

RECENT EVOLUTIONS IN THE DEVELOPMENT OF THE AGRICULTURAL SECTOR OF THE REPUBLIC OF MOLDOVA

DOGA Valerii¹, IGNAT Anatolie¹, GANGAN Svetlana²

¹National Institute for Economic Research, Republic of Moldova

²State Agricultural University of Moldova

Abstract. Agriculture is one of the most important sectors of the national economy of the Republic of Moldova. The status of the agricultural sector has changed dramatically during the post independence period due to a wide range of factors of which the most important are disruptions of production and distribution networks. Agriculture is the sector most exposed and vulnerable to natural hazards and climate change that influence primarily on large fluctuations of the agricultural production.

The aim of the article is to analyze the recent evolutions in the development of the agricultural sector of the Republic of Moldova and formulate necessary recommendations in order to overcome existing problems of this sector. The most important part of the agricultural production is still produced by households and agricultural enterprises. Subsidies' developments along with volume of investments are the most important indicators characterizing the state policy in the field of agriculture. During the period 2006-2015 the volume of investments and subsidies in agriculture evolved non-uniformly, with pronounced annual growths and decreases. The subsidy measures should avoid large annual fluctuations and be more focused both on agricultural products with high export potential and on those that are not covered completely by local production.

Key words: agricultural sector, agricultural production, subsidies, rural area, agri food exports.

The agricultural sector represents one of the main branches of the national economy and manifests itself as an important and complex direction of activity, with all the peculiarities and socio-economic consequences of the country.

In 2016 the volume of GDP reached 134,9 billion lei, registering a more than threefold increase comparing with the year 2006.

In the same period the contribution of the agricultural sector in formation of GDP dropped to 12,1%, that is a 2,4% decrease in comparison with 2006. This decrease is conditioned partially by the increase of the volume of services, that contributes nowadays to about 2/3 from GDP. This trend is characteristic to economies from developing countries where service sector has an important role, while the share of the agricultural sector in national economies is constantly reducing (see table 1).

Table 1. The evolution of the production volumes in agriculture in current prices, 2006-2015, billions MDL, %

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
GDP, current prices	44,8	53,4	62,9	60,4	71,9	82,4	88,2	100,5	112,1	122,2	134,9
Production volume of the agricultural sector (billions MDL)	6,5	5,3	5,5	5,1	8,7	10,1	9,9	12,4	14,6	14,9	16,3
The share of agriculture in GDP,%	14,5	10,0	8,8	8,5	12,0	12,3	11,2	12,3	13,0	12,2	12,1

Source: NBS, 2018.

At the same time agriculture is a sector most exposed and vulnerable to natural hazards and climate changes. Thus, the main factors that determine the quantity, quality and stability of the

agricultural production in the Republic of Moldova are agricultural and climatic conditions, in particular the lack or excess humidity, conditioned largely by ongoing climate change.

Recent trends of the Gross Agricultural Product in Moldova are characterized by large fluctuations of agricultural production, depending, primarily, to changes in climate and weather conditions

According to data of the NBS (2018), the gross agricultural product obtained in 2016 by all categories of farms, including agricultural enterprises, peasant farms and households recorded a level of 119% compared to the previous year after a two years decrease in 2014-2015 (see figure 1).

