

AGRICULTURE IN THE REPUBLIC OF MOLDOVA: PRESENT AND FUTURE

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Abstract:

Agriculture was and still is the most important source for human being and, thus, constitutes the strongest factor for economic development harmonization in any country. Agriculture is the key branch of economy in Moldova. Weather conditions together with the available land resources could assure the growth of any kind of plant, excepting tropical and subtropical ones. The development of this branch could be also influenced by number of persons employed in agriculture. Another important factor is the number and quality of tractors or other agricultural equipment that, according to the latest specialized research, is completely deteriorated – 20% and partially 60-70% out of total number. These underline the outdated technologies and necessity of massive investments in fixed assets that automatically will increase the final price of local production above the imported ones. Meanwhile each country, including Moldova, dreams to be self-sufficient in terms of assuring of internal market with agri-food products and export the surplus. Small size of internal market of our country creates good premises for export but the share of agri-food products registered the continue decrease from 63% in 2001 to 44% in 2010. Thus current situation in agriculture of Republic of Moldova impose the necessity of major changes in respective policies that will be consider in this article.

Keywords: agriculture, resource, efficiency, internal market, export, import, agricultural policies

INTRODUCTION

Agriculture was and still remains for all countries the support of human existence and, therefore, is the most balance powerful factor in harmonizing the economic development. For Moldova, agriculture represents the backbone of the national economy. The national agricultural reform was initiated after independence by removing the managed centralized system and establishing market relations with all the effects of reform processes that have often been marked by dynamism, uncertainty and risk, sometimes even hostility.

MATERIAL AND METHOD

National and international legal acts, textbooks, monographs, national and international conference proceedings and other publications on the specific theme are the materials used in the research. The study is performed on selected and processed by the authors' data on the basis of Statistical Yearbooks of Moldova, EUROSTAT and other publications that have provided meaning and relevant explanations in relation to phenomena

or processes that take place in the food sector in our country.

RESULTS AND DISCUSSION

3.1 Agriculture of the republic of Moldova: general characteristics

The national economy is characterized by a continuous growth of gross domestic product (GDP) at current prices, from about 7.7 in average years 1995-1997 to 58.8 in average years 2007-2009 or by 7.6 times and at 71.8 billion MDL in 2010, that is more than 1.22 times compared with the average of 2007-2009. This increase is due mainly to prices, given the fact that in comparable prices, calculated on the average of 2000, in 2008 it increased only by 1.5 times as compared with 2001.

It is significant to mention that goods are involved more and more modest in the formation of GDP. So, if in 1995-1997 the share of goods in GDP stood at 49%, then in the average of 2007-2009 they accounted only for 22.7%, in 2010 increasing to 25.2%. Major changes have occurred in the national economy sectors' contribution to the GDP. If in the years 1995 - 1997 the GDP structure was dominated by agriculture, hunting, forestry and fishing

(27.39%), followed by industry (22.5%), then in the years 2007 to 2009, agriculture (9.03%)

came on the last place. In 2010 the share of agriculture in GDP formed 11.9%.

Table 1. Agricultural production by forms of ownership

	2003	2004	2005	2006	2007	2008	2009	2010
Total, current prices, mil MDL	10354	11819	12688	13734	12825	16503	13300	19873
Total, comparable prices (2005) mil. MDL	10179.0	12301.3	12402.2	12266.7	9432.5	12460.3	11259.5	12146.7
Including: - public	68.9	139.5	117.4	106.5	74.9	137.2	61.8	78.4
- private	10111.0	12161.8	12284.8	12160.2	9357.6	12323.1	11197.7	12068.3
of which:- collective	2402.1	3722.6	3508.0	3359.1	2589.6	4311.1	3373.1	3613.6
- households and peasant farms	7708.9	8439.2	8776.8	8801.1	6768.0	8012.0	7824.6	8254.7

Source: Made by the author on the basis of Statistical Yearbooks of the Republic of Moldova

If the total amount of agricultural production in current prices in our country (Table 1) increased from 10,354 in 2003 to 19,873 mil MDL in 2010 or by 1.92 times, then in comparable prices of 2005 it increased more modestly from 10179 in 2003 to 12146.7 mil. MDL in 2010, or by 1.19 times. The crop production dominates the reference years (68.4% in 2003 and 68.5% in 2009).

