

## ECONOMIC ASSESSMENT OF AGRICULTURE DEVELOPMENT AND PROSPECTIVE DIRECTIONS OF AGRARIAN REFORMS IN THE REPUBLIC OF AZERBAIJAN

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### Abstract

*The paper examines the stages of agricultural development strategies of the Republic of Azerbaijan. Taking into account that, our country is among the developing countries, agriculture is one of the leading sectors in the country after the oil industry. Agriculture plays an important role in the food security of the country and the socio-economic development of the regions. From this point of view, the state has always focused on the development of agriculture. Considering all the things mentioned above, the article has attempted to show the dynamics of development of agriculture in the economy of the country. Also, the article assessed the current state of agriculture in accordance with agrarian reforms carried out in the post-Soviet period and after the independence of the state. In the development of a competitive environment, the owner entities play large role. In the article found a place, development of enterprises in agriculture and their regulation by the state in accordance with the requirements of a market economy. Also, the dynamics of production, productivity and self-sufficiency of the main types of crop and livestock products were analyzed and evaluated on the basis of statistical data of the Azerbaijan Republic. It should be noted, the assessment also examined the impact of agrarian reforms on agricultural development after state independence. During the observation were used, methods of logical history, analysis-synthesis, induction-deduction. Finally, the conclusions and recommendations are based on the provisions obtained from the analysis.*

**Key words:** agriculture, agrarian reform, economic evaluation, transition economies, competitiveness

### INTRODUCTION

Agriculture is of particular importance for its role in social and economic life, especially as a factor contributing to economic development and as a provider of food security. Thus, despite the fact that the share of agriculture in world trade in 2018 is 9.34%, this sector accounts for 63% of world employment. In other words, it is the main source of income for more than 2.5 billion people. High levels of employment in this area are mainly due to developing countries.

According to a new report issued by the Food and Agriculture Organization of the United Nations (FAO), global agri-food trade has more than doubled since 1995, amounting to \$1.5 trillion in 2018, with emerging and developing countries' exports on the rise and accounting for over one-third of the world's total. Despite its small relative share to GDP, the economic potential of primary agriculture

needs to be properly evaluated and harnessed for growth. However, in an economic structure dominated by services, led by Government Services, followed by Banks and Insurance, Wholesale and Retail Trade, Transport and Hotels and Restaurants, in that order, competition for resources is a continuous challenge. The 2006-2011 Agricultural Development Strategy (ADS) recognized this internal competition for resources as domestic threats to the development of agriculture [3].

Today, most development economists share the consensus that far from playing a passive, supporting role in the process of economic development, the agricultural sector, in particular, and the rural economy, in general, must play an indispensable part in any overall strategy of economic progress, especially for the low-income developing countries [10].

Agricultural production continues to grow, generally keeping pace with population

growth. The global population has almost tripled since 1950. By 2030, there will be an additional 1.7 billion mouths to feed, most of whom from developing countries. To cope with this reality, the world's farmers need to double or even triple food production by 2050. However, farming policies have neglected the critical role which farmers, especially smallholder farmers, must play in making sustainable development a reality [2]. Despite various measures taken to alleviate the world hunger problem, food insecurity and malnutrition remain serious problems in many countries [7]. Ensuring food security has become an issue of key importance to countries with different degrees of economic development, while the agricultural sector plays a strategic role in improving food availability [6].

There are three main stages in the development of agricultural production. The first stage is the pure, low-productivity, mostly subsistence-level traditional (peasant) farm. The second stage is what might be called diversified or mixed family agriculture, where a small part, of the produce is grown for consumption and a significant part for sale to the commercial sector. The third stage represents the modern farm, exclusively engaged in high-productivity, specialized agriculture geared to the commercial market, as in developed countries, and often found in the highly urbanized developing countries [10].

Agriculture in Azerbaijan is currently at the second stage. Azerbaijani agriculture has significant developments over the last two decades with direct effects on the role of the agricultural sector in national income formation and promoting exports. Such developments have also affected farmers' delivery as related to the cropping structure, applied technology, levels of income, and farmers' response to market changes.