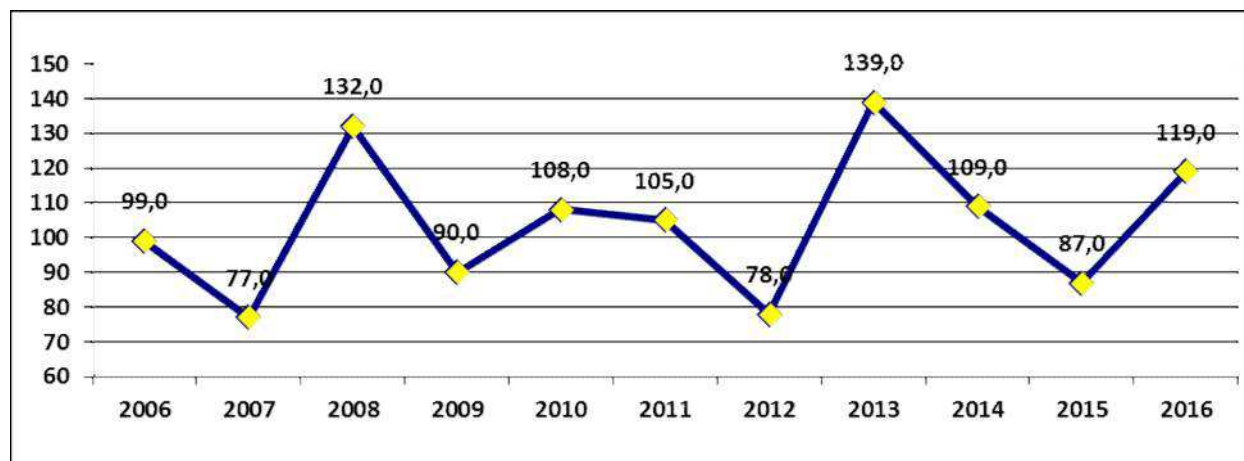


Figure 1. Index of the volumes of agricultural production. 2006-2016, (previous year =100%)

Source: elaborated by authors based on NBS 2018 data.

Analysis of the impact of different types of crops on the total volume of agricultural production in 2015 compared to 2014 indicates that the most important negative influence had the decrease in the production of rape seeds by 76.3%, of the sugar beet with 60, 5%, of the soya with 56.2%, potato with 41.0%, cereals and leguminous beans with 25.2%, vegetables - with 24.0%, and of the sun flower – with 11.9%, which resulted in a decrease of the overall agricultural production with 1.0%, 1.7%, 1.1%, 1.5%, 5.9%, 1.7% and 1.0%., correspondingly.

In 2015 the share of vegetal production constituted 58% of the total agricultural production, compared to 65% in 2014, while the share of the animal production constituted about 42% of the total agricultural production in 2015, the sector, increasing by 7% to the level of 2014.

The decrease of crop production in 2015 compared with the previous year was generated by the decrease in average yield in most crops as a result of adverse weather conditions. Thus, the average yield per hectare of soya was reduced by 65%, sugar beet by 50%, potatoes – 39%, corn - 34% rape seeds - 20% and wheat by 16% comparing with the previous year.

The agricultural production is obtained in different types of farms such as agricultural enterprises, peasant farms and households. The most important part of the agricultural production (47%) is produced by households that are followed by agricultural enterprises with a share of 37% and peasant farms that contributes to about 16% of the total agricultural production

The high share held by households can be explained by the significant share of animal production (72%) grown in households. About 96% of the volume of milk production, 63% of cattle, poultry and eggs were produced by households and peasant farms in 2016.

Agricultural enterprises contributed to the largest share in production of sugar beet (91,5%), tobacco (77,8%), cereals and leguminous crops (52,0%) and sunflower seeds – 73,5%.

At the same time, about 89% of the total volume of potatoes and vegetables, 75% of grape and 72% of corn has been produced by households and peasant farms (see table 2).

Table 2. Structure of agricultural production of selected crops by categories of households, 2006-2016,% of total production volume