3.2 Natural resources in national agriculture

Agriculture is considerably influenced by *natural potential* and as P. Bran [2.20] claims, it participates with "the force of its laws and its "goodies", substance (s), energy (e) and information (i)".

Natural potential is shown, first, by the weather conditions which were characterized by average annual air temperature of 10.6, with the absolute maximum of 36.8 and absolute minimum of -21.8 Celsius degrees in 2010, at the Chisinau meteorological station. Annual amount of precipitation made up 446 mm in 2009 and 734 mm in 2010. The relative air humidity was 68 and respectively 74 percent. Climatic conditions and water resources are favourable for cultivation of all plants, except of those tropical and subtropical.

Agricultural land accounted for 22498.3 thousand hectares, forming 73.8% of the land fund. Arable land surface formed 72.6 percent of the total agricultural land. The main focus of national policy on the land fund was, is and still remains de-monopolization of the state ownership of the land.

Reforming the land ownership, as it is noted in the statistical survey of households and farms activity, has caused the situation that "the average size of land on plots near the house amounted to 0.4 ha on average per household surveyed. The average size of worked land by private citizens was 1.62 ha". We must add that agricultural land, even in the composition of a household have often been fragmented into several parcels.

Most representatives of public authorities and a large part of specialists claim that the decline in agriculture in our country is a consequence of the small size of farms as a result of excessive parcelling of land. We believe that such views are at least questionable if not erroneous for the following reasons:

First, we believe that to this medium size (of 1.62 ha) of agricultural land processed by the citizens individually, the land around the house (0.4 ha) must be added. Indirectly, the idea is confirmed by the same statistical research showing that "from the total number of surveyed households, 80% had both land around the house and lots of land allocated to citizens in the shares of parcels of equivalent land".

Therefore, if we begin with the fact that a person was assigned with a land parcel equivalent with 1.62 ha in size, and within the most families there are three holders of parcels, then the size of a farm should be a minimum of about 4-5 ha. In addition, according to the same statistical research, "over half of households (54%) have fully transmitted the land plot in use (rent etc.) to other users and about 46% were processed individually the land."

The area of land owned by companies and organizations increased from 798,500 in 2003 (Table 2) to 871 300 ha in 2010 or by 9.1 %.

Table 2. Agricultural land by categories of land owners, at the beginning of the year, thousand ha

Indices	2003	2004	2005	2006	2007	2008	2009	2010
Total	2269.6	2264.0	2257.4	2254.0	2245.8	2240.2	2239.4	2236.9
Of which:								
Companies and organizations	798.5	835.2	841.2	848.0	839.0	858.0	867.8	871.3
Farm households	743.5	706.7	692.9	685.6	678.9	668.6	672.4	661.4
Including the average size of the land less than 50 ha	607.1	611.7	604.1	620.0	605.8	603.3	600.4	591.0
Of which the average size of the land less than 10 ha	600.4	586.5	601.9	611.6	591.3	585.3	579.4	565.6
Households auxiliary annexes (land near the house and gardens)	305.2	298.6	299.1	306.9	308.5	307.8	303.5	313.6
Other landowners	422.4	423.5	424.2	413.5	419.4	405.8	395.7	390.6

Source: Authors' calculations on results of statistical research on agricultural activities of small agricultural producers in Moldova, Ed. Statistica Chisinau

Increase occurred from the account of agricultural lands owned by farm households, whose surface respectively decreased from 743.5 to 661.4 thousand ha or by 11.1%.