Agricultural sector is major part of the Azerbaijan economy, and has been important to the country's economic resilience. Azerbaijan agricultural sector has performed relatively well in recent decades, contributing employment, and poverty reduction. However, the sector's relative contribution to

the economy has declined, due in part to the growth of other sectors of the economy, such as industry, mining, and services.

To date, one of the most important tasks for Azerbaijan is to eliminate the oil dependence of the economy and ensure a wider spread of economic development in rural areas. In the economy of Azerbaijan, agriculture is the third largest sector after oil and construction. Food products produced in agriculture and its processing industry cover about 75% of the population's demand for consumer goods. There is a close relationship between agriculture and the industrial sector, especially in the light and food industries. Most of the products of food industry in the country is provided by agricultural products.

## **MATERIALS AND METHODS**

In this paper, in order to assess the evolution of the development of agricultural production there were used logical and historical methods, methods of analysis and synthesis. The analysis of production, yields and self-sufficiency in agricultural products, was based on the data collected from State Statistical Committee of the Republic of Azerbaijan. In the process of working on the paper were used the relevant laws and regulations of the state, such as Law of the Republic of Azerbaijan on the Basics of Agrarian Reform, the Decrees of the President of the Republic of Azerbaijan, the Strategic Road Map for Production and Processing of Agricultural Products in the Republic of Azerbaijan and etc.

## **RESULTS AND DISCUSSIONS**

In this regard, we touch brief chronology of the stages of agricultural development in the economy of Azerbaijan.

One of the main features of the development of agriculture in the Azerbaijan Republic is the climatic conditions of the country.

42% of the territory of the Azerbaijan Republic is mountainous, and 58% are mountainous and lowland. 4,740 thousand ha or 55.1% of the total land fund – 4,769.8 thousand ha are agricultural land, including

30.2% of pastures and hayfields, 31.2% - other lands.

Currently, based on the country's existing hydrographic resources, 1,438 thousand hectares of agricultural land are irrigated, and in total it is estimated that irrigated lands amount to 3,200 thousand acres. In general, the Republic of Azerbaijan is one of the countries with limited land resources. Thus, the country has 0.48 ha of agricultural land per capita, including 0.21 ha of arable land.

The presence of long sunny days, natural heat and other favorable climatic features in the country is a positive factor in rural development. Thus, 9 out of 11 types of climate are typical for the country, with the exception of three types, the rest of which are favorable for the development of various areas of agriculture.

All these factors have led to the specialization of agriculture in Azerbaijan since ancient times. Thus, agricultural products produced in Azerbaijan have become an important object of export not only for the internal market but also for export. Cotton, silk, saffron and many other agricultural products grown in the country were exported to many western and eastern countries along ancient caravan routes. Azerbaijan has become the largest grain, cotton, silk, tobacco and cattle-breeding center in the whole Caucasus.

### **Assessment of the development of agriculture of the Republic of Azerbaijan in the Soviet Union**

A more comprehensive and significant economic growth in Azerbaijan dates back to the Soviet Socialist Republic, which spanned over 70 years in the 20th century. Over the years, most sectors of the Azerbaijani economy developed rapidly and had a strong industrial potential compared to previous periods. This was due to the strong oil potential of Azerbaijan. Azerbaijan was the main oil base of the Soviet Union.

The economy of Azerbaijan in the Soviet Union has reached a high but incorrectly assessed level of development. Thus, the development of the Azerbaijani economy during this period was unstable. For example, the average economic growth in the country in the 1960s and 1970s was 5.2% and increased

by 7.4% between 1970-80. In the 1980s and 1990s, this ratio declined sharply. Thus, there was a decline of 4.9% in 1981-85. and 5-6% in 1986-1990. The reason for the decline is the desire of Azerbaijan to obtain political independence in 1989-1991.