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Agricultural enterprises											
Cereals and leguminous crops	34,7	48,3	45,1	37,3	37,4	39,5	47,9	52,4	50,4	50,5	52,0
Sugar beet	80,3	85,2	90,4	87,9	86,4	91,4	89,2	93,7	93,5	92,5	91,5
Sunflower	61,1	66,5	68,2	66,8	69,8	68,1	70,0	83,0	74,4	72,4	73,5
Potatoes	3,9	11,4	9,3	11,1	16,6	15,4	17,0	14,8	15,2	14,2	11,2
Vegetables	16,6	19,9	21,1	15,5	16,1	16,0	17,5	15,2	16,4	13,7	14,6
Farmsteads											
Cereals and leguminous crops	36,6	29,6	31,9	34,2	35,8	33,8	29,6	29,1	29,6	28,2	28,5
Sugar beet	19,0	14,4	9,1	10,9	13,1	7,9	10,2	6,0	6,2	7,2	8,3
Sunflower	35,3	30,3	29,1	30,2	27,8	29,7	27,7	15,9	24,4	26,3	25,7
Potatoes	22,4	38,9	18,6	19,2	18,3	18,8	15,9	15,7	16,9	14,7	16,9
Vegetables	12,5	14,4	11,5	13,1	10,8	10,9	7,0	10,7	13,7	9,1	8,9
Households											
Cereals and leguminous crops	28,7	22,1	23,0	28,5	26,8	26,7	22,5	18,5	20,0	21,3	19,5
Sugar beet	0,7	0,4	0,5	1,2	0,5	0,7	0,6	0,3	0,3	0,3	0,2
Sunflower	3,6	3,2	2,7	3,0	2,4	2,2	2,3	1,1	1,2	1,3	0,8
Potatoes	73,7	49,7	72,1	69,7	65,1	65,8	67,1	69,5	67,9	71,1	71,9
Vegetables	70,9	65,7	67,4	71,4	73,1	73,1	75,5	74,1	69,9	77,2	76,5

Source: Elaborated in the base of data of the National Bureau of Statistics, 2018.

Development of the agricultural sector largely depends on policies supported by the state that can be achieved only through concrete and effective actions. Among the most important indicators characterizing the state policy in the field of agriculture one can mention subsidies and financial investments. In fact subsidizing the agricultural sector is a necessary aid for development and also a way of investment in this sector.

The European vector of the Republic of Moldova allows targeting policies subsidizing economic units from the agricultural sector toward subsidy policies promoted in the EU. For these reasons, the Government through its Decision no. 1305 from 28.11.2007 approved the Concept of subsidy system for agricultural producers for the period 2008-2015.

Through the system of subsidizing agricultural producers, the following priority directions are supported:

Priority direction I: Modernization of the agricultural sector. For the modernization of agricultural sector are subsidized investment activities related to the establishment of units for processing and handling of agricultural products, endowment with equipment and machinery, creating the infrastructure for collecting agricultural products, provision of agricultural raw materials, establishment of perennial plantations, units for producing seeds, seedling and reproductive material, development of services in agriculture.

Priority direction II: Performing agricultural activities in vegetal and animal sector. In order to increase productivity and competitiveness in agricultural sector, establishment of market, assurance of the food security and equitable income for farmers direct payments will be provided, depending on the agricultural crop, species of animals and poultry, the average individual return in comparison with the regional level, and according to the cultivated area or the livestock herd grown.

Worth to mention that the system of subsidies applied in the period 2002 - 2009 was appreciated by experts and researchers as inefficient, non-transparent and biased by manipulated then currently subsidies area targeted specifically on investment issues, aimed to increase competitive advantages of the agricultural sector and its integration into the international trading system.

Another important factor that influenced the growth of all indicators of economic activity in agricultural enterprises during the recent years is related to the revision of the state policy

regarding objectives of subsidies in agricultural sector. Analysis of the NBS data shows that during the period of 2006-2016 subsidies allocated for agrarian sector varied unevenly with significant growths and cuts. In 2016 the volume of subsidies totaled 700 million MDL, increasing with 36% as compared to 2006. However, relative to GDP it constitute only 0.5%, and this share is more than two times less comparing with this share in 2006. Compared with the total value of obtained agricultural production, the share of subsidies was of 4,3% in 2016 that is a 2,6% decrease comparing to the year 2006 (see table 3).