Nowadays, the world is directed towards the development of small and medium legal-organizational forms. The study on the experience of countries with developed agriculture shows that one farm has in Britain - 67.9 ha, Denmark - 34.7 ha, Sweden - 33.7 ha, Luxembourg - 32.4 ha, France - 28.4 ha, Ireland - 26.1 ha, Germany - 17.9 ha, Netherlands - 16.2 ha, Belgium - 15.9 ha, Spain - 15.8 ha, Finland - 12.8 ha, Austria - 12.2 ha, Portugal - 6.9 ha, Italy - 5.6 ha, Greece - 4.2 ha. According to the results of statistical researches, individual auxiliary households of citizens and farm households with the land size up to 10 hectares and that have only about 40% of agricultural land produced 70% of the total agricultural production in the country, including 58% of the vegetable production and about 87% - of animal production, which proves incontestably that small farmers are more efficient.

*We support the land consolidation if this process occurs through **donation, lease, sale and purchase of land, association and cooperation**. For consolidation of small farmers' lands it is extremely important that the state not to impose any of the listed ways, but impartial to publicize and encourage them by applying economic instruments and mechanisms.*

At this stage we consider appropriate to set the lower limit of the price of rent and registration of contracts by the local public authorities. To encourage the growth of land through sales and buying, it is necessary to form a special fund in the state budget that would cover the interest rate of commercial banks that grant loans on a term of about 10 years in order to purchase land plots.

3.3 Human resources in national agriculture

The *human potential* can be emphasized among the "definition factors" that create the mass of agricultural goods. Total active population fell from 1473.6 thousands in 2003 to 1235.4 thousands in 2010 or by 16.2%. Activity rate respectively decreases from 51.6% to 41.6%.

Number of people employed in agriculture of the Republic of Moldova fell from 583 thousands in 2003 to 315 thousands in 2010 or by 46%. The share of rural population employed in economic activities in agriculture, hunting and fishing is even more definitely reduced. If the number of people employed in agriculture in 2003 accounted for 75.3% of those employed in rural economic activity, then in 2010 it accounted for 52.1%. In fact, 25.5% of the total active persons were involved in the national agriculture in 2010.

We mention that where the eternity was born, those engaged in economic activities work basically on their own. More than two third (72.8% in 2008 and 69.4% in 2010) of those

who practice agriculture, hunting and fishery work on their own.

The most large group (table 3) from the employed population is formed from people of age 45 – 54 (28.3% in 2008 and 27.2% in 2010), followed in 2008 by those of 35 – 44 (24.6%), and those of 25 -34 years (24.1%) in 2010. In rural areas those aged 45-54 years accounted for 29.3 in 2008 and 28.6 in 2010.

Most of the population employed in agriculture age. If those aged 15-24 years employed in agriculture constituted 43.6% in 2008 and 41.7% in 2010 of all people employed in rural areas, then those aged 55-64 made up 63.9% in 2008 and 62.0% in 2010. Practically, all those who are aged over 65, 94.5% in 2008 and 93.1% in 2010 were involved in economic activities in agriculture, hunting and fishing

Table 3. Employed population on age groups in the Republic of Moldova

	Year	Total	From the total on age groups, years					
			15-24	25-34	35-44	45-54	55-64	< 65
Total, thousand persons	2008	1251.0	124.3	254.2	308.1	354.6	169.2	40.7
	2010	1143.4	117.8	275.8	262.8	311.1	113.4	22.5
including: - in rural areas	2008	691.8	67.4	122.3	170.7	202.9	96.1	32.5
	2010	605.0	65.2	119.8	146.5	173.1	86.1	14.4
Of which: - in agriculture	2008	371.7	29.4	57.5	84.8	107.9	61.4	30.7
	2010	314.7	27.2	55.7	70.5	94.5	53.4	13.4

Source: Author's calculations after the Workforce in Moldova. Employment and Unemployment, National Bureau of Statistics of the Republic of Moldova, Chisinau, 2009, 2011

In the structure of population involved in agriculture, those with higher education made up only 2.6% in 2008 and 3.8% in 2010 of all the

people employed in this branch or almost 3.8% in 2008 and 4.6 % in 2010 of the total of those with higher education in our country.

