgia’s grain harvest was 370 thousand tonnes, which is 6 thousand tonnes more than in 2018. Harvest reached a maximum of 483,000 tonnes in 2013, with the lowest yield being at 288,000 tonnes in 2017.⁷

Corn and wheat are the main grains in Georgia. Compared to 2012, in 2018, the wheat harvest increased by 33%, but it still was lagging behind the 2015-2016 figures. As for the corn yield, it decreased by 27% in 2018, compared to 2012. In 2018, compared to 2017, wheat and corn crops increased (Figure 11).

⁷ According to Geostat, a new agricultural census was carried out in 2014; the 2014-2018 data is based on this census and is not fully compliant with 2013 data.

Kakheti region produces 80% of Georgia’s wheat and 33% of its corn. The share of Samegrelo (25%) and Imereti (17%) is also high in the production of corn.

Figure 11. Harvest of grains in Georgia, thousand tonnes

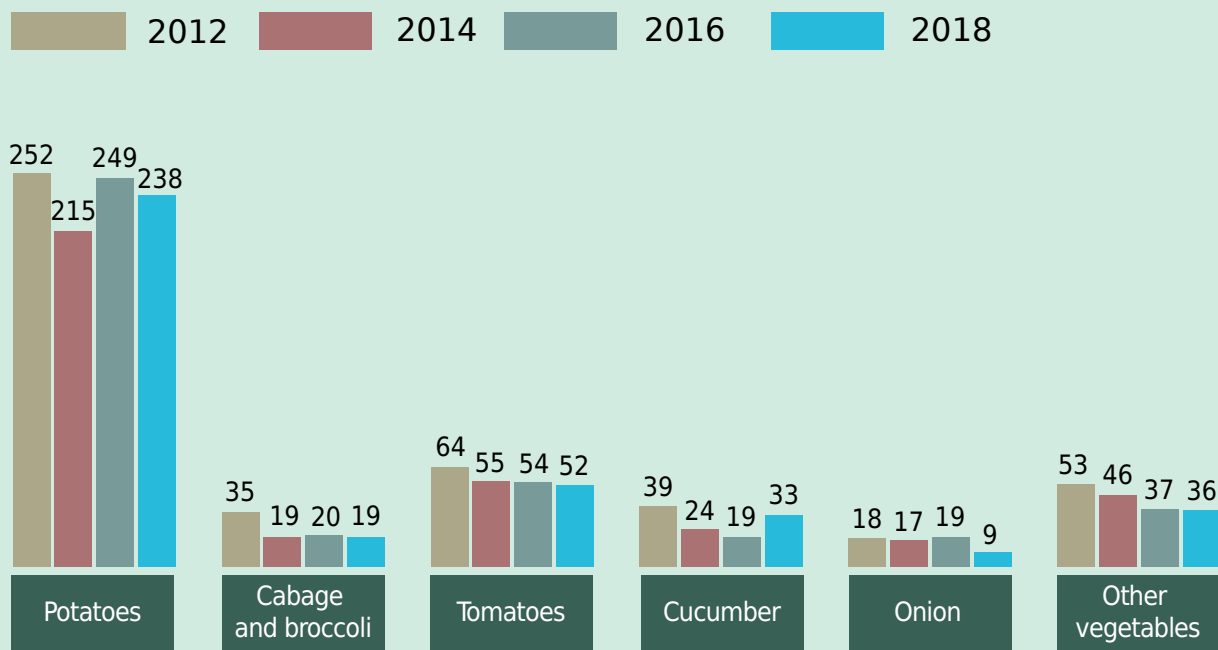


Data source: Geostat

Potatoes and tomatoes are the most consumed vegetables in Georgia. By weight, more than half of all vegetables grown in Georgia come from potatoes. In 2018, Georgia harvested 238,000 tonnes of potatoes, which is 5% less than in 2012. Compared to 2017, the potato yield has increased by 32%, but it is still lagging behind the 2013 and 2016 figures. 62% of potato crops come from Samtskhe-Javakheti and 20% - from Kvemo Kartli.

Harvest of tomatoes, cabbage, onions and other vegetables (beans, garlic, carrots, peppers, etc.) is declining. Only cucumber yield has a growth trend (Figure 12).

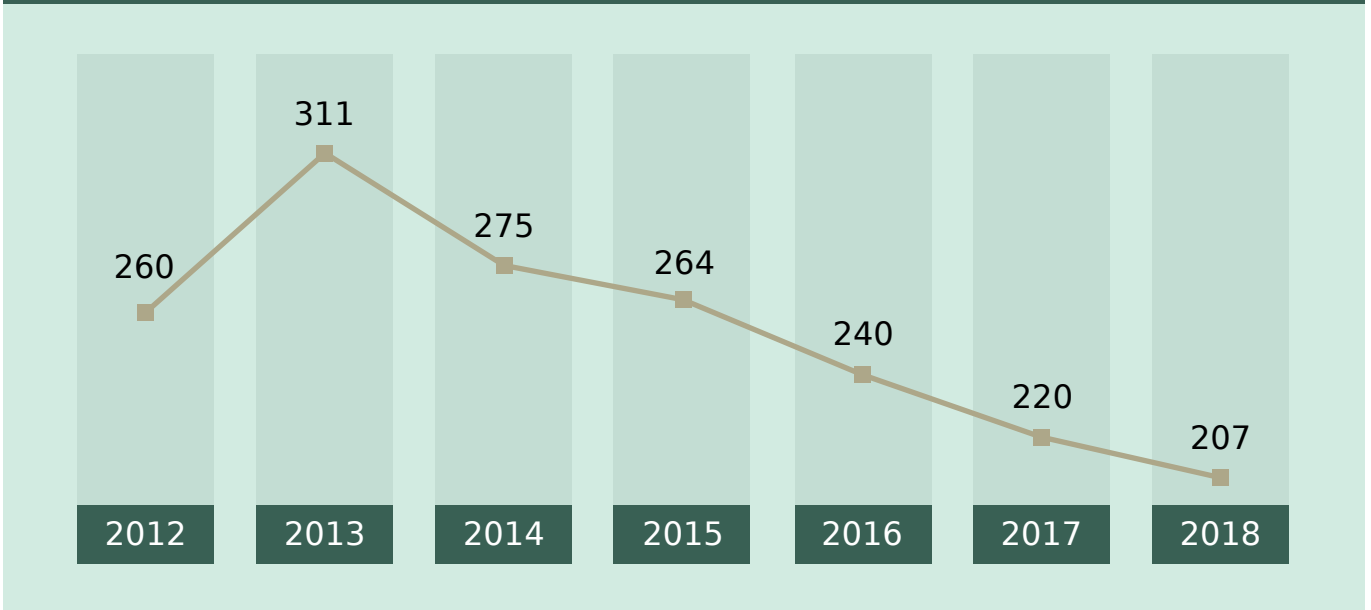
Figure 12. Harvest of vegetables in Georgia, thousand tonnes



Data source: Geostat

In 2018, compared to 2012, the total crop area decreased by 20%. According to Geostat, due to the methodological changes, it is more reasonable to compare this data from 2014. In 2018, compared to 2014, the crop area still was contracted by 25% (68 thousand hectares). The largest reduction - 44% (65 thousand hectares) was in corn areas. The harvested area of vegetables also decreased by 17%. Since 2013, the crop areas have been declining annually. Free plowing and planting vouchers caused a one-time rapid growth of harvested areas in 2013. As mentioned above, this program has contracted during the following years and was fully canceled in 2017 (Figure 13).

