

THE INCREASING OF COMPETITIVENESS OF HIGH VALUE ADDED HORTICULTURAL PRODUCTION IN THE CONTEXT OF THE ECONOMIC GROWTH OF THE REPUBLIC OF MOLDOVA

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Abstract

This scientific work reveals the place of the horticultural sector at the economic growth of the Republic of Moldova. In today's competitive marketplace, successful companies develop value added strategies to build and sustain important customer-supplier relationships that rise above the traditional confines of both product and price. It is very important to concentrate the attention to the development of competitive high value added horticultural products by using high technologies, know-how, innovations which will give us the possibility in the future to speak about a modern high value added horticultural sector which will be competitive in the international markets. High value added horticultural products means high value revenues, high value wages, the development of the country.

Key words: competitiveness, credit costs, economic growth, high value added horticultural products, subsidies

INTRODUCTION

Transition to market economy and continuous process of economic integration of the Republic of Moldova in the World Economy significantly increases the degree of opening of the national economy compared to the world economies.

In conditions of competitive sales markets of agricultural products, those companies will have success which will develop „Value Added Strategies” to establish baselines and develop important business relations between buyers and suppliers.

Value Added Strategies are based on the suppliers' competencies and other areas of expertise as an organization. They are designed to provide high value to a selected customer's bottom line, versus merely seeking to „add value” to the individual products and services it sells. It is a supplier's organizational value rather than its product or service value that is at the core of Value-Added Strategies [3].

From another perspective, the „customer value” reflects the relationship between the benefits customers receive from and the price they pay for a product. The more benefits relative to the price, the higher the customer value.

„Value” is usually created by focusing on the benefits associated with the agribusiness product or service that arise from:

- **Quality** – Does the product or service meet or exceed customer expectations?
- **Functionality** – Does the product or service provide the function needed of it?
- **Form** – Is the product in a useful form?
- **Place** – Is the product in the right place?
- **Time** – Is the product in the right place at the right time?
- **Ease of possession** – Is the product easy for the customer to obtain?

A product must have one or more of these qualities to generate additional value [1].

In the Republic of Moldova the horticultural sector has a special place in the economy of the country, ensuring with horticultural high value added products both the customers inside and outside the country.

According to the programme of the horticultural development 2013-2020, the fresh and processed horticultural production provided in 2011 about 13% of export revenue (mln USD 282,5). In the last 10 years, the export value of the horticultural sector increased about 4,3 times, exceeding the rate of total exports [10].

The main purpose of this scientific work consists of: highlighting the role played by the horticultural products at the economic growth of the Republic of Moldova; the analyze of the situation and of the existent problems of the horticultural sector and also the main objective of the scientific work is to propose ways of increasing the competitiveness of the horticultural products from Moldova.

MATERIALS AND METHODS

This scientific article was elaborated after the analyze of the literature from the agri-food sector of the Republic of Moldova.

The research has been conducted on the basis of the official statistics collected from the National Bureau of Statistics, the NBM, and the Minister of Agriculture and the Food Industry of Moldova.

In this scientific work are used the following methods of research: synthesis, induction, deduction, graphical method and others

RESULTS AND DISCUSSIONS

The agricultural sector is the traditional branch of the Republic of Moldova, which contributed in 2013 with 11,9% to GDP, which represents an increase comparing to 2012 with 1,0% and a decrease comparing to 2011 with 0,4%, when this economic index constituted 12,3% (See the table 1). In 2013 was a favourable agricultural year comparing to 2012, when the drought negatively influenced the agricultural production [12,14].

Table1. The structure of GDP by categories of resources in 2011 -2013

Goods	Years			Deviations of 2013 with	
	2011	2012	2013	2011	2012
Agriculture, hunting, forestry	12,3	10,9	11,9	-0,4	+1,0
Industry	13,6	14,0	13,9	+0,3	-0,1
Constructions	3,3	3,5	3,9	+0,6	+0,4
Wholesale and retail trading	13,5	14,0	13,7	+0,2	-0,3
Transports and communications	10,9	10,8	10,4	-0,5	-0,4
Other activities	31,3	32,3	31,5	+0,2	-0,8
Financial intermediary services indirect calculated	-2,2	-2,0	-1,7	+0,5	+0,3
Net taxes on products	17,0	16,5	16,4	-0,6	+0,1