Table 4 Inactive people from the Republic of Moldova declared as left to work abroad, thousand people

	Year	Total	From	Of the total		From rural area on age group, years				
			Rural area	Men	Women	15-24	25-34	35-44	45-54	55-64
Total	2008	309.7	212.6	201.4	108.3	58.1	59.8	51.7	38.4	4.6
	2010	311.0	220.5	198	113	57.3	70.5	48.9	37.3	6.4
Israel	2008	8.0	5.8	0.0	6.6	0.0	1.5	2.8	2.8	0.0
	2010	8.2	6.6	0.8	7.4	0.0	0.0	2.2	2.2	0.0
Italy	2008	55.4	33.9	17.2	38.2	6.8	8.7	9.6	7.6	0.0
	2010	58.6	38.5	18.5	40.1	6.1	10.7	8.9	10.4	2.2
Russia	2008	191.1	137.8	147.5	43.6	40.2	38.9	33.0	22.8	2.9
	2010	191.9	142.5	147.2	44.7	42.8	45.0	32.1	20.1	2.6
Turkey	2008	7.9	5.6	1.6	6.2	1.7	1.8	0.0	0.0	0.0
	2010	9.0	6.3	1.5	7.5	1.6	2.0	0.0	0.0	0.0
Ukraine	2008	10.9	6.1	8.4	2.0	1.8	0.0	0.0	0.0	0.0
	2010	6.5	3.8	5.3	0.0	0.0	0.0	0.0	0.0	0.0

Source: Author's calculations based on Workforce in Moldova. Employment and Unemployment, National Bureau of Statistics of the Republic of Moldova, Chisinau, 2009, 2011

Human potential is part of the resources that circulate freely throughout the earth. It is natural that our country is also part of the area of free flow of human resources. But in our country people who go to work abroad dominate. If the number of immigrants in 2009 stood at 2010 people, then the number of emigrants - 6663 or 3.3 times higher.

309.7 thousand people were declared to work abroad in 2008 and 311 thousand people in 2010 (Table 4) which forms respectively 24.7% and 27.2% of the total employed population in Moldova. The share of persons leaving the rural areas is increasing from 68.6% in 2008 to 70.9%.

Most of people (61.7% of total) go to work in Russia, followed by Italy, where left about 18% of the total. Of all people going to work abroad, the group of people aged 25-34 years (27.3% in 2008 and 26.0% in 2010) followed by the one with the age of 15-24 (28.1% in 2008 and 32% in 2010) dominates.

The fact that the population, mainly people of working age, leave our country in search of a better paid job generate serious issues to the national economy, including agriculture. Given that more than half of those who leave are aged between 15 and 35 years, the demographic situation will worsen considerable in the future and will become extremely difficult to assure the economy with those who need to produce goods and provide services. Economic and social measures are necessary to motivate human resources to work in the national economy.

3.4 Longterm tangible assets, investments in national agriculture

Application of innovative and modern technologies requires technical efficiency, performance, use of chemical and natural fertilizers, irrigation systems, etc. The value of machines, tools and transmission facilities in current prices increased from 552 mil MDL in 2000 to 1694 mil MDL in 2010 or slightly more than three times. This growth is not accompanied by an appropriate increase of physical technical means used in national agriculture. The number of tractors (Table 5) increased from 39.5 in 2004 to 42.6 thousand in 2009 or by 7.8 percent. To each tractor in 2009 corresponded 42.7 ha of arable land. In the period 2004 – 2009, the number of harvester increased by 23% in 2009 and to each harvester correspond 383.3ha of arable land.