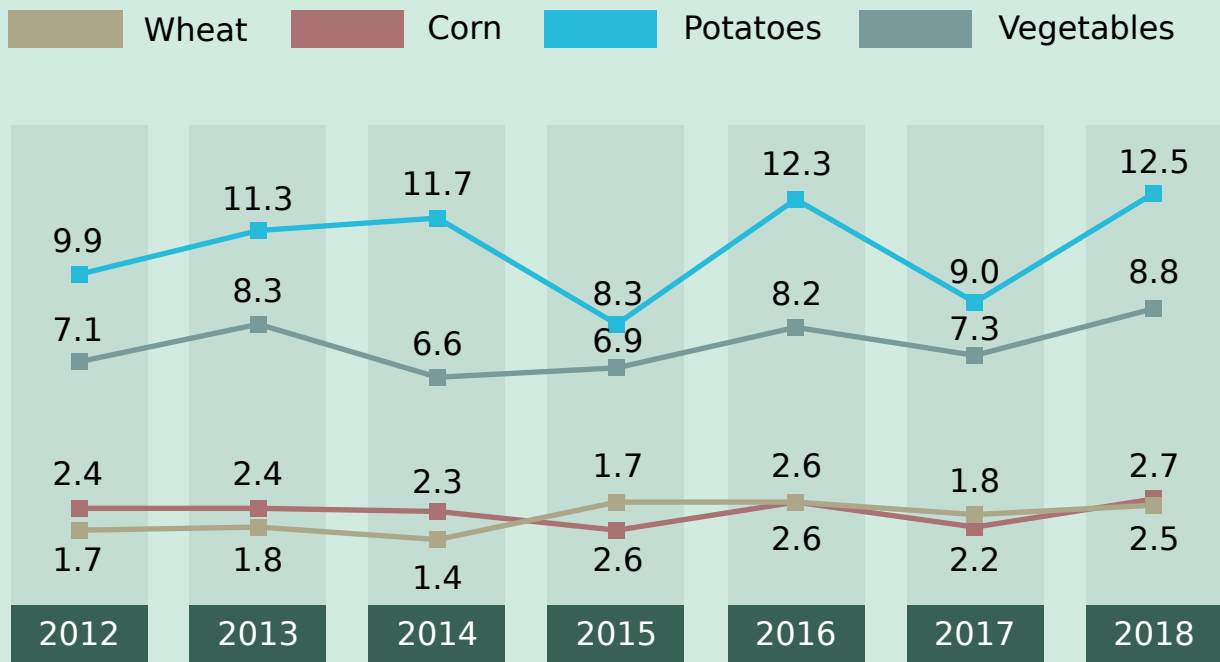
Figure 13. Total crop area, thousand hectares



Data source: Geostat

Despite the decline in total crop yields, there is a positive trend of productivity growth in almost every annual crop. There was an average of 9.9 tonnes of potatoes per hectare in 2012, while this number reached 12.5 tonnes in 2018, which is a 26% increase. The highest increase was in the wheat crop yield. Compared to 2012, wheat yields per hectare increased by 47% in 2018. Corn had the slowest productivity growth (Figure 14).

Figure 14. Average yield of annual plants, tonne/hectare



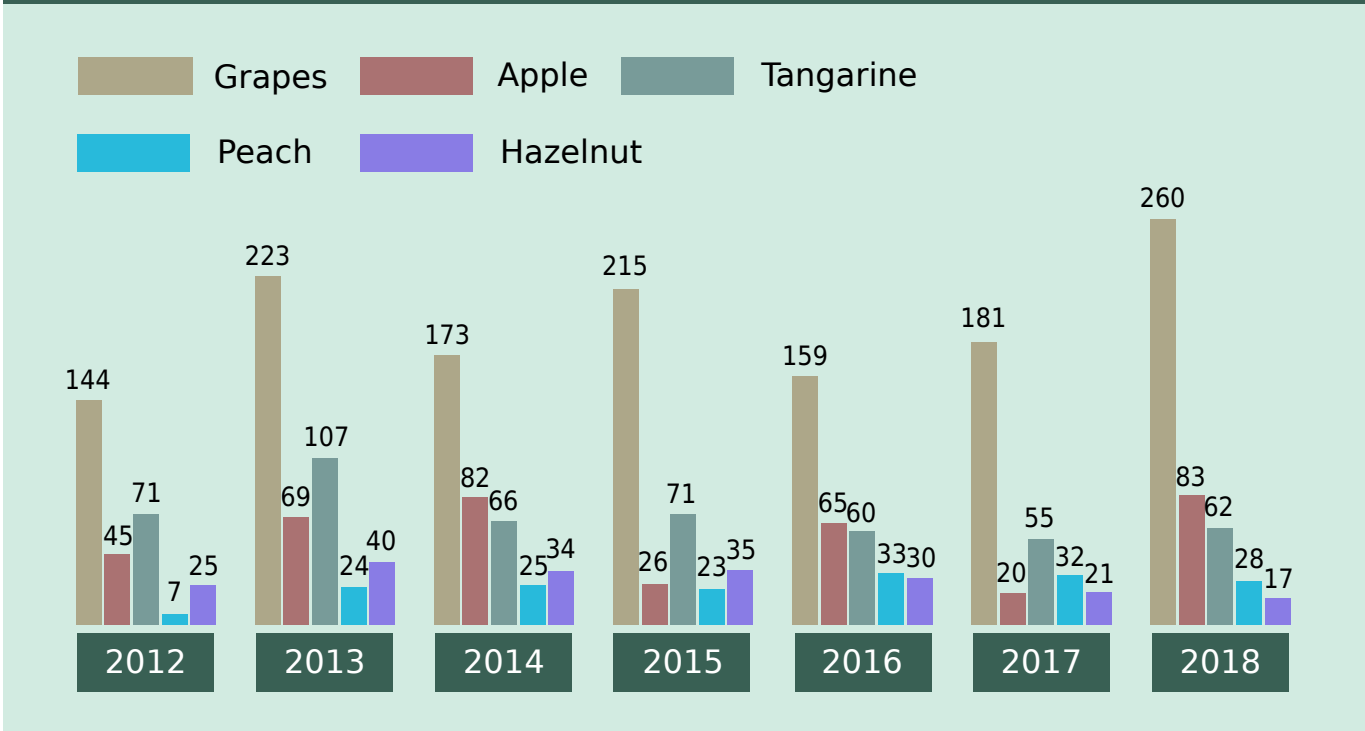
Data source: Geostat

Perennial crops include fruits. In 2018, 513 thousand tonnes of fruits were harvested in Georgia. By weight, 88% of Georgia’s fruit crops come from five sorts: grapes, apples, tangerines, peaches and nuts. Grapes are 51% of the total fruit crops. In 2012, this figure stood at 38%.

Compared to 2012, in 2018, the tangerine and hazelnut crop declined, while the yield of grapes, apples and peaches increased. Since 2014, only grape and peach crops have increased. Grapes, which increased by 116 thousand tonnes (80%), compared to 2012, and by 87 thousand tonnes (50%), compared to 2014, caused the total growth of fruit crop (Figure 15).

Shida Kartli region produces 87% of apples in Georgia. 72% of grapes and 79% of peaches come from Kakheti. Samegrelo has 56% of hazelnut crop and 73% of citrus is produced in Adjara.