As we mentioned, Azerbaijan has historically been specialized in agriculture. In the 1970s, about 80,000 hectares of land was used for wine production. Cotton production in Azerbaijan's agriculture at that time also played a special role. In the 1970s and 1980s, about 1 million tons of cotton was produced annually. During this transition period, the cotton sector also faced serious challenges. There has been a significant decline in cotton production due to falling world cotton prices. In addition, wheat, tobacco, tea, olives, fruits and vegetables were staple products in the agricultural sector. The country had the potential to produce enough grain to support itself.

During the Soviet period grain production was high. In the 1970s and 1980s, annual output increased to 1 million tons. In addition, production per hectare, for example, more than tripled in 1970 compared with 1913. However, at a time when the planned economy dominated, it was dictated by the center, who would produce, what would be produce and how much. The center preferred to replace the production of grain with grape plantations. True, this contributed to the development of the grape industry in the country.

In the period from 1970 to 1975, the growth rate of agricultural production in Azerbaijan increased and reached 34% instead of the expected 30%. Analyzing the experience and new possibilities of thinking about the sustainable development of agriculture in the republic, Heydar Aliyev set the task for the tenth five years (1976-1980) to achieve the rapid development of agriculture by expanding the use of intensive factors and increasing labor productivity and made concrete proposals. As a result of the implementation of these decisions in the republic in 1981-1985, gross agricultural output increased 2.5 times compared to the average of 1966-1970.

In general, in the 70s and the first half of the 80s, the number of specialized areas of crop production in agriculture in Azerbaijan increased. However, it should be noted that, due to the formal nature of commodity production in Soviet times, prices were not formed under the influence of socially necessary value, as well as supply and demand. The requirements of economic laws, including economic laws relating to the production of goods, were not taken into account. Prices for products were set by the state on the basis of political ambitions. At that time, the state was oriented toward the development of industry, especially the military-industrial complex. Economic development was considered secondary in the agricultural sector. Therefore, the price of agricultural products was many times lower than the cost. However, the law of value, which is one of the economic laws of commodity production, requires that the price must be higher than cost, that is, cost, because if the cost is not paid and the income is not received, reproduction will not occur. In a market economy, this is regulated by a market mechanism. That is, if the cost of the goods of the producer (production costs) is higher than the market price, it will go to bankruptcy. Because the ability to organize production is low, it is replaced by a more capable manufacturer who knows the functions of the market. This factor motivates manufacturers to use new, modern equipment and technologies, to modernize the organization of production. In the absence of them in the Soviet system, the Soviet system began to crumble in the mid-1980s, and the agricultural sector was in a deep crisis. With the collapse of the USSR, state farms and collective farms also ceased to exist. It should be noted that the land used by collective farms was called collective-farm cooperative property, but in fact it was state property. Socialist agricultural enterprises used land inefficiently due to the lack of material interests of collective farms and state farms as a result of production, on the other hand, due to the lack of competition law. As a result, a significant part of the arable land was lost.

### **Agricultural reforms after independence and evaluation of their results**

In the transition to a market economy, the emergence of new production structures and the diversity of economic forms, the overall efficiency of agricultural production depends on the ratio of organizational and legal forms, their application to specific economic conditions and the degree of development. This, in turn, will guarantee the competitiveness of products. It should be noted that improving the competitiveness of agricultural products is, in fact, the most important component of ensuring economic security and maintaining food security, but also plays an important role in improving the national competitiveness of the country's economy.

Legal support for the implementation of agricultural reforms in our country consists of the Constitution of the Republic of Azerbaijan, adopted laws on the implementation of reforms in the agricultural sector, decisions on ensuring their implementation, decisions adopted by the state on the development of the agricultural sector. Theoretical and practical guidelines and decisions arising from these laws, decrees and decisions determine the methodological basis for the creation of private farms, the formation and development of entrepreneurship. The main goal of implementing agricultural reforms in our country is to achieve the organization of special forms of economy in accordance with the law of a market economy and the development of entrepreneurship by all means in all areas of the agricultural sector. It should be noted that for the implementation of agrarian reforms, the State Commission on Agrarian Reform has been created in the republic, local and regional commissions on agrarian reform, their rights, functions, duties and rules of procedure pose very important tasks for the commissions created for the implementation of reforms, which are approved in the relevant provisions.