Table5 Technical means in national agriculture

	2004	2005	2006	2007	2008	2009
Tractors	39500	40400	40454	40700	40800	42600
Harvesters	3852	3828	4170	4170	4170	4748
Ploughs	13888	14307	14900	14900	14980	15000
Seeders	9354	9445	10150	10150	10200	10250
Cultivators	13860	12209	13560	13560	13600	13600

Source: Made by authors based on data from the Ministry of Agriculture and Food Industry

Research [3,105] indicates that "about 20% of the total number of tractors are fully used and can not be repaired, the ones which still work are obsolete at a level of about 60-70%, and half of agricultural machines are being operated more than 15 years". Obviously, current and / or capital repairs of such technical means require imposing costs, which ultimately result in an unjustified increase of cost at agricultural products.

In 2001, "2KR Project" that is a technical grant for purchase of agricultural machinery was

launched. According to this program, 43 tractors in 2001 and 518 tractors in 2008 (Table 6) have been sold to farmers annually, in a total amount of 3158 tractors in these ten years, fact that makes up to 7.5% of the total number in 2010. Number of harvesters sold to farmers in the framework of this project varies from 4 in 2004 to 59 in 2008, totalling 338 harvesters in 2001-2010, that form 7.1% of the total number in 2010

Table 6 Agricultural technique realized within the 2KR Project

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Tractors	42	172	310	492	294	405	332	518	198	395	3158
Harvesters	21	23	32	4	46	9	43	59	44	57	338
Aggregates	42	21	30	21	222	11	56	137	70	114	488

Source: Made by authors based on reports of Ministry of Agriculture and Food Industry

Until the 90s of last century, the amount of tractors increased with about 15% and the combines - with 30%. Comments are useless.

Even though in the years 2004 – 2010 380 irrigation equipments were made and installed, the surface of irrigated lands has decreased

from 302,100 ha in 2004 to 226,300 ha in 2010. The volume of agricultural production depends largely on the additional supply of chemical fertilizers and natural fertilizers. According to the diagram below, even if chemical fertilizers have a tendency to increase from 14.6 kg in 2001 to 24.5 kg of active substance per hectare, they remain insufficient to guarantee an acceptable and stable result. The use of natural fertilizers in the same years has a clear tendency to decrease.

Agriculture, which is undergoing a difficult period of reform by removing the centralized management and establishing a system of mechanisms based on market relations,

undoubtedly will successfully be reformed if it is provided with financial resources.

Modernization of technologies by increasing the number of technical means used in agriculture and "creative destruction" by practical change of characteristics of these technical means requires considerable investment.

Investments in fixed capital on objects of national agricultural production (Table 7) increased from 90.7 mln MDL in 1995 to 455.9 mln MDL in 2005 or by 5 times, then increased to 992.3 mln in 2010 or about 2.2 times compared with 2005.

Table 7 Investment in fixed capital for agricultural development in current prices, mln MDL

	1995	2005	2006	2007	2008	2009	2010
Investment in fixed capital on productive use objects	90.7	455.9	489.2	731.6	1020.2	923.3	992.2
Of which: - public	25.5	41.5	37.5	37.8	41.2	23.7	29.2
- private	64.5	369.6	382.5	558.8	861.9	795.8	818.8
- mixt (public and private)	0.7	6.9	5.4	20.1	14.9	2.6	0.9
Of mixed enterprises	-	32.9	61.8	110.2	98.1	87.2	116.8
Of foreign investors	-	5.0	2.0	5.2	4.0	14.0	26.6

Source: Made by authors on the basis of Statistical Yearbooks of the Republic of Moldova

Investment in private sector increased steadily and sharply. Definitely, investment in national agriculture of foreign investors increased from 5 mil MDL in 2005, to 26.6 mil MDL in 2010 or by 5.3 times, but they remain insufficient and account for just 2.7%. Investments involve a significant mobilization of capital and, obviously, the right choice of means of investment financing is required. It is preferable to finance investment from own means that at the farm level are obtained by selling products and services both on domestic and foreign markets.

3.5 Market of food products

In all countries, evident in our country also, food production is addressed, primarily to domestic market. Total retail sales of food products (Table 8) on domestic market increase from 1.44 billion MDL in 2000 to 8.05 billion MDL in 2010 or by 5.6 times. But if the share of food products accounted 45.2% from the

total retail sales in 2000, then in 2010 - only about 32%.