Table 3. Development of subsidies for agricultural sector, and their share in GDP and total volume of agricultural production, 2006-2016, mil. MDL,%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Volume of subsidies (mil. MDL)	514,0	799,0	675,0	455,0	385,0	417,0	400,0	462,8	564,7	610,0	700,0
Share in GDP (%)	1,1	1,5	1,1	0,8	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Share in the total volume of agricultural production (%)	7,9	15,0	12,2	8,9	4,4	4,1	4,0	3,7	3,9	4,1	4,3

Source: own calculations based on NBS data, 2018.

An important and valuable role for agriculture is played by investment policy, because in the nowadays conditions the sector development is impossible without investments. During the period 2006-2016 the volume of investments in agriculture also performed non-uniformly, with pronounced annual growth and decreases. The maximum rate of investments was in 2014 when it reached the level of 2332,7 millions MDL, that was 4.7 times increase compared with the year 2006. In 2015 it registered an essential downtrend of about 537.0 million lei, or 23.0% less comparing to the previous year with a small recover in 2016 when it increased with about 7% comparing to the previous year and reached the level of 1933,8 mil MDL (see figure 2).

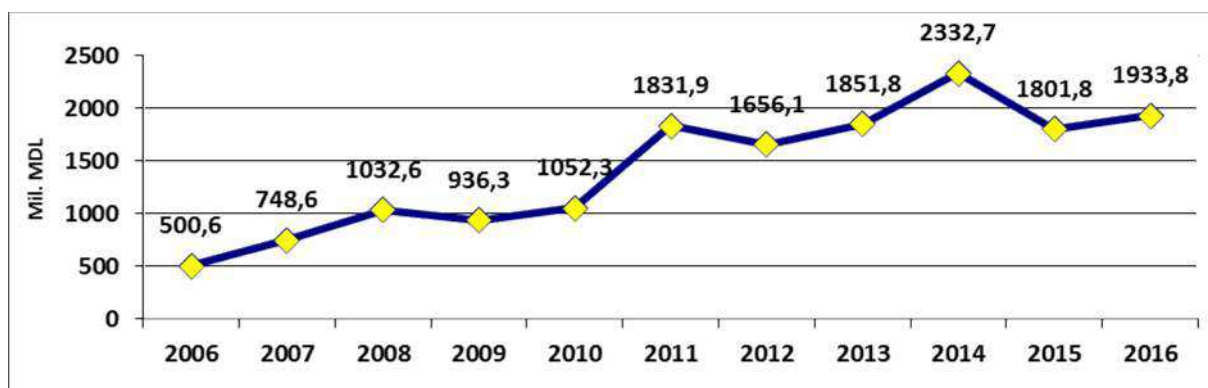


Figure 2. The evolution of investment in agriculture, 2006-2016, mil. MDL

Source: elaborated by authors based on NBS 2018 data.

The economic and political crisis, but also destructive phenomena in the financial and banking system resulting in the bankruptcy of three important banks was reflected significantly in terms of investments for the development of the agricultural sector and for the whole national economy. It is possible that this incident will have a negative impact and will influence undesirable investment processes also in the coming years.

An important indicator of economic activity in rural areas and especially in the agricultural sector is the average annual number of the employees. During the period of 2006-2016 more than 50% of the total population employed in rural area was employed in the agricultural sector. Starting with 2006 the population in rural areas as well as the number of employees in the agricultural sector had a downward trend until 2010 when it reached 605.0 thousand persons living in rural area and 314,7 persons employed in agricultural sector. After that, during the

period from 2011 to 2016, their number has evolved increasingly, reaching 659,7 thousand persons and respectively 384,2 thousand persons in 2016. This demonstrates that gradually the agriculture sector is becoming more attractive as a living space a creation of new working places (see table 4).

Movements of the population employed in rural areas is influenced by several social and economic factors, but the most important is the earning in the agricultural sector which is one of the main income sources that influence the living standard of the population in rural areas.