The main directions, goals and objectives of agrarian reform Law of the Republic of Azerbaijan on the Basics of Agrarian Reform was approved by the President of the Republic

of Azerbaijan H. Aliyev on February 18, 1995. The goal of the reform was to bring the agricultural sector out of the crisis, stabilize the economy, improve the socio-economic situation of the population in the regions and ensure food security of the country. For this purpose, the following directions are envisaged for the reform [4]:

- the formation of new property relations in the agricultural sector;
- land reform, land reclamation and water management;
- the creation of different types of farms;
- state support for the agricultural sector.

The main principles of agrarian reform are:

- coordination of agrarian reform with the economic policy of the state;
- ensuring social justice and voluntariness in the implementation of reforms;
- ensuring the complete freedom of producers in the organization of economic activity and the disposal of their products;
- taking into account the agricultural features of the republic;
- compliance with environmental requirements;
- social development of the village and social protection of the population.

The initial stage of the implementation of agricultural reforms in our country falls on the period after independence, and this stage is considered the first stage of deepening agricultural reforms, improving agricultural relations and the formation of the agricultural market. In this case, the following measures were taken:

- legal basis was created in accordance with market relations;
- agrarian reforms were carried out on state and collective farms, their land and property were privatized, and land and property were provided to those who had the right to receive shares;
- the property of processing, procurement, sales and service enterprises was privatized, the state monopoly was abolished;
- on the basis of state and collective farms liquidated at the expense of land and property shares, various economic entities were established on a private basis, entrepreneurship was formed and developed;

- financial, credit, tax, insurance, price, management system was changed, systemic policy was implemented in accordance with market principles;
- customs policy on import-export operations was improved;
- cooperation with international organizations in the field of agriculture (scientific-technical, experimental, economic, etc.) was expanded;
- new integrated relations in the field of production, processing and services were established in international markets;
- obstacles to the development of entrepreneurship in agriculture and interference in their work have been eliminated;
- favorable legal-economic and organizational mechanisms have been created in the development of entrepreneurship, consistent stimulation measures have been implemented in the development of production (taxes, subsidies, loans, etc.);
- land and property owners are completely free to manage their farms, etc.

At the first stage of agrarian reforms, 99.8% of land plots to be transferred to private ownership and 98.9% of property were privatized. About 867,000 families received land shares and owners were created. As a result of favorable conditions created in the agrarian sector, about 842,000 small (family) farms, 36 state farms (limited liability company), more than 79 agricultural production cooperatives, 2,409 agricultural enterprises (joint farms), 2,571 individual entrepreneurs (legal entities) and 220 other agricultural enterprises (research, teaching, practice, etc.).

Developing second stage, it was considered necessary to resolve the following issues:

1. Soil and climatic features, conditions for the development of territories in the country. This is the main distinguishing feature of agricultural relations. Renewal of land relations and creation of various forms of economy;
2. There should be a raw material base for the agricultural processing industry. Cotton, tobacco, and tea are processed, not consumed. 40-50% of some products are sold for processing, the rest are for personal

consumption. Expanding the network of processing and service enterprises, creating new organizational and legal structures;

3. Agriculture is multifaceted. In addition to the main sector, it is possible to develop other areas of agriculture in one economic region. To develop the production of export-oriented products based on the superior development of the industry;

4. In agriculture, market relations require a new relationship of ownership and entrepreneurship in relation to land and property, and this is a key factor. Creation of conditions for the development of entrepreneurship;

5. The formation and development of market relations in the agricultural sector depends on a flexible system of state regulation. That is, to stabilize and develop production, protect producers' incomes, credit, tax, price, insurance, management, etc. pursue a flexible economic policy in connection with;

6. Ensuring state participation in the social development of rural territories and villages in the regulation of social policy in the agricultural sector;

7. The formation of stocks of food and raw materials for state reserves;

8. Efficient use of available land, labor and financial resources;

9. Ensuring the independence of entities working in the agricultural sector, producers, processors, sales and services.

It should be noted that consistent and systematic measures have been taken and are being taken at the state level to form the agricultural market in accordance with these agrarian policy directions.