Source: Elaborated by the author based on the data from National Bureau of Statistics of the Republic of Moldova

In 2013 the share of the vegetal production from the whole agricultural production constituted 72% (in 2012 this index was 62%), from which cereals and grain legumes constituted – 29.0% (more than in 2012 with 11%), technical crops – 17.6% (less than in 2012 with 3.1%), vegetables and melons – 8% (more than in 2012 with 0.7%), fruits, nuts and berries – 5.4% (in 2012 - 6.7%), grapes – 9.1% (in 2012 - 10.4%) [14].

The increase of the vegetal production (respectively the share of the vegetal production in the whole agricultural production) in 2013, comparatively with the previous year was generated by the increase of the average harvest for all agricultural crops. Thus, the average production per ha of corn increased by 2,5 times, of soybean – increased by 1,9 times, sunflower and sugar beet – respectively increased by 1,8 times, wheat- increased by 1,7 times, barley- increased by 1,6 times, potatoes – increased by 1,3 times.

Nowadays, more and more agricultural producers are oriented to high value added agricultural products. In general, adding value is the process of changing or transforming a product from its original state to a more valuable state [9].

According to the data of the study performed by fourteen farmers in the Southern US conducted by ATTRA and the Southern Sustainable Agriculture Working Group were identified 10 key points in developing a high value added agricultural business [13]. These include: starting small and growing naturally; making decisions based on good records; creating a high-quality product; following demand-driven production; getting the whole family or partners involved; keeping informed; planning for the future; continuing evaluation; persevering and having adequate capitalization [2,8].

In Republic of Moldova high value added products can be considered horticultural products, especially fruits and vegetables, which are very useful for health, being a rich source of vitamins

Horticulture is the main source of income for the majority of the population of the country

(about 28%) employed in agriculture, playing a multiplier role for economy.

Agricultural production structure in all categories reveals that horticultural production in 2013 constituted about 33% (from which: grapes - 14%, vegetables and mellons - 8%, potatoes - 6%, fruits and berries - 5%), this means that from the whole agricultural production, one third of the production is horticultural production, and the remaining agricultural production consists of: animal production - 18%, cereal crops production - 18%, sunflower crops - 8%, other vegetal production - 9% [14].

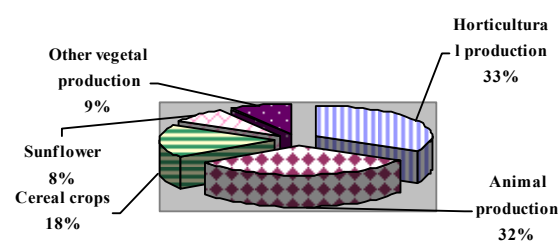


Fig.1. Agricultural production structure, in all categories of households (2013)

Source: Elaborated by the author based on the data from www.maia.md

Although horticultural production constitutes a third from the total agricultural production, the development of the high value added horticultural production in the Republic of Moldova, faces many problems: including excessive fragmentation of agricultural lands. The utilised agricultural area, on average, for an agricultural unit is 2,2 ha. Farms with legal status, on average, have approximately 247.9 ha, those which haven't legal status have 0.8 ha [10].

Excessive fragmentation of the agricultural lands underlines series of problems for the horticultural sector of the Republic of Moldova. In particular, the division of lands in small parcels does not permit application of the intensive methods of work, the manifestation of the effect of scale when agricultural technologies are used, the supply of inputs, the processes of transportation, storage, processing and marketing of the agricultural products. The state have been taken many measures regarding the Programme of Land consolidation (Government Regulation nr 1075 from

01.10.2007), but which unfortunately doesn't registered expected results [5,6].

According to the Subsidies Regulation of the agricultural producers, one of the additional measures introduced in 2013, provided agricultural land consolidation subsidizing, according to which the costs of the sale-purchase transactions, donations or change and registration of lands will be compensated in proportion of 50% of costs [11].