Figure 15. Harvest of fruits, thousand tonnes



Data source: Geostat

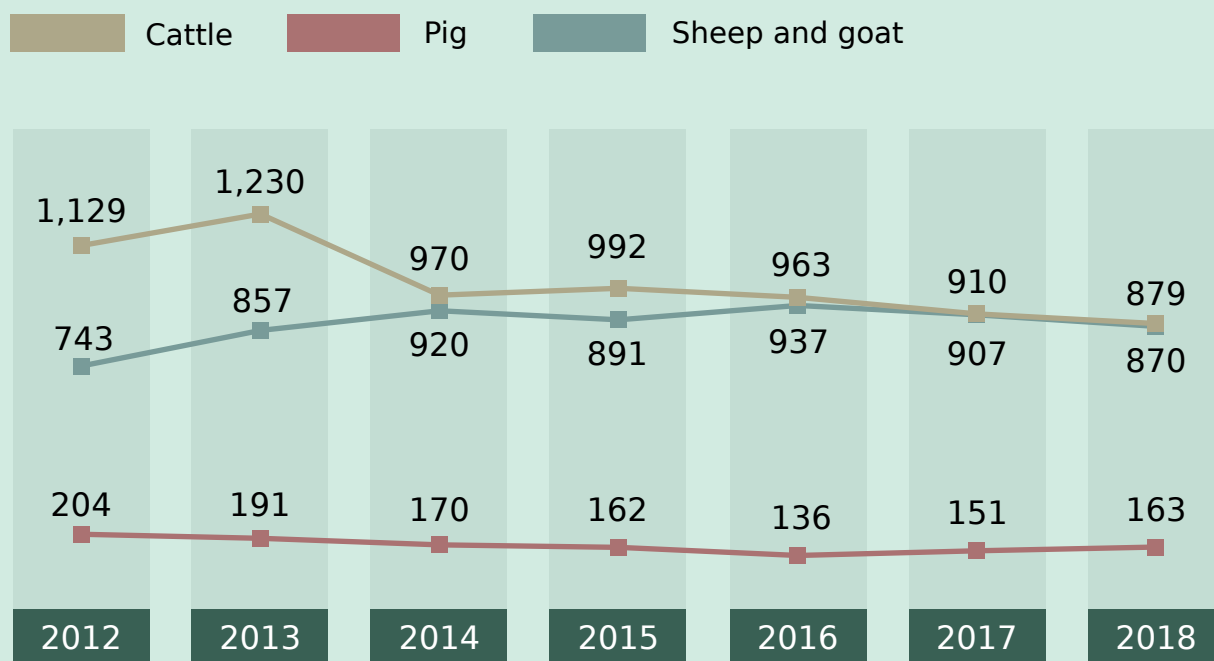
The data on the land areas covered by perennial crops is available only for 2017, according to which, vineyards, orchards, citrus plantations and berries occupy a total of 121,000 hectares. Out of this area, orchards occupy 75,000 hectares and vineyards - 36,000 hectares.

2. LIVESTOCK PRODUCTION

At the end of 2018, farmers and households in Georgia had a total of 1,912 thousand livestock (cattle, pigs, sheep and goats). This figure is 8% lower than in 2012 and 7% lower than in 2014. Compared to 2012, the number of cattle and pigs decreased, while the number of sheep and goats increased. Compared to 2014, the quantities of livestock are reduced by a total of 148,000. Compared to 2017, in 2018, only the number of pigs has increased by 13 thousand, while the rest has decreased by 141 thousand (Figure 16).

The data for the first half of 2019 is already known, according to which, at the end of June there were 2,188 thousand livestock in Georgia, which is 3.3% less than the number at the end of June of 2018. The decrease was observed in all three species of animals.

Figure 16. The number of livestock in Georgia, thousand

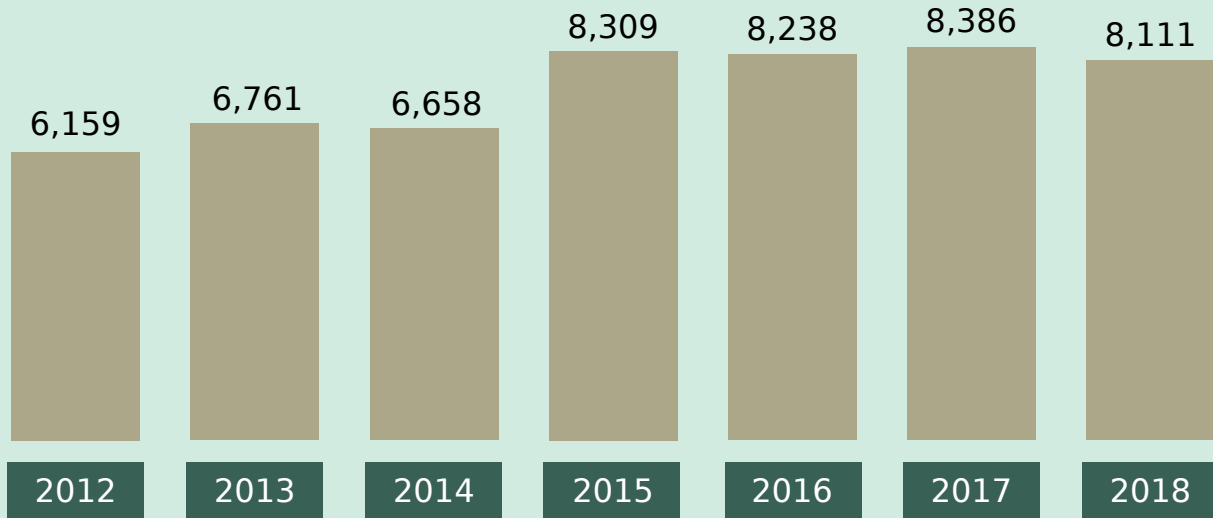


Data source: Geostat

Compared to 2012, in 2018, the number of poultry increased by 32%. However, since 2015 there has been a declining trend of poultry production. For example, in 2018, compared to 2017, poultry production decreased by 198 thousand and amounted to 8,111 thousand (Figure 17).

The decline in poultry production continued in 2019. In the first half of the year, compared to the same period of 2018, the number of poultry decreased by 5% - 497 thousand.