As a result of the agrarian reforms carried out in the first years of our independence, agriculture emerged from the crisis and entered a new development path based on quality. These reforms were distinguished by their radicalism and speed not only from reforms in other sectors of the economy, but also from similar reforms of the CIS countries. Thus, with a view to the sustainable development of agriculture, has been created a solid legal framework and have been formed new land and property relations. The new land relations that arose as a result of agrarian

reforms created a sense of ownership among the owners and made them real controllers of their products. Now the landowners could decide for themselves what to plant, where to sell and at what price. Owners must both provide themselves with the products that they receive from the land, and improve their material well-being, making a profit, selling it on the market. This increases their interest in production. As a result of land reform carried out in the Republic of Azerbaijan on the basis of a market economy, 4.913 million hectares of land were transferred to state ownership, 2.032 million hectares - into municipal ownership and 1.695 million hectares - into private ownership. The most important task of agrarian reforms was the reindustrialization of the Azerbaijani peasantry, the creation and development of multilayer, highly efficient forms of economy in this important sector.

Following the adoption in 1991 of the Constitution "On the State Independence of Azerbaijan", the Law on Private Property was adopted in the same year. Then, on December 15, 1992, the Entrepreneurship Law entered into force. Also in 1993, the Law on the Privatization of State Property was adopted. We know that the main way to attract large groups of people to entrepreneurship is privatization. This leads to the creation of the material base for the formation of small and medium enterprises. The emergence of small and medium-sized businesses accelerated the transition to a market economy. Then, at the beginning of 1993, the law on privatization of small enterprises was adopted. It should be noted that 93.2% of the properties to be privatized in the agricultural sector have been privatized. As a result, since 1997, agricultural and livestock production has increased by 7% per year.

At the same time, as a continuation of the reforms, the state signed a decree in 2011. In addition, the development concept "Azerbaijan 2020: a Vision for the Future" provides for further improvement of scientific support and training in the agricultural sector [5].

By the Decree of the President of the Republic of Azerbaijan dated March 16, 2016 No. 1897 On approval of the main directions

of the strategic roadmap for the national economy and key sectors of the economy, appropriate instructions were given for the preparation of the Strategic Roadmap based on an in-depth analysis of the current state of the economy. Accordingly, the current situation in the field of agricultural production and the processing industry has been systematically and comprehensively analyzed with the participation of the relevant public authorities, research centers and independent experts, a number of discussions and relevant assessments were held and on this basis the Strategic Road Map for Production and Processing of Agricultural Products in the Republic of Azerbaijan was prepared.

In connection with the implementation of the Strategic Roadmap for 2016–2020, based on the principles of sustainable development in the country, it is planned to implement 9 strategic goals to create favorable conditions for achieving the formation of competitive agricultural production and the processing sector. These strategic objectives include strengthening the resilience of food security, building agricultural production capacity in value chains, developing an agricultural resource market and facilitating access to appropriate resources, including finance, improving agricultural science and education, and providing advice and information. developing service systems, developing market infrastructure and facilitating market access for producers, creating mechanisms for the sustainable use of natural resources, improving the business environment in the agricultural sector and improving welfare in rural areas [1].

By the Decree of the President on amendments to the Decree of the President of the Republic of Azerbaijan dated December 19, 2018 "On improving state support for agriculture and leasing activities in the agricultural sector" and to the Decree of the President of the Republic of Azerbaijan No. 571 dated 23 July 2015 "On approving the provisions of some into the structure of the Ministry of Agriculture ", the Agrarian Credit and Development Agency (ACDA) was created, based on the structure of the State Service for Management of Agricultural

Projects and Credits under the Ministry of Agriculture of the Azerbaijan Republic. The State Agrarian Trade Company was established under the Ministry of Agriculture by a decree signed on the establishment of the Agrarian Research Center under the Ministry of Agriculture of the Republic of Azerbaijan. In addition, the district and city offices of the ministry were abolished and replaced by the State Agricultural Development Centers (SADC) and the Farmers Council under the Ministry of Agriculture. Also, the Agrarian Advisory Council was established under the Ministry, the Food Supply and Procurement OJSC was liquidated, and the Agrarian Supply and Supply OJSC was established under the Ministry of Agriculture. On the basis of the State Service for Agricultural Projects and Credit Management, the Agrarian Agency for Credit and Development was created, the portfolio of OJSC Agroleasing, as well as the function of selling agricultural machinery and breeding animals at reduced prices was transferred to the new institution.