According to the report of the Agency of interventions and payments in the agricultural sector for 2013, the number of the requests for land consolidation subsidizing was not very relevant in 2013 and constituted 6 requests in total amount of 0,1 mln. MDL. For payment was authorised 6 requests in total amount of 0,05 mln MDL which is less than other subsidizing measures like crediting the agricultural sector - 1014 files, stimulation of risk ensuring in agriculture - 81 requests, etc.

The analyze of the relation between the evolution of the production and the surface of fruits plantations from the Republic of Moldova, reveals that in the period during 1986-1990 the total surface of orchards constituted 220 thousands ha, orchards in bearing constituted approximately 150 thousands ha (which represents 60% from the total surface of orchards from USSR) with a total production of 1043 thousands tons [10]. From the beginning of '90 of the previous century, was registered a decrease of the orchards surfaces from 251 thousands ha in 1993 to 116 thousands hectares in 2013 [fig.2].

But, transition to market economy, the development of the private property influenced in a positive way the process of foundation new orchards, respectively from less than 1000 ha in 2002 to 2882 ha in 2013 (but less than in 2012, when this index constituted more than 4000 ha) from which [fig.3]: apple orchards - 1392.65 ha, plum plantations - 704.56 ha, nuts plantations - 530.86 ha, apricot tree plantations - 320.99 ha, cherry plantations - 296.39 ha, sour cherry plantations - 112.74 ha.

AIPA paid subsidies to agricultural producers which founded new fruit plantations in 2013 in total amount of 56.9 mln. MDL.

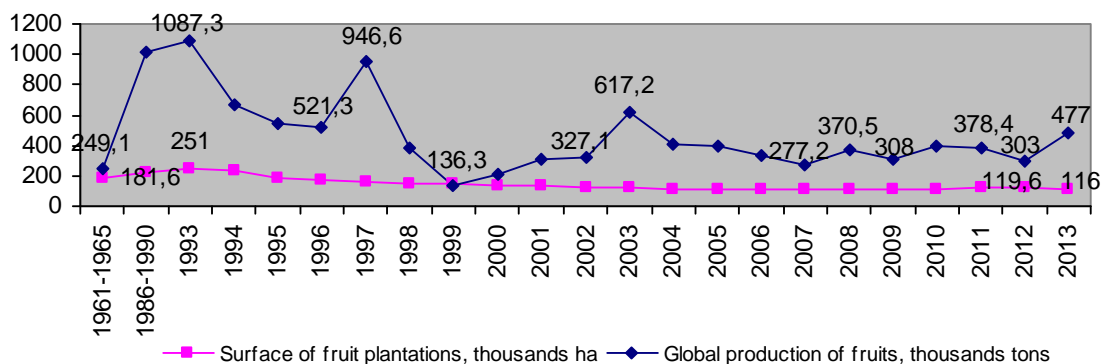


Figure.2. Relation between global production of fruits and fruit plantations surface

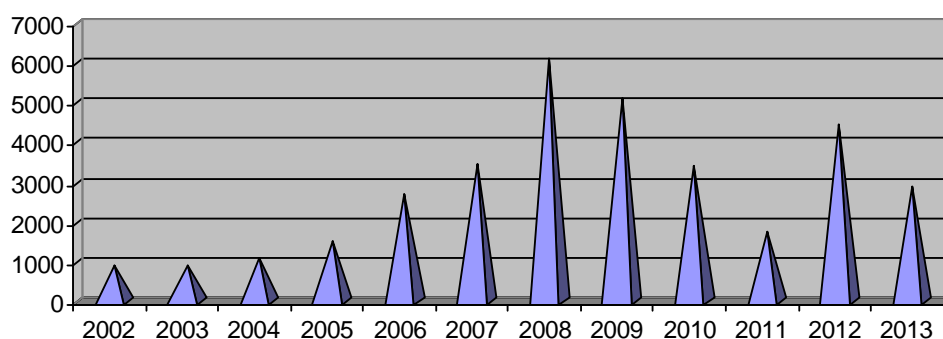


Figure 3. The dynamics of founding new fruit plantation in the Republic of Moldova during 2002-2013, ha

Table 2. The results of the cost-benefit analysis to remove the constraints of the Republic of Moldova horticultural sector development [7]