Figure 17. The number of poultry in Georgia, thousand



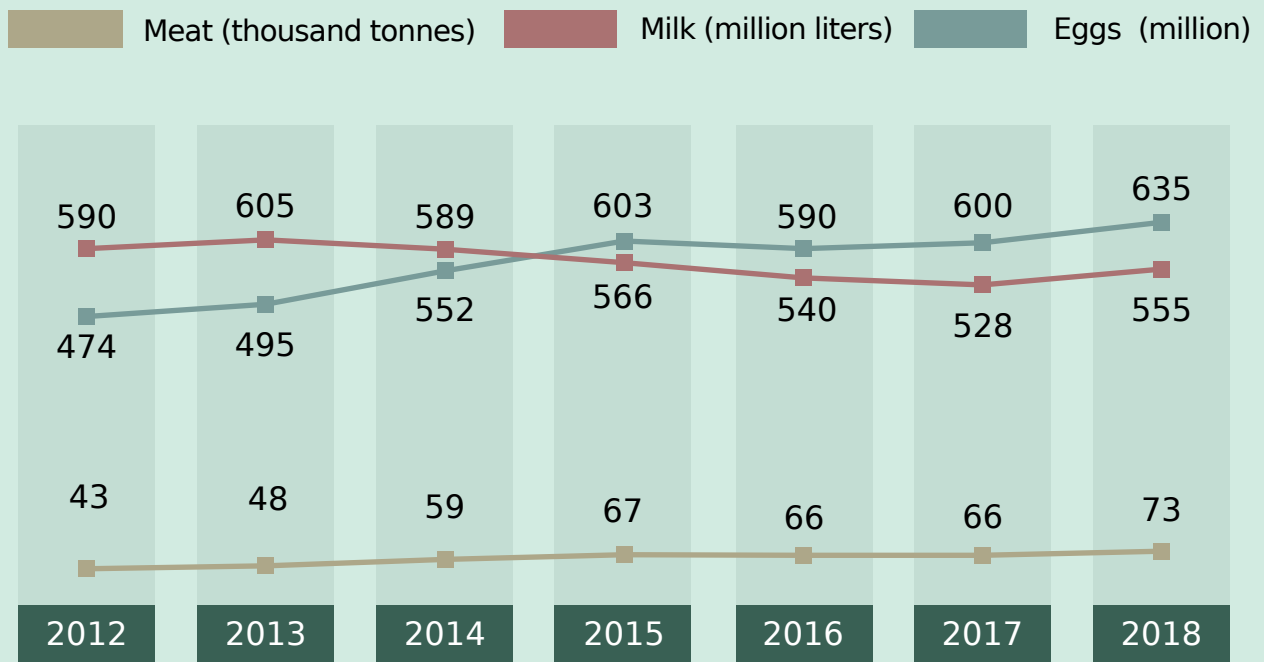
Data source: Geostat

The decline in the quantities of livestock in 2012-2018 did not have a clear impact on livestock production. Meat production had an upward trend. In 2018, 73,000 tonnes of meat was produced in the country, which is 70% more than in 2012 and 22% more than in 2014. Growth rates were observed in beef, as well as pork, lamb and poultry production.

Unlike meat, milk production has decreased. In 2018, compared to 2014, only 555 million liters of milk were produced, which is a 6% decrease.

In 2018, 635 million eggs were produced, which is 34% more than in 2012 and 15% more than in 2014 (Figure 18).

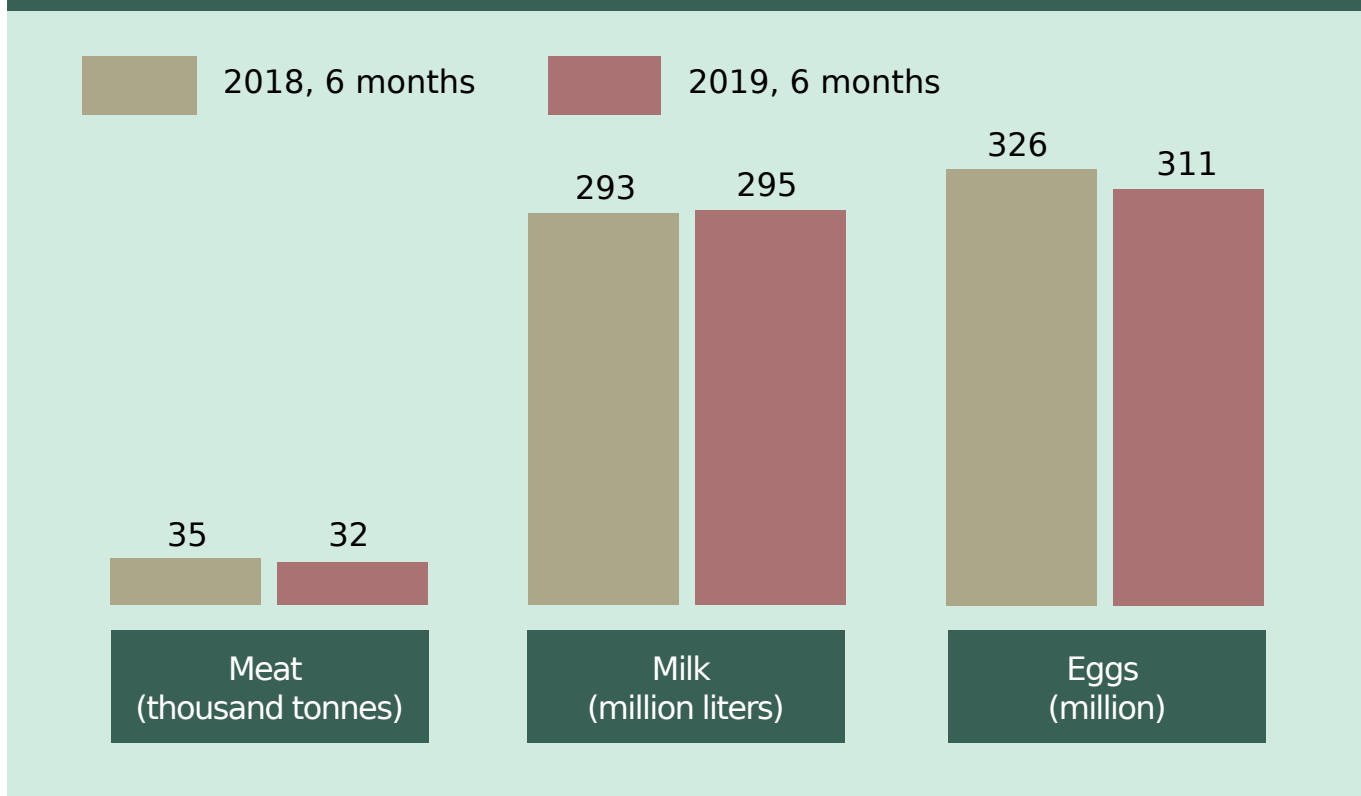
Figure 18. Livestock production in Georgia



Data source: Geostat

In the first half of 2019, compared to the same period of 2018, meat production decreased by 6.7%, and egg production - by 4.8%, while milk production increased by 0.8%.

Figure 19. Livestock production in Georgia, in the first half of 2018-2019



Data source: Geostat

CHAPTER IV. EXPORTS AND IMPORTS OF AGRICULTURAL PRODUCTS

It is difficult to have a fully segregated data of agricultural exports and imports. Final products are usually exported in a processed form and have only a certain share of the value created in the agriculture sector. For example, in the case of wine exports, the share of agriculture is the value of grapes, but other costs of wine production can be assigned to the industry sector.

Since agriculture is mainly a source of food and beverages, the best picture when studying exports and imports of agricultural products is to focus on foreign trade of food and beverages.

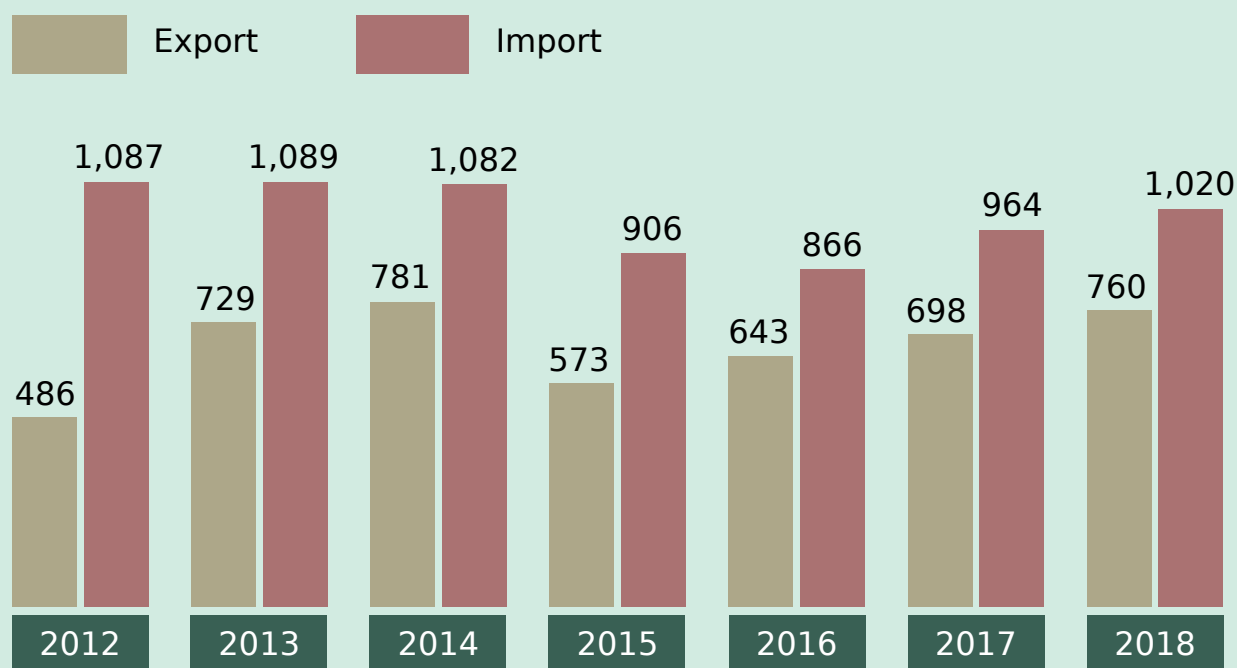
In 2018, Georgia exported food and beverages worth USD 760 million, which is 57% more than in 2012. That number reached a maximum of USD 781 million in 2014. In 2015, Russia's economic downturn caused a sharp decline in Georgia's exports. In addition, due to the depreciation of GEL, prices and income calculated in USD declined. Since 2016, this figure has been characterized by an upward trend (Figure 20).