The Decree of the President of the Republic of Azerbaijan dated June 27, 2019 No. 759 "On the establishment of a new subsidy mechanism in the agricultural sector" was signed to make the provision of subsidies in the agricultural sector more efficient. At present, the fixed financial means used in the calculation of subsidies in the field of crop production is equal to 200 AZN. 25% of planting subsidies are used in cash and 75% in non-cash form. 100% of the cost of pesticides and seeds, 70% of the cost of mineral fertilizers and biohumus can be paid by subsidies. Agricultural cooperatives are paid more than 10% of the subsidy for planting on more than 50 hectares of land. In addition, a new mechanism for providing subsidies for crops and seeds is being introduced, which will help improve the financial situation of farmers.

In the livestock sector, the mechanism for providing subsidies for artificial insemination, beekeeping and cocoon production has also been improved.

**Economic assessment of agricultural production in 2010-2018**

Although agriculture provides about 5-6% of GDP in Azerbaijan, it accounts for 37% of employment. Of course, this disproportion reflects the situation with labor productivity and human capital development in the agricultural sector. The value of gross agricultural output in actual prices in 2010 was 3,877.7 million manat, and in 2018 it was 7,010.0 million manat. As can be seen, in 2018 it was 1.8 times more than in 2010. Thus, in comparable years, the production of livestock increased by 2 times, and crop production by 1.6 times.

The analysis of statistical data on the production and productivity of the main types of crop products in Table 1 [9] shows that in

the comparable 2010-2018 there is a significant increase in crop production in general. From this point of view, in 2018, compared to 2010, crop production is 65.4%, productivity is 45%, cotton production is 6 times, productivity is about 39%, vegetable production is 28%, productivity is 14%, hazelnut production is 76.8%, productivity decreased by 0.8%. This is due to unstable weather conditions and heavy rainfall. Due to weather conditions, pollination of trees is not carried out properly. Although fruit and berry production increased by 38.6%, productivity decreased by 3.7%, tea production increased by 54.4% and productivity increased by 18%.

Table 1. Production and productivity of the main types of crop products

	Grain		Cotton		Vegetables		Hazel		Fruit, berries		Tea	
	Production, thousand ton	Productivity, cents / ha	Production, thousand ton	Productivity, cents / ha	Production, thousand ton	Productivity, cents / ha	Production, tons	Productivity, cents / ha	Production, tons	Productivity, cents / ha	Production, tons	Productivity, cents / ha
2010	2,000.5	20.7	38.2	12.7	1,189.5	142	29,454.3	12.9	729,502.4	70.6	544.9	9.4
2011	2,458.4	25.4	66.4	15.5	1,214.8	146	32,922.2	14.1	765,818.0	71.7	534.1	9.8
2012	2,802.2	27.2	57.0	19.5	1,216.3	150	29,623.8	12.4	765,818.0	73.8	567.9	10.5
2013	2,955.3	27.5	45.2	19.3	1,236.3	154	31,201.9	12.5	853,557.2	74.3	567.6	12.0
2014	2,383.3	24.0	41.0	17.9	1,187.7	152	30,039.0	11.8	850,802.9	72.0	474.3	10.1
2015	2,999.4	31.5	35.2	18.8	1,275.3	158	32,576.3	11.8	888,415.8	71.4	579.0	12.4
2016	3,065.1	30.6	89.4	17.3	1,270.6	159	34,270.7	10.7	882,800.0	65.7	1015.7	14.1
2017	2,928.8	29.8	207.5	15.3	1,405.6	155	45,530.4	12.0	954,785.4	68.4	775.2	11.1
2018	3,309.2	30.0	233.6	17.6	1,521.9	162	52,067.3	12.8	1,010,816.3	68.0	868.6	11.1
2018/2010 %	165.4	145.0	611.5	138.6	128.0	114.1	176.8	99.2	138.6	96.3	159.4	118.1

Source: The State Statistical Committee of the Republic of Azerbaijan.

