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# THE SITUATION OF THE IMPORT AND EXPORT OF VEGETABLES IN ROMANIA IN THE PERIOD 2007-2016

MICU Marius Mihai<sup>1</sup>, MICU Ana-Ruxandra<sup>2</sup>, PETRE Ionuț Daniel<sup>3</sup>

**Abstract:** *The state of import and export of fresh vegetables in Romania presents major imbalances, which tend to increase from year to year. Even if it is a vegetable-growing country, Romania imports fresh vegetables from countries like Turkey, the Netherlands or Italy, countries with a tradition of growing vegetables and significant areas of protected areas, benefiting from the benefits of this way of cultivating vegetables. In the present paper, using the technical-economic method of the comparison, based on the statistical data, an analysis was made of the areas cultivated with vegetables in the 8 regions of Romania, according to the main crop systems, the production made, as well as the quantities imported and exported.*

**Keywords:** *vegetables, import, export*

**Clasificare JEL:** *Q17*

## INTRODUCTION

Vegetables are of particular importance in eating, so they have a positive influence on human health. At the same time, vegetables contribute to ensuring daily nutritional needs through the intake of minerals, salts, vitamins and other substances that vegetables contain.

Cultivation of vegetables can be done both in the field and especially in protected areas that allow for better production, both in terms of quantity and quality, as well as allowing them to be marketed during the pre-season.

The production of vegetables has a huge advantage, as Romania has a great market and a well-established tradition in the field of vegetable-growing research and development through assortment of varieties adapted to the pedoclimatic conditions in Romania.

In Romania, over time, cultivation of vegetables has been a tradition, especially in rural areas, being interrupted by nationalization and collectivization in the communist era. After this period, all the negative effects have been restricted, including on the vegetable sector, which led to retrocessions or destruction of existing greenhouses at that time, where the sector currently has numerous deficiencies.

## MATERIALS AND METHODS

The research is based on information obtained by analyzing the existing statistical data on the area cultivated with vegetables, the production system, the yields of the main vegetable crops, but especially the imports and exports both in terms of quantity and value, which allow us determining the evolution of the areas and productions in the period 2007-2016, in relation to the volume of imports and exports made in Romania. The information was collected from the INSSE and Trade Map databases and interpreted using the technical-economic analysis methods.

## RESULTS AND DISCUSSIONS

In Romania, at the level of 2015, an area of over 236 thousand hectares was cultivated, down 7% compared to the period cultivated in 2007, when it exceeded the area of 253 thousand hectares. Also, the area cultivated with field vegetables decreased by 12.4% in 2015 (when 137 thousand hectares were cultivated) compared to 2007 when more than 156 thousand hectares were cultivated.

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At the level of 2015, the region where the largest vegetable area was cultivated was the South-Muntenia region, where over 45,000 hectares were grown with. (Table no. 1).

Table no. 1.

Area cultivated with vegetables according to the cultivation method, by regions in 2007-2015