Constraints for Export and Production	Operational benefits	Current costs	Net operational Benefits	Regulate investments costs	Extra investments costs	Total investment costs	Redemption period
	A	B	C=A-B	D	E	F=D+E	G=F/C
Land consolidation	1936		1936		2500	2500	
Irrigation	6454	1760	4694	35203		35203	
Packaging	3227	3520	-293			0	
Pre-cooling	5385	1096	4289	17700		17700	
Refrigerated rooms	11120	2950	8170	59000		59000	
Calibration and packaging for new channels	9311	3319	5993	10800		10800	
Engineering network					8750	8750	
Subsidies					-11200	-11200	
Banking finance					23333	23333	
The association capacity					2500	2500	
Post harvest and sales producers cooperation					2500	2500	
State support of exports					5600	5600	
TOTAL	37434	12646	24788	122703	33983	156687	6,32

The cost-benefit analysis to remove the constraints of the horticultural sector development generated the following findings [7]:

-The inefficiencies from the horticultural sector lead to uncovered losses and lost margins for export sales in total value of USD mln. 37,4 each year. The basic elements of this losses are lost margins for the sales out of the season because of the absence of the refrigerated rooms (30%), lost margins at new export channels – supermarkets from Russia and new markets from EU (25%), losses because of the insufficient irrigation (17%), losses of the absence of the pre-cooling methods for fruits vegetables (14%), losses of the packaging of production (9%).

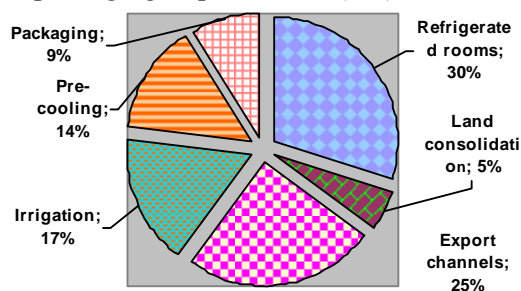


Figure 4. The moldavian horticultural losses because of constraints for export

-To avoid these losses must be made investments in irrigation and post-harvest equipments. The necessary investments is close to USD mln. 122 at the current level of investments. The major part of investments will be for refrigerated rooms (48%). The current costs necessary for the equipment operating represents USD mln. 12,6 per year.

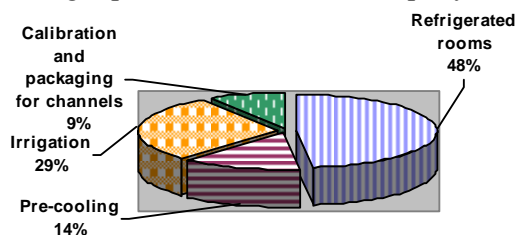


Figure 5. Necessary investments for constraints elimination of the horticultural development

-The horticultural producers must invest more than USD mln 122 because of the sectorial inefficiencies. Extra investments costs will constitute about USD mln 34, which is linked

more than 50% with the expensive banking financing, engineering networks – 19%, state support at exports – 12%, association capacities – 6%, post harvest and sales producers cooperation – 6% etc.

-According to the cost-benefits analysis, the redemption period will be about 6,3 years. This short redemption period will give possibility to develop the infrastructure.

In the last decade there were registered several qualitative enhancements in the sector of producing high value added horticultural products determined by:

-The increasing popularity of intensive and super-intensive methods of fruits producing;

-The increasing number of orchards equipped with irrigation and anti hail systems

-The increasing number of the assortment of machines, equipments and instruments necessary for the process of production etc.

Although there was registered several qualitative enhancements in the horticultural sector, at the same time exists series of problems of producing high value added horticultural products, among which we can mention:

-The producers are not sufficient informed about the advantages of founding intensive fruits plantations and about the application in production of the advanced technologies, which will ensure a higher productivity of intensive plantations in comparison to traditional plantations;

-The costs of credits to buy modern equipments, necessary for founding intensive plantations are very high, which determines the agricultural producers to found traditional plantations;

-Foreign investors bypass Republic of Moldova because of the uncertainty in tomorrow, bureaucracy and corruption;

-The production and processing equipments are outdated;

-Small-scale irrigation of orchards because of high costs and incomplete regulation of the water basins use for irrigation purposes;

-A particularity of the horticultural sector is the seasonal harvest production. In some parts of the country is registered labor deficit in the agricultural sector. If in 2004 in the agricultural sector were employed about 533

thousands persons, than in 2012 the number of population employed in agriculture decreased with 230 thousands persons and constituted 303 thousands persons. Thus it is necessary to develop the infrastructure and to create attractive living conditions in the rural areas to diminish the migration of the population from rural areas.