In 2012, exports of food and beverages accounted for 20.4% of Georgia's total exports. In 2016, the share reached 30.5%, and it stood at 22.7% in 2018.

In contrast to exports, the value of imported food and beverages has not increased in recent years. In 2018, this number was down by 6%, compared to 2012, and amounted to over USD 1 billion. In 2015-2016, imports of food and beverages fell by 20%. However, after 2017 it has had a slight upward trend.

As imports remained at about one level and exports increased, the export-import ratio changed. In 2012, the ratio of export to import was 0.45 and in 2018, it became 0.75.

Figure 20. Export-import of food and beverages in Georgia, USD million

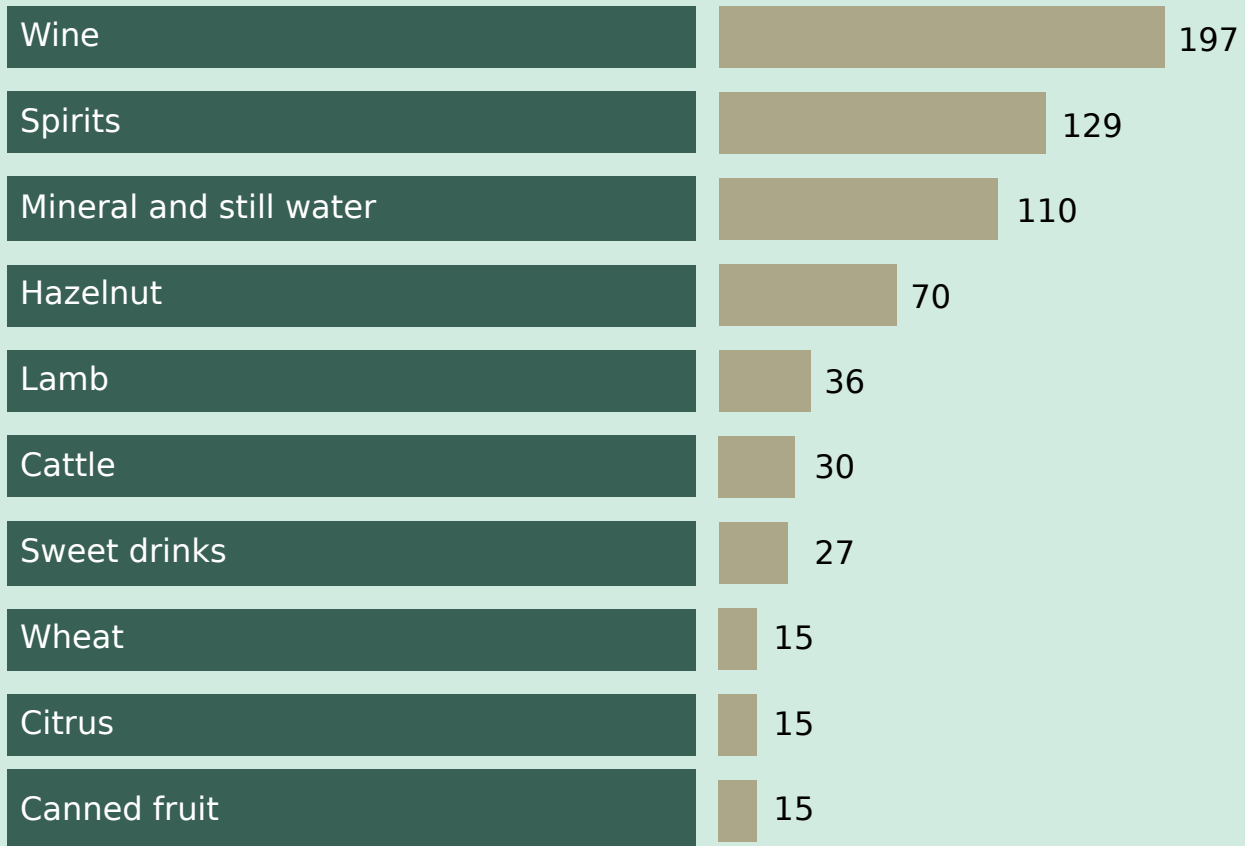


Data source: Geostat

Exports of food and beverages totaled USD 326 million in the first half of 2019, which is less by 5.6% than in the same period of 2018.

In 2018, Georgia's three largest export agricultural products were wine, spirits and mineral water, totaling USD 436 million. These three products accounted for 57% of total agricultural exports (Figure 21).