Alcoholic products and other beverages sold in retail on the domestic market accounted for 20.3% in 2000 and 24.8% in 2010, which represent the biggest share of food products.

If in 2000 the trade with meat and meat products which accounted for 15.4% of total food products was placed second, then in 2010 trade with bread and bread products which accounts for 18.3% of total food products retailed ranked the second place.

Moldova's *domestic food market* is limited to those only about 4.3 million consumers and is a subject to their purchasing capacity.

Average monthly disposable income compared to the average vale of the subsistence minimum per person increased from 51.4% in 2001 to 92.7% in 2010. Disposable incomes up to 200 MDL per month in urban areas accounted for 0.5%, while in rural areas - 2.2% in 2010.

Table 8 Retail sales value, mil MDL

	2000	2005	2006	2007	2008	2009	2010
Retail sales value, total	3193.7	11030.8	13620.7	16866.6	21387.2	19960.6	25096.5
Including: - food products	1442.9	3611.4	4290.7	5485.1	7094.3	7057.4	8049.2
Of which: - potatoes, vegetables and fresh fruits	56.8	97.1	100.0	147.8	206.9	249.6	361.6
- bread, pastries and cakes	190.2	691.3	803.5	1046.4	1352.8	1277.7	1474.7
-meat, poultry and meat products	222.9	570.0	632.7	747.6	1103.5	1218.0	1237.3
- milk and dairy	83.6	138.3	154.3	204.8	268.8	232.3	255.7
- eggs	67.7	97.0	87.8	98.7	145.7	123.9	127.8
- alcoholic products and other beverages	292.9	1015.5	1264.8	1539.8	1873.2	1847.0	1998.7

Source: Made by authors on the basis of Statistical Yearbooks of the Republic of Moldova

The largest group (15%) is the one that has the monthly disposable income in amount of 800.1-1000 MDL that in urban area consisted of 12.5% and in rural area - 16.7%. If the share of total population with 800 MDL salary

accounted for 6.7% and in agriculture it accounted for 17.5%, then those with salaries of 2500.1-3500 MDL respectively accounted for 19.2% and 19.8%.

Table 9 Exports and imports by sections, mil USD

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total export	565.5	643.8	790.0	985.2	1091.2	1051.6	1341.8	1591.2	1287.5	1541.5
Including animals and animal products	18.3	15.3	28.6	20.2	17.2	16.2	13.6	10.1	9.1	27.0
Of which: - meat and edible offal	6.7	6.1	19.1	8.7	1.9	1.8	4.6	1.4	1.5	10.2
- milk / dairy, eggs	10.9	7.5	5.6	9.5	13.1	10.4	6.6	8.1	5.0	5.3
Vegetal products	78.8	106.1	91.2	120.0	131.9	136.5	162.9	210.1	268.4	340.7
Of which: edible fruits	24.1	32.6	54.5	64.7	60.9	64.6	92.8	85.4	125.4	167.6
- cereals	18.6	47.5	18.5	24.4	43.2	42.0	17.2	50.3	66.5	71.0
Animal or vegetable fats and oils	8.2	16.8	28.9	41.2	37.8	34.9	55.3	62.9	50.7	47.6
Food products, alcoholic and non-alcoholic beverages	251.6	267.4	314.3	345.9	396.0	276.4	276.0	311.9	281.0	316.9
Of which: - fruit and vegetable dishes	34.0	28.2	38.4	40.3	46.5	42.3	79.5	51.4	50.1	52.3
- alcoholic and non-alcoholic production	174.7	195.9	242.1	277.9	314.5	186.6	134.2	195.9	159.5	178.2
Total import	892.2	1038.0	1402.3	1768.5	2292.3	2696.2	3689.9	4898.8	3278.3	3855.3
Including animals and animal products	23.8	23.9	24.8	38.8	57.2	51.9	61.7	100.3	75.3	94.7
Of which: - meat and edible offal	13.3	11.9	12.9	19.9	32.1	19.3	15.3	35.6	13.5	27.6
- milk / dairy, eggs	1.6	2.8	4.5	8.7	10.6	15.1	19.8	21.4	21.7	25.6
Vegetal products	37.6	43.5	82.3	73.5	65.0	72.8	150.4	166.7	132.6	168.8
Of which: edible fruits	5.5	9.5	9.2	10.1	17.7	20.5	28.6	29.5	40.2	58.0
- cereals	3.5	3.5	28.3	8.7	3.6	4.0	15.6	22.5	9.5	9.7
Animal or vegetable fats and oils	3.0	7.1	5.5	7.4	9.9	11.1	16.0	20.9	16.1	19.3
Food products, alcoholic and non-alcoholic beverages	78.9	72.6	92.0	105.3	147.5	179.8	237.9	343.4	289.7	308.6
Of which: - fruit and vegetable dishes	2.6	4.7	5.6	10.5	13.6	14.5	20.8	30.1	20.0	22.7
- alcoholic and non-alcoholic production	13.6	20.8	19.7	25.1	34.0	42.4	47.8	75.5	47.9	44.9