From the mentioned above, we can point out that the development of high value added horticultural production is facing many problems, but besides the existent problems, a separate problem is to ensure a stable marketplace.

In the Republic of Moldova prevails outdoor markets, where often are not offered conditions to ensure product quality and safety. This fact determines the commercialization of the vast majority of high value added horticultural products during the harvest season, sometimes directly from the field at low prices, and only a small quantity is stored in refrigerated rooms and commercialized out of the season at higher prices.

The analyze of the external market of horticultural products, reveals that with the accession of Ukraine (2008) and Russian Federation (2012) to WTO diminished the export of horticultural products from the Republic of Moldova to these countries.

Thus in 2012, the export of apples from Moldova in Russian Federation diminished by 30% in comparison with 2011. The biggest competitor on Russian Federation market was Poland, which exported in 2012, about 128 thousands tons of apples.

But in six months of 2013-2014 Moldova increased the volume of apples supplies on Russian Federation market by 13% in comparison with the similar situation of 2012.

In generally, according to the statistical information, in the current season the apples supplies on the russian market are continuously decreasing. Thus in december 2013, Russia imported 117 thousands tons of apples, which is less than in 2012 by 6%. In the first half of 2013-2014 there were exported in Russian Federation 446 thousands tons of apples, which is less than in july-december 2012 by 11%.

The decreasing trade trend of the Republic of Moldova with the Russian Federation and the countries from the Customs Union (Kazakhstan-Belarus), are reflected by the descending evolution of the Intraregional Trade Intensity Index (ITII) [4].

ITII is an indicator which reveals the ratio of the intra-regional trade share to the region's share in the world's total trade:

$$ITII_{i,t} = \frac{\left(\frac{IT_{i,t}}{T_{i,t}}\right)}{\left(\frac{T_{i,t}}{T_{w,t}}\right)} \quad (1)$$

where:

$IT_{i,t}$ denotes region i 's intra-regional trade in year t ,

$T_{i,t}$ denotes region i 's total trade in year t (i 's total imports plus total exports),

$T_{w,t}$ denotes the world's total trade in year t (world's total imports plus total exports).

This indicator is used to determine whether the value of intra-regional trade is greater or smaller than would be expected on the basis of the region's importance in world trade. This value is:

- equal to zero in the case of no intra-regional trade;
- equal to one if the region's weight in its own trade is equal to its weight in world trade (geographic neutrality);
- higher than one if intra-regional trade is relatively more important than trade flows with the rest of the world.

In figure 6 the value of ITII is higher than one, which reveals that between the states from the Customs Union, intraregional trade has high importance compared to the weight held in the world trade.

The Republic of Moldova must maintain the commercial relations with the Customs Union states which is an important economic partner, and to try to find out new trade markets for high value added horticultural products.

The trade with the countries from the Customs Union among advantages generates several risks for Moldova, from which we can mention: dependence of one market, the increasing of the geographical concentration contradiction with the general economic policy of the state which has the purpose to

support the competitiveness of the national production.

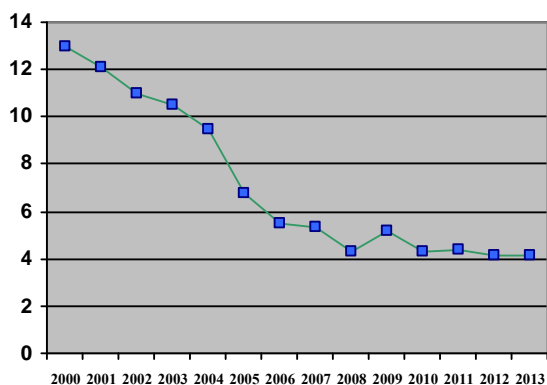


Figure 6. The ITII with the Customs Union member states

The biggest problems of moldavian exported fruits and vegetables on foreign markets are the image of the products, the quality certification, the absence of a country branding strategy etc.