Figure 21. Georgia's 10 largest agricultural exports in 2018, USD million

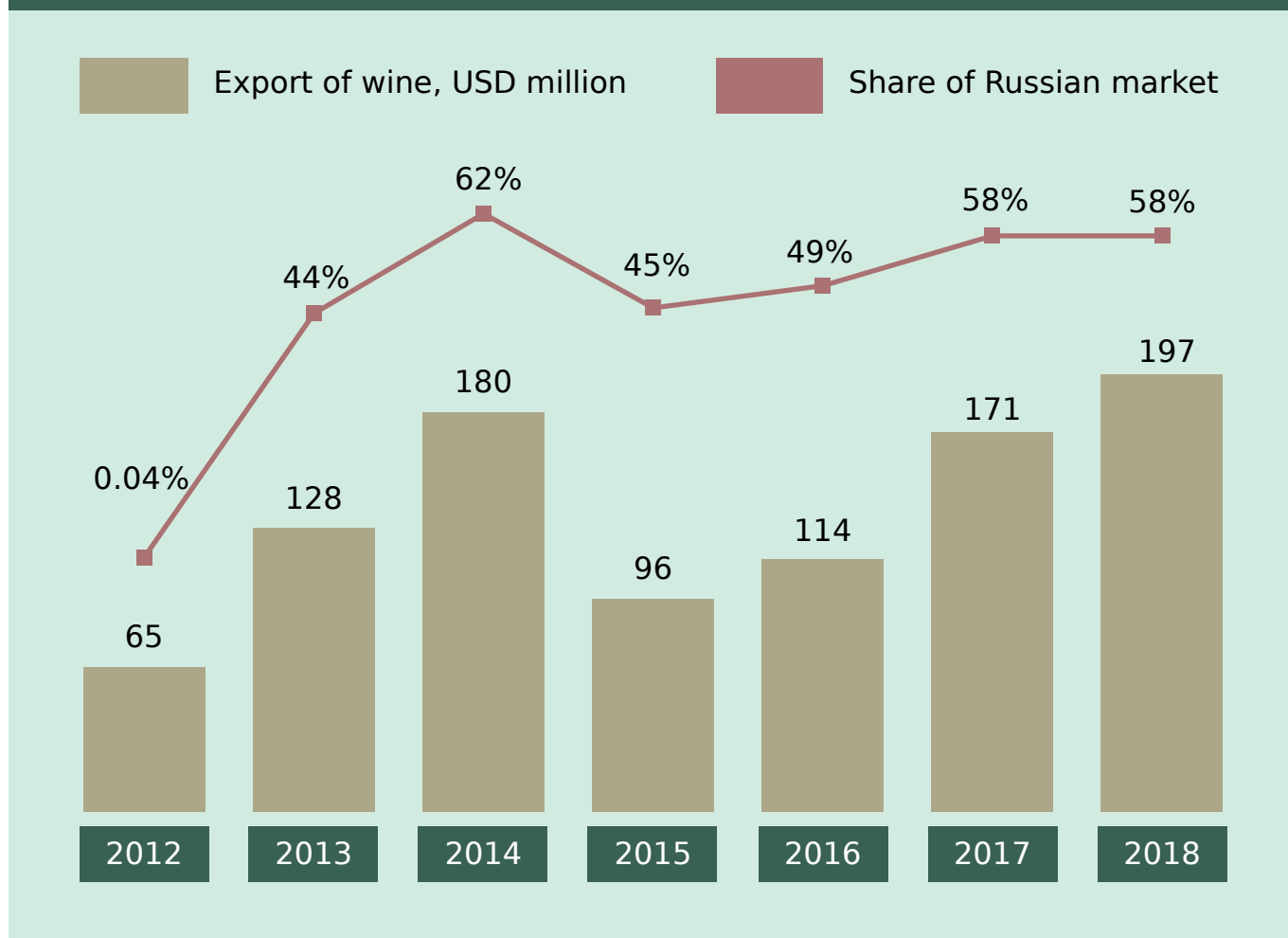


Data source: Geostat

The increase in the export of food and beverages in 2013-2018 was mainly driven by the growth of wine exports, which in turn was mainly stemmed from the opening of the Russian market. In 2018, wine exports increased by 200% - USD 132 million - compared to 2012. Of the USD 132 million increase, 115 million was Russia's share. In 2012, only USD 23,000 worth of Georgian wine was exported to Russia. In 2013, this figure stood at USD 115 million. In addition, Russia's share of Georgian wine exports increased from 0.04% to 58% (Figure 22).

High reliance of Georgian wine exports on the Russian market carries political risks. Russia's boycott of Georgian products in 2006, as well as the discussions held at the Russian Parliament about potential restrictions on the import of Georgian wine due to the events of June 20, 2019, has clearly shown that dependence on the Russian market is a challenge to Georgia's economic and political security. Regardless of political relations, high reliance on the market of one country creates economic risks. For example, in 2015, Georgian wine export to Russia decreased by 61%. The reason was Russia's economic problems, which also significantly affected Georgia.

Figure 22. Export of Georgian wine and share of Russian market

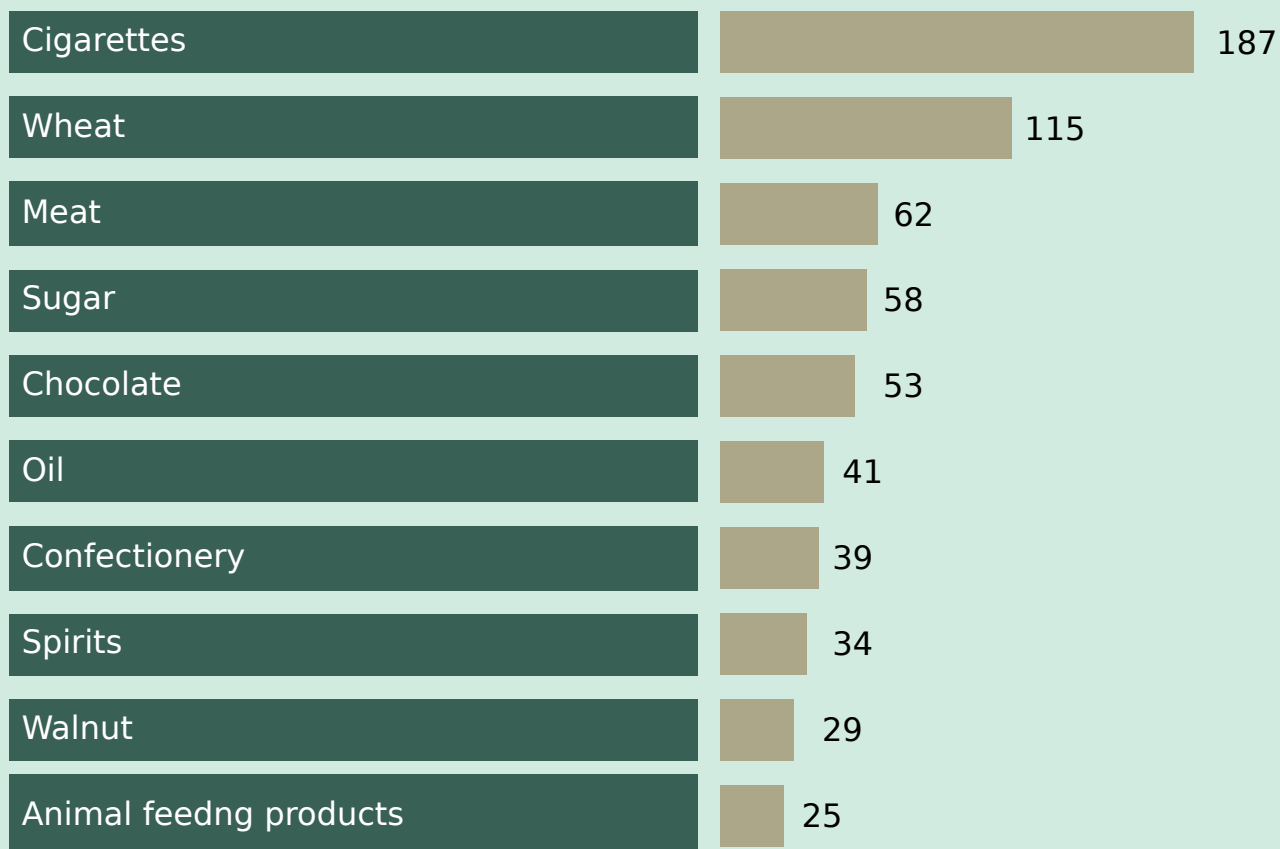


Data source: Geostat

Imports of food and beverages declined by 8.5% in the first half of 2019 and totaled USD 452 million. The export-import ratio stood at 0.72.

In 2018, the import of cigarettes (USD 187 million) was the number one agricultural import, followed by wheat with USD 115 million. Other major imported agricultural products were meat, sugar, chocolate, oil and confectionery (Figure 23).