Satisfying the demand for cotton products in the country, improving the supply of raw materials for cotton processing enterprises, developing the processing industry, increasing exports of cotton products, strengthening government support for growing cotton in rural areas and stimulating the development of this sector.

At present, against the background of the development of the non-oil sector in the country, increasing hazelnut production is also a priority. On the other hand, the

government is working to increase production and provide farmers with hazelnut seeds free of charge, as well as subsidies, grants and soft loans. At the same time, foreign companies are interested in the development of this area. It should be noted that companies from Italy, Turkey, Austria and Poland are interested in investing in this field in Azerbaijan. All this plays a significant role in the development of hazelnut growing, and as a result, Azerbaijan is the third largest exporter of hazelnuts in the

world. One of the most profitable products in the agricultural sector today is hazelnuts.

One of the most lucrative industries in the country since independence has been the breeding of cattle. Livestock is developed to meet the needs of the country. In order to maintain the dynamics of growth in livestock production in the country and to meet the needs of the population in livestock products through domestic production, the necessary measures are being taken to create new farms, improve the breed of existing livestock and other areas. Recently, more than 15 modern livestock farms have been established in the country. On the basis of the project "Creation of modern family farms for the production of meat and dairy products", measures are being taken to improve the living standards of the rural population by creating modern family

farms in selected pilot districts of Agjabedi, Barda and Imishli districts.

It should be noted that in the analyzed years, there has been an increase in livestock production and head count. So, in 2010-2018. meat production in cut weight was 33.2%, milk production - 35.46%, egg production - 42.22%, wool production - about 1.3%, cocoon production - 86 times, honey production, while poultry meat increased by 78.9% more than 2.6 times. National buttermilk, dovga, yogurt, curd and other national products processed by dairy enterprises have taken their place in the markets.

Thanks to targeted measures taken to strengthen the country's food security, the level of self-sufficiency in basic food products increased in 2015 (Table 2).

Table 2. Level of self-sufficiency in crop and livestock products

Products	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Total grain</b>	56.5	64.8	64.3	63.9	60.6	64.5	63.8	66.3	74.1
<b>wheat</b>	48.9	57.7	56.8	55.9	54.1	54.8	52.9	58.1	64.8
<b>barley</b>	87.7	93.7	95.1	97.8	84.6	95.1	101.7	94.4	103.1
<b>corn</b>	64.5	68.0	67.3	60.0	56.7	54.1	71.1	70.7	82.7
<b>oats</b>	80.6	82.8	84.4	89.3	62.2	93.1	85.7	90.1	89.2
<b>Other types of cereals</b>	1.0	4.0	8.7	2.3	1.1	6.3	32.0	20.4	82.3
<b>legumes</b>	65.8	70.4	71.6	76.6	76.5	69.3	68.4	73.7	72.0
<b>potato</b>	100.5	101.6	98.2	97.6	89.7	89.1	85.5	89.2	90.8
<b>All kinds of vegetables</b>	97.6	95.7	98.9	102.3	103.4	103.4	105.4	115.2	115.0
<b>tomatoes</b>	106.0	106.1	105.4	109.3	112.1	113.7	119.0	130.9	138.0
<b>gourds</b>	100.0	100.2	100.1	100.0	100.4	100.0	100.2	100.2	99.7
<b>Fruits and berries</b>	107.9	116.8	125.7	121.8	120.1	113.7	116.4	122.4	123.2
<b>walnuts and hazelnuts</b>	121.6	139.9	134.4	134.9	151.4	132.5	141.9	152.9	130.0
<b>pomegranate</b>	...	...	106.7	104.7	103.5	103.7	105.2	104.5	106.3
<b>grape</b>	90.4	89.9	94.3	94.8	97.9	93.1	89.2	93.4	92.5
<b>All types of meat of cattle and poultry</b>	87.7	87.7	91.8	92.4	92.4	94.7	87.9	84.7	82.7
<b>beef</b>	95.5	88.0	92.6	86.3	87.7	91.8	93.5	86.3	85.1
<b>mutton</b>	99.7	99.8	98.5	97.7	97.9	99.3	98.7	98.0	98.1
<b>pork</b>	19.7	14.7	25.7	36.0	16.6	17.8	7.0	5.6	5.5
<b>poultry</b>	70.6	79.9	87.8	98.5	98.0	98.6	79.1	79.7	75.9
<b>Milk and dairy products</b>	70.4	70.9	72.5	76.0	76.3	84.3	87.7	86.1	86.7
<b>Egg</b>	97.9	77.4	96.2	100.0	99.7	99.7	98.8	100.5	101.5
<b>Fish and fish products</b>	76.6	73.0	74.7	71.7	72.8	77.6	82.3	81.2	83.1