Source: Made by authors on the basis of Statistical Yearbooks of the Republic of Moldova

Both in urban and rural areas definitely dominate expenditures on food products and non-alcoholic drinks. So, in 2010 in urban areas, expenditures for food production formed 37.8%, while in rural areas - 44.1% of the total spending. It is unquestionable that the agri-food production clearly exceeds the needs of the internal market, which requires entering with agri-food products on foreign markets. *Our country is doomed to export agricultural products.* Total exports (Table 9) increased from \$ 565.5 mil USD in 2001 to 1541.5 mil USD in 2010 or by 2.7 times. If the share of agri-food products in the total exports in 2001 stood at 63.1%, including food products, alcoholic and non-alcoholic beverages - 44.5%, then in 2010 the agri-food products accounted for 44.4%, including food products, alcoholic and non-alcoholic beverages - 20.6%. The export of vegetable production showed the largest increase (4.3 times) in 2001-2010. Among them, stand out edible fruits (30.6% in 2001 and 49.2% in 2010) which in growth tempo increased about 7 times. Export of alcoholic beverages increased until 2005 and then declined in 2010 reaching almost to the level of 2001. Total imports increased from \$ 892.2 mil USD in 2001 to \$ 3855.3 mil USD in 2010 or by 4.3 times. If the ratio import / export in 2001 were 1.6: 1, then in 2010 - 2.5: 1, this caused the significant increase of debts.

It is significant that although the share of imported agri-food products remains practically at the same level, forming 16.1% in 2001 and 15.3% in 2010, imports of food products, alcoholic and non-alcoholic beverages increased by 4.32 times in these years. If in 2001 the ratio of exports and imports of food products, alcoholic and non-alcoholic beverages was 3.2: 1, then in 2010 this ratio is practically 1: 1. In other words, our country from a recognized exporter of food products becomes an importer of them.

The obtained financial resources are insufficient for the sustainable development of agriculture in our country and therefore require financial support.

3.6 Subsidizing policy of the agri-food segment of the national economy

Total of endowments, compensations and subsidies offered to agricultural enterprises (Table 10) increased by 18.7 times. In all the reference years subsidies for agricultural production and compensation of expenditures (which have increased by 46 times) have been offered, and compensations for farms from losses from natural disasters, which increased by about 6.5 times. If in 2003 compensation for losses of agribusinesses from natural disasters with around 92% of the total were dominating, then in 2009 subsidizing of farmers with 67.8% of the total prevails. Fund to subsidize farmers accounted for 300.0 mil MDL in 2010, being later changed to 400.0 mil MDL. Financial support from the state was directed to:

- Subsidizing of 93 beneficiaries of agricultural credit;
- Stimulating of 122 beneficiaries of subsidies for insurance of agricultural risks;
- Planting of 1687.8 ha of orchards and 881.0 ha of vineyards;
- Stimulating of 61 beneficiaries of subventions for purchasing vegetable production on protected land;
- Purchasing agricultural machinery and irrigation equipment, namely agricultural techniques - 467 units, agricultural equipment - 534 units and irrigation equipment - 124 units;
- Extending over 10 hectares of areas framed in ecological conversion, being recorded 65 farmers (*including 41 subsidized* in 2010);
- Subsidizing of 20 beneficiaries who have purchased technological equipment for endowment and modernization of livestock mini-farms located outside the city;
- Purchasing of breeding animals, namely: pigs – 137; cattle – 44; sheep – 297 and queen bees - 67;
- Creation and renovation of 30 refrigerators; 1 drying room; 1 packing house; 9 meat processing companies; 8 grain processing companies; 3 companies processing fruits and vegetables; 3 milk processing companies; 1 company processing oil products;
- Subsidizing of 82 agricultural producers to compensate energy costs for irrigation;
- Subsidizing of 385 beneficiaries who purchased plant protection products and fertilizers.

Table 10. Dynamics of endowments, compensations and subsidies of agricultural companies from the national budget, thousand lei

	2003	2004	2005	2006	2007	2008	2009
Total	2213	73879	76740	72022	357532	328623	413354
Including: endowments for agricultural production and expenditure compensation	40	18	254	3214	24888	30733	18675
Subsidizing the farmers	-	-	-	-	188287	200158	280265
Expenditure compensation for planting the perennial plantations	141	69104	42588	24076	-	-	9561
Compensations for losses of agricultural companies that have suffered from natural disasters	2032	4757	30749	43437	41536	7465	9102
Other endowments, compensations and subsidies	-	-	-	-	102683	90267	94931

Source: Elaborated by the authors based on data from Liliana Cimpoies' thesis "Development of state regulation of the agricultural sector of the Republic of Moldova", p 63-64

Also, with the state support, through IFAD and RISP programs, in 2010, there was funded the development of: 33 refrigerators, 8 bakeries, 3 fruit drying, 11 grain processing enterprises, 7 meat processing enterprises, 1 fruits and vegetables processing company. In order to revitalize the livestock sector, there have been renovated and re-equipped: 1 cattle breeding farm; 2 pig farms; 2 sheep farms; 6 poultry farms, including 1 incubator; 1 rabbit breeding farm; 2 modern abattoirs. In order to optimize agricultural subsidies we consider appropriate to:

- Cancel the current system of compensation for agri-climate conditions, even if they affect the agri-food sector and to encourage the development and implementation of the assurance system;

- Cancel limits for existing funds, creation of new budgetary and extra-budgetary funds from incomes from agricultural activities for the financial support strictly directed to certain activities in agriculture and processing of agricultural raw material;

- Stimulate exports of food products through preferential rate. Every euro obtained from export to be changed at the increased ratio with 1 – 2 MDL compared with the existing one;

- Ensure transparency of state expenditures for the agri-food sector;

- Quit the *ex ante* support / before getting production / which is usually inefficient and *ex post* government intervention / after obtaining production /. But better after production was sold, in such a way stimulating farmers to produce what domestic and especially foreign

market needs. *Ex post* type support can be provided through two mechanisms:

- a. The state subsidizes a part of the market price covering the production expenditures;

- b. State purchases production at a negotiated price, but higher than the cost. Production is then sold, including to manufacturing industry, at a price that may be lower than that paid to farmers in order to not affect the purchasing power of the population.

In conclusion we mention that only by supporting private property, slow strengthening on the principles of market economy of the agricultural land, development of effective legal forms, implementation of efficient technologies, implementation of economic instruments and mechanisms appropriate to competitive economy, training for those involved in the agri-food sector and amplification of the advisory system will contribute to sustainable development, to a desirable future of agriculture in our country.

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