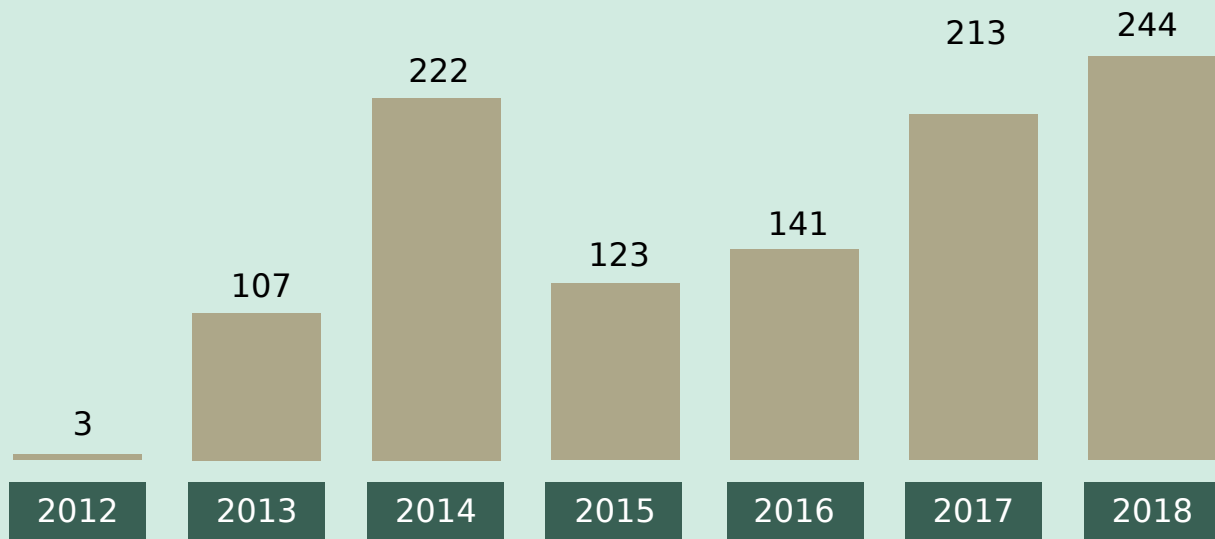
Figure 23. Georgia's 10 largest agricultural imports in 2018, USD million



Data source: Geostat

If we take specific countries, the largest export destination for Georgia's food and beverages is Russia. More specifically, USD 244 million worth of Georgia's agricultural products were exported to this country in 2018, while in 2012, this number stood at only USD 3.3 million. In 2018, Russia's share in Georgian exports of food and beverages was 32% (Figure 24).

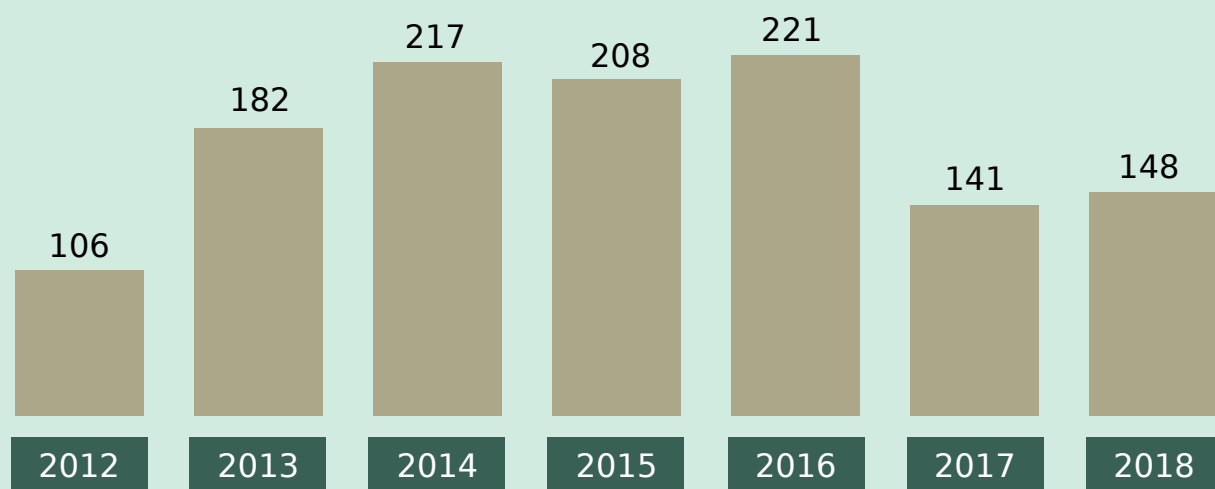
Figure 24. Export of Georgian food and beverages to Russia in 2018, USD million



Data source: Geostat

In 2018, USD 148 million worth of Georgian food and beverages were exported to the EU countries, representing 15% of total Georgian exports. This figure reached a maximum of USD 221 million in 2016, with a share of 32% (Figure 25).

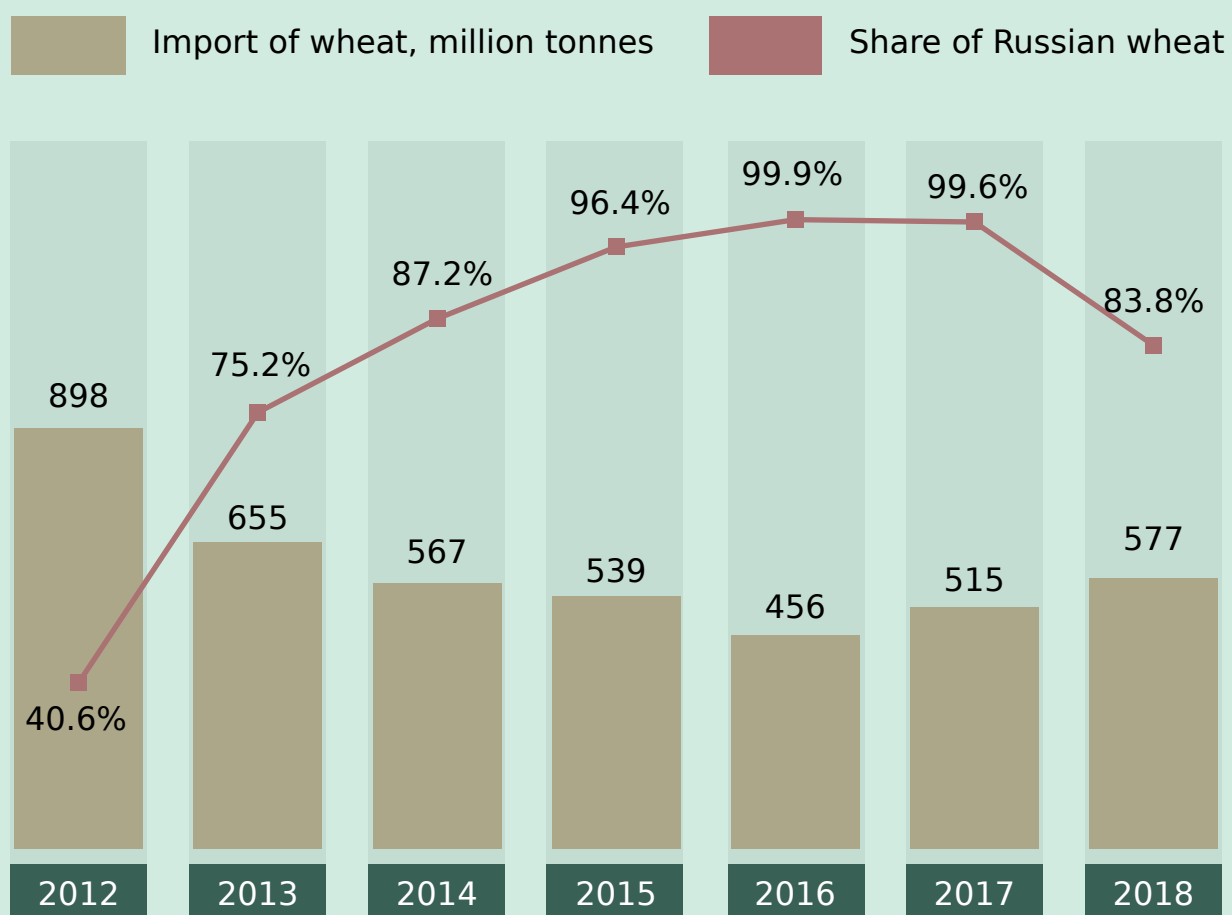
Figure 25. Export of Georgian food and beverages to the EU in 2018, USD million



Data source: Geostat

As the population of Georgia heavily depend on the consumption of bread and other wheat products, the import of wheat requires being discussed separately. In 2012, 58% of Georgia’s wheat imports came from Kazakhstan and 41% - from Russia. In the following years, wheat imports from Russia increased significantly, with almost 100% of wheat imported from this country in 2016-2017. In 2018, Russia’s share fell to 84% as Kazakhstan’s share rose to 16%. Such a high dependence on wheat imports from Russia poses a certain danger. Halting of wheat import from Russia to Georgia for political reasons, will lead to a shortage of wheat for a certain time and increase the price of bread (Figure 26).