Source: The State Statistical Committee of the Republic of Azerbaijan.

One of the main challenges is to radically develop the food safety control system, which is one of the important components of food security. At present, the control over the

quality and safety of agricultural and food products in Azerbaijan is carried out by eight government agencies. The establishment of proper coordination among these bodies and

the overcoming of existing problems require institutional reforms.

Thus, the total volume of agricultural products in the country in 2010 was 3,877.7 million manat, in 2018 - 7,010.0 million manat. This shows an increase of 3,132.3 million man. in comparable years. It should be noted that the development of the agricultural sector has increased the level of self-sufficiency in some agricultural products. Despite this increase, the level of self-sufficiency has not yet been fully achieved. Thus, the level of self-sufficiency in vegetables, fruits and eggs is slightly more than 100% ( Table 2) [8].

Based on official figures, it can be said that in 2018, the level of self-sufficiency in cereals was about 82.4%, fruits and vegetables more than 100%, and the level of self-sufficiency in livestock products was 83%. Feed and feed components account for 70% of farmers' livestock costs. This reduces the production of livestock products. In general, the development of animal husbandry is one of the most important factors for livestock farmers. At the same time, the elimination of manual labor can be solved with the help of strong financial resources, which, in turn, will lead to higher market prices. All this requires the state to protect farmers and take serious steps in the field of market interventions.

## CONCLUSIONS

According to our analysis, despite the positive changes in agriculture, there are still many problems in this area that need to be addressed. The e-agriculture system still has a weak base, the privatization of agro-leasing services, and the optimization of breeding and fertilizer support need to be addressed. Among the serious problems we can show that there are many small farms. From this point of view, the mechanism of establishing cooperative relations should be studied and applied in accordance with world experience, that is, a model should be built in this direction. To accelerate cooperation, the agricultural insurance system must be strengthened. In addition, specifically:

- low productivity due to the lack of widespread application of advanced farming

methods, the role of extensive factors in the growth of production for most products;

- problems with irrigation water supply to arable lands;

- insufficient development of market infrastructure, including sales and warehousing infrastructure;

- the predominance of family farms based on low ownership of land and the low level of market orientation of these farms;

- the predominance of supply (production) over demand (market) in agrarian policy and the need to improve this policy in general on the basis of the "value chain" approach;

- weak farming partnerships and cooperation in agriculture, including agro-industrial integration;

- poor development of producers' access to financial resources and agrarian insurance system, etc.

In order to solve these problems, important agrarian projects implemented in the field of agriculture in 2019-2020 continue in our country. The reforms carried out by the state in the field of agriculture have entered a new stage. In our opinion, the most needed area for innovation in the country is agriculture. Innovation will stimulate the efficient use of land, as well as agrarian entrepreneurship, which will increase the competitiveness of products and strengthen the scientific and technical potential of the country.

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