According to the statistical data provide by the NBS a steady increase of the average monthly earnings per employee in agriculture is observed throughout the period of 2006-2016 with an average yearly growth rates of 1,1%.

Table 4. Evolution of the population employed in rural area 2006-2016, thousands,%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total number of employees in rural area	696,4	698,6	691,8	636,1	605,0	616,7	592,8	622,3	646,9	648,3	659,7
of which in agricultural sector	422,4	408,6	388,6	333,7	314,7	323,0	303,3	337,9	361,1	368,1	384,2
share,%	60,6	58,5	56,2	52,5	52,0	52,4	51,1	54,3	55,8	56,8	58,2
In other sectors	274,0	290,0	303,2	302,4	290,3	293,7	289,5	284,4	285,8	280,2	275,5
share,%	39,4	41,5	43,4	47,5	48,0	47,6	48,9	46,7	44,2	43,2	41,8

Source: elaborated by authors based on NBS 2018 data.

Compared to 2006, when wage per economy amounted to 1697 MDL and in agriculture - 915 MDL, the average wage per economy was of 4998 MDL in 2016 increasing by almost 3 times, and in agricultural sector the monthly earnings constituted 3300 MDL, registering a growth of 3,6 times. If in 2006 the average wage in agriculture constituted 53.9% of the average wage in economy, then in 2016 this indicator was 66.0%, increasing by 12,1% (see table 5).

Table 5. Evolution of the average salary per economy, in and agriculture 2006-2016, MDL,%

Indicators	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Average monthly earnings per employee in the economy, MDL	1697	2065	2530	2748	2972	3042	3386	3674	4090	4611	4998
Average monthly earnings per employee in agriculture, MDL	915	1099	1484	1469	1639	1832	2111	2422	2709	3072	3300
The ratio of the earnings in agriculture to the average earning per economy,%	53,9	53,2	58,7	53,5	55,1	60,2	62,3	65,9	66,2	66,6	66,0

Source: elaborated by authors based on data provided by the National Bureau of Statistics.

The structure of the agro-food exports is dominated by a few product groups, where the leading role belongs traditionally to wine products, followed by fruits, of which the most important are walnuts. A large share of the agro-food exports during the last years belong to cereals and sunflower seeds. In general, foreign markets can be characterized by the dominance of exports of agricultural raw materials.

CONCLUSIONS

For the stable development of the agricultural sector and of the whole rural area, it is necessary to ensure first of all the economic stability for a period accepted by local producers. At the second stage the agricultural sector has to be developed according to market principles that are reflected in national strategies for economic development within the context of EU development.

Also is valid the likelihood of natural and climatic risks that could affect the volume of agricultural production. This at their turn could have an impact over prices of food products and volume of the agrifood exports. The uncertain political situation in conditions of tightening the monetary policy creates additional premises that could affect the business and investment environment, as well as production of the agrifood products.

Another problem is related to the structure of Moldovan agrifood exports. Thus a large part of the agrifood exports consist s of row material such as wheat, corn, sunflower seeds and nuts. The subsidy measures should be focused mostly on agricultural products with high export potential, especially on those products with high added value which does not cover domestic consumption necessities.

Situation with the Russian ban on Moldovan agrifood exports is another lesson to be learned by Moldovan agricultural producers that means that in an open economy is essential to ensure an effective management of exports, while the excessive concentration on certain markets involves a range of major risks.

BIBLIOGRAPHY

1. Government of the Republic of Moldova. (2008). National strategy for sustainable development of the agro-industrial complex in the Republic of Moldova for the period (2008-2015). Decision nr. 282 from March 11, 2008.
2. Data base of the National Bureau of Statistics (2018), Accessed at: <http://www.statistica.md/pageview.php?l=ro&idc=407&nod=1&>
3. National Bureau of Statistics (2018). Accessed at: <http://www.statistica.md>