Figure 26. Import of wheat to Georgia and share of Russian wheat



Data source: Geostat

CONCLUSION AND RECOMMENDATIONS

41% of Georgia's population lives in rural areas and 659,000 persons are employed in agriculture, most of whom are self-employed. In 2018, the share of those employed in agriculture was 39% of total employment.

In 2018, the average labor productivity of agricultural workers was GEL 407 per month, which is five times lower than the average productivity of the country's economy. Among other sectors, agriculture is in the last place by average labor productivity. Low labor productivity is the main cause of poverty for people employed in agriculture.

One of the factors causing the low labor productivity is a level of development of agricultural technologies, leaving Georgia significantly behind developed countries.

Georgia has 788,000 hectares of agricultural land, out of which 488,000 hectares were arable or for greenhouse and perennial plants. In 2018, 67% of this area was cultivated or occupied by perennials.

One of the factors that hinder the development of Georgia's agriculture is a scarcity of land. An agricultural household on average holds 1.4 hectares of land in Georgia, which in turn stems from a low level of urbanization. Small-scale farming usually does not allow the farmer to take advantage of economies of scale and significantly reduce the average cost of production.

Georgia's agriculture is not attractive for foreign investment, which was partly stemmed from the ban on selling agricultural land to foreign nationals.

In 2013-2019, GEL 1.5 billion was spent on agricultural development from the state budget of Georgia. In the same period, the average growth rate of agriculture was 1.5% and was three times lower than the average growth rate of the economy.

The largest state-funded programs were the modernization of melioration systems, food safety and plant protection, and concessional loans.

In nominal terms, GEL 3 billion worth of agricultural output was produced in 2018 in Georgia. Compared to 2012, agricultural output has increased by GEL 689 million, but only GEL 220 million was real growth (inflation-adjusted). The real growth was only GEL 29 million, compared to 2013. This, in fact, means that agriculture has not increased in 2014-2018. The share of agriculture in the economy tends to decline and in 2018, this figure was 7.8%.

In 2012, Georgia's crop yield was 370 thousand tonnes, which is 6 thousand tonnes more than in 2018. Wheat crop increased by 33% compared to 2012, while corn yield decreased by 27%.

By weight, more than half of all vegetables grown in Georgia come from potatoes. In 2018, Georgia harvested 238,000 tonnes of potatoes, which is 5% less than in

2012. Harvest of tomatoes, cabbage, onions and other vegetables is declining. Only cucumber yield has a growth trend.

Compared to 2012, in 2018, the crop area was reduced by 20%. The highest reduction was in corn crop areas.

Despite the decline in total crop yields, there is a positive trend in almost every annual crop yield. For example, if there were an average of 9.9 tonnes of potatoes per hectare in 2012, in 2018 it increased to 12.5 tonnes.

88% of Georgia's fruit crops come from five sorts: grapes, apples, tangerines, peaches and nuts. Grapes are 51% of the total fruit crops. Compared to 2012, in 2018, the tangerine and hazelnut crop declined, while the yield of grapes, apples and peaches increased.

At the end of 2018, farmers and households in Georgia had a total of 1,912 thousand livestock. This figure is 8% lower than in 2012. Based on data for the first half of 2019, the number of livestock decreased by 3.3%.

Compared to 2012, in 2018, the number of poultry increased by 32%, but after 2015 this figure has been declining.

The decline in the quantities of livestock in 2012-2018 did not have a clear impact on livestock production. Meat production had an upward trend. In 2018, 73,000 tonnes of meat were produced in the country, which is 70% more than in 2012. Unlike meat, milk production has decreased. In 2018, compared to 2014, milk production decreased by 6%. In 2018, 635 million eggs were produced, which is 34% more than in 2012.

In 2018, Georgia exported food and beverages worth USD 760 million, which is 57% more than in 2012. That number reached a maximum of USD 781 million in 2014.

Growth in food and beverage exports in 2013-2018 was mainly driven by a USD 132 million increase in wine exports, out of which USD 115 million was Russia's share. In 2018, Russia's share of Georgian wine exports rose to 58%, which significantly increased the impact of the Russian market as a lever on Georgia.

In contrast to exports, the value of food and beverage imports has not increased in recent years; it was down by 6% from 2012, though still over one billion US dollars.

As imports remained at about one level and exports increased, the export-import ratio changed. In 2012, the ratio of export to import was 0.45 and in 2018, it became 0.75.

Exports of food and beverages totaled USD 326 million in the first half of 2019, which is less by 5.6% than in the same period of 2018.

In 2018, Georgia's three largest export agricultural products were wine, spirits and mineral water, totaling USD 436 million.

In 2018, the import of cigarettes (USD 187 million) was number one agricultural import, followed by wheat with USD 115 million. Other major imported agricultural products were meat, sugar, chocolate, oil and confectionery.

High dependence on the imported Russian wheat raise certain concerns. In 2016-2017, almost 100% of imported wheat came from this country. In 2018, Russia's share fell to 84%. Such a high dependence on wheat imports from Russia poses a certain danger. Halting of wheat import from Russia to Georgia for political reasons, will lead to a shortage of wheat for a certain time and increase the price of bread.

If we take specific countries, the largest export destination for Georgia's food and beverages is Russia. More specifically, USD 244 million worth of Georgia's agricultural products were exported to this country in 2018, while in 2012, this number stood at only USD 3.3 million. In 2018, Russia's share in Georgian exports of food and beverages was 32%.

In 2018, USD 148 million worth of Georgian food and beverages were exported to the EU countries, representing 15% of total Georgian exports. This figure reached a maximum of USD 221 million in 2016.

Given the decline in the quantities of basic crops and livestock products, the growth of the export of food and beverages and the replacement of imports has been driven by the development of the local processing industry. The share of processed products in exports has increased, the value of which is higher than that of raw materials.

Low productivity is one of the major challenges for Georgia's agricultural sector, which is a primary reason for poverty of the people employed there. To alleviate this problem, it is necessary to enhance large-scale farming, by reducing the share of employment in agriculture and attracting additional investment in the sector.

In order to increase productivity, it is also necessary to introduce new technologies and increase the knowledge of the employees in the sector.

It is important to increase irrigated land area, which requires the extension of rehabilitation-construction projects of irrigation systems.

In addition, the growing trend of dependence on Russia, a hostile country, is dangerous for the economy and the country as a whole. Russia is the largest export market for Georgian agricultural products, we also heavily depend on Russian wheat imports, thus diversifying markets, risk analysis and preventive measures are needed.