Therefore the prerogative of the horticultural products sector relates to maintaining competitiveness through:

- General increasing of the horticultural products quality;
- Unitary costs reducing;
- Consolidation of horticultural products commercialized volumes for facilitating the cooperation with the networks and the big importers;
- Clear differentiation from the basic competitors;
- Improvement of sanitary and phytosanitary official control on exports to prevent crisis situations;
- Creation of storage conditions of the horticultural products during the cold period of the year;etc.

An opportunity in increasing the competitiveness of the high value added horticultural products will be signing the Deep and Comprehensive Free Trade Agreement with the European Union. Signing this agreement will open new markets (characterized by high potential of absorption) for local producers, high purchase power and relative stability of prices.

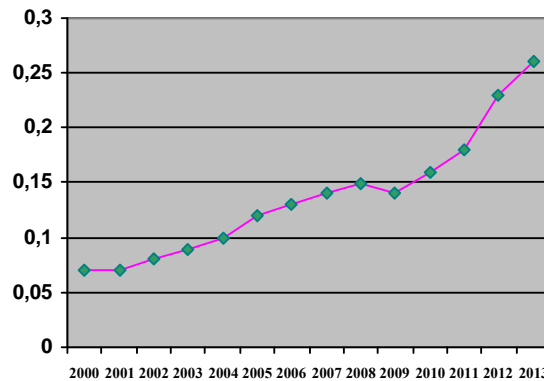


Figure 7. The ITII with the EU member states

According to the figure 7, we can reveal that the ITII with the EU member states has a positive evolution in time, which shows the faster growth of intraregional trade, compared to the weight of the EU region in the world trade.

The Export volume trend to the EU (figure 8), from 2001 till 2012, increased continuously, European Union remains the main commercial partner of the Republic of Moldova [14].

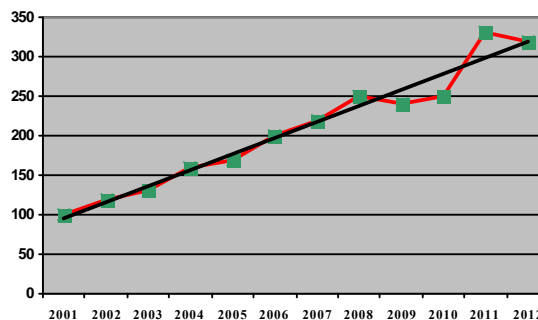


Figure 8. Export volume trend to the EU, 2001=100

After Moldova will sign the DCFTA with the EU, the attractiveness of foreign investors in RM will increase, estimated by the increased flow of FDI in the country's economy, fact which will contribute to the modernization of agriculture and to the enhancing of the competitiveness of high value added agricultural production [15].

CONCLUSIONS

Horticultural sector of the Republic of Moldova has a special place in the economy of the state, ensuring with high value added

horticultural products both the internal markets and the external markets.

The competitiveness increasing of the horticultural production will influence in a positive way the economic growth of the Republic of Moldova. This will be possible only by: ensuring with advanced equipments the production process, storage conditions creation of production, the infrastructure development in the rural area, informing the agricultural producers about the advantages of founding intensive plantations and the most important to find out new sales markets for high value added horticultural products.

According to the Intra-regional Trade Intensity Index was stated that in the last years the trade with the countries from the Customs Union have a descending trend, but the value of ITII is higher than one, which reveals that between the states from the Customs Union, intra-regional trade has high importance compared to the weight held in the world trade.

The Republic of Moldova must maintain the commercial relations with the Customs Union states, which is an important economic partner, and to try to find out new trade markets because the dependence of one market generates risks regarding the increasing of competitiveness of the country.

The analyze of the ITII with the EU member states reveals a positive evolution of this index during the last years, which shows the faster growth of intra-regional trade, compared to the weight of the EU region in the world trade.

An opportunity in increasing the competitiveness of the high value added horticultural products will be signing the Deep and Comprehensive Free Trade Agreement with the European Union. Signing this agreement, on the one hand, will open for local producers new markets, characterized by high potential of absorption, high purchase power and relative stability prices, and on the other hand will be a challenge for producers with low level of competitiveness.

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