Main cultures	Regions	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015/2007
		U.M: thousands Ha									
Vegetables - total	<b>TOTAL</b>	253	269	267	263	263	259	259	239	236	-7.0
	Region NORD-VEST	29	26	27	24	23	22	24	23	22	-23.3
	Region CENTRU	18	18	19	17	18	17	19	18	20	11.7
	Region NORD-EST	44	48	47	45	47	45	46	43	44	0.6
	Region SUD-EST	42	42	44	44	43	43	43	36	36	-15.4
	Region SUD-MUNTENIA	46	51	50	51	51	50	48	46	45	-1.2
	Region BUCURESTI - ILFOV	5	5	6	5	6	6	6	5	5	6.3
	Region SUD-VEST OLTENIA	40	44	45	47	45	45	40	38	37	-7.2
Region VEST	30	34	31	29	31	30	33	30	26	-12.4	
Vegetables grown in the field	<b>TOTAL</b>	156	167	166	159	161	158	154	137	137	-12.2
	Region NORD-VEST	16	14	15	12	13	13	12	12	11	-29.3
	Region CENTRU	10	9	10	9	9	9	10	9	12	14.8
	Region NORD-EST	27	30	28	27	27	27	27	24	25	-5.8
	Region SUD-EST	29	29	31	31	30	29	29	23	23	-22.1
	Region SUD-MUNTENIA	25	30	28	27	27	26	25	23	23	-7.3
	Region BUCURESTI - ILFOV	3	3	3	3	4	3	3	3	3	5.6
	Region SUD-VEST OLTENIA	27	29	30	32	32	32	27	25	25	-7.5
Region VEST	19	23	19	18	19	18	19	17	15	-21.4	
Vegetables in solariums and greenhouses	<b>TOTAL</b>	2	2	2	3	4	3	3	4	4	84.8
	Region NORD-VEST	0	0	0	0	0	0	0	0	0	888.2
	Region CENTRU	0	0	0	0	0	0	0	0	0	-5.9
	Region NORD-EST	0	0	0	0	0	0	0	0	0	-70.4
	Region SUD-EST	1	1	1	1	1	1	1	2	2	169.1
	Region SUD-MUNTENIA	0	1	1	1	1	1	1	1	1	82.3
	Region BUCURESTI - ILFOV	0	0	0	0	0	0	0	0	0	-0.8
	Region SUD-VEST OLTENIA	0	0	0	0	0	0	0	1	1	145.3
Region VEST	0	0	0	0	0	0	0	0	0	260.0	
Fresh vegetables from family gardens	<b>TOTAL</b>	83	89	89	92	90	88	93	90	86	4.1
	Region NORD-VEST	12	11	11	11	9	9	11	11	10	-15.8
	Region CENTRU	8	9	9	9	8	8	8	8	8	9.5
	Region NORD-EST	14	16	16	16	17	17	17	17	17	20.1
	Region SUD-EST	12	12	12	12	12	12	12	11	11	-1.7
	Region SUD-MUNTENIA	15	16	16	19	18	18	17	16	16	8.9
	Region BUCURESTI - ILFOV	1	2	2	2	2	2	2	2	2	36.9
	Region SUD-VEST OLTENIA	12	14	14	13	12	12	12	11	11	-7.7
Region VEST	10	10	10	10	11	11	13	13	11	10.4	

Source: processed data INSSE, access 29.09.2017;

Analyzing the area cultivated with vegetables in protected areas, the most pronounced increase is observed, so that if in 2007 the area cultivated with vegetables in the solariums and greenhouses was about 2000 hectares, in 2015 the cultivated area exceeded 4000 hectares, registering - an increase of 84.8% (Table no. 1).

Table no. 2.

Area cultivated with the main vegetable crops by region in 2007-2015

Main cultures	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015/2007
	U.M: thousands Ha									%
<b>Potatoes</b>	268.1	255.3	255.2	241.3	242.6	223.5	203.4	198.5	185.9	-30.7
<b>Tomatoes</b>	46.0	51.5	49.1	49.8	51.8	49.7	48.4	43.9	43.7	-5.0
<b>Eggplants</b>	5.5	10.5	10.0	10.3	10.0	9.6	9.4	9.2	9.1	65.6
<b>Dry onions</b>	34.1	35.0	35.2	33.8	33.1	33.1	32.2	30.3	30.6	-10.2
<b>White cabbage</b>	46.1	49.0	48.3	47.0	47.0	49.1	54.9	47.8	47.9	3.8
<b>Pepper</b>	18.6	20.2	20.0	21.0	20.0	19.9	19.5	18.2	18.2	-2.5

Source: processed data INSSE, access 29.09.2017;

For the main vegetables grown in our country, in terms of the potato area, in the year 2015 it was 185.9 thousand hectares, decreasing by 30.7% compared to the area cultivated in 2007, ie 268.1 thousand of hectares. In other words, during the period 2007-2015 there is a descending trend of the potato area (Table no.2).

However, it is noted that the area planted with eggplant in 2015 was 9.1 thousand hectares, up 65.6% compared to the area cultivated in 2007 when it was 5.5 thousand hectares ( Table 2.).

Table no. 3.

The production of the main vegetable crops during 2007 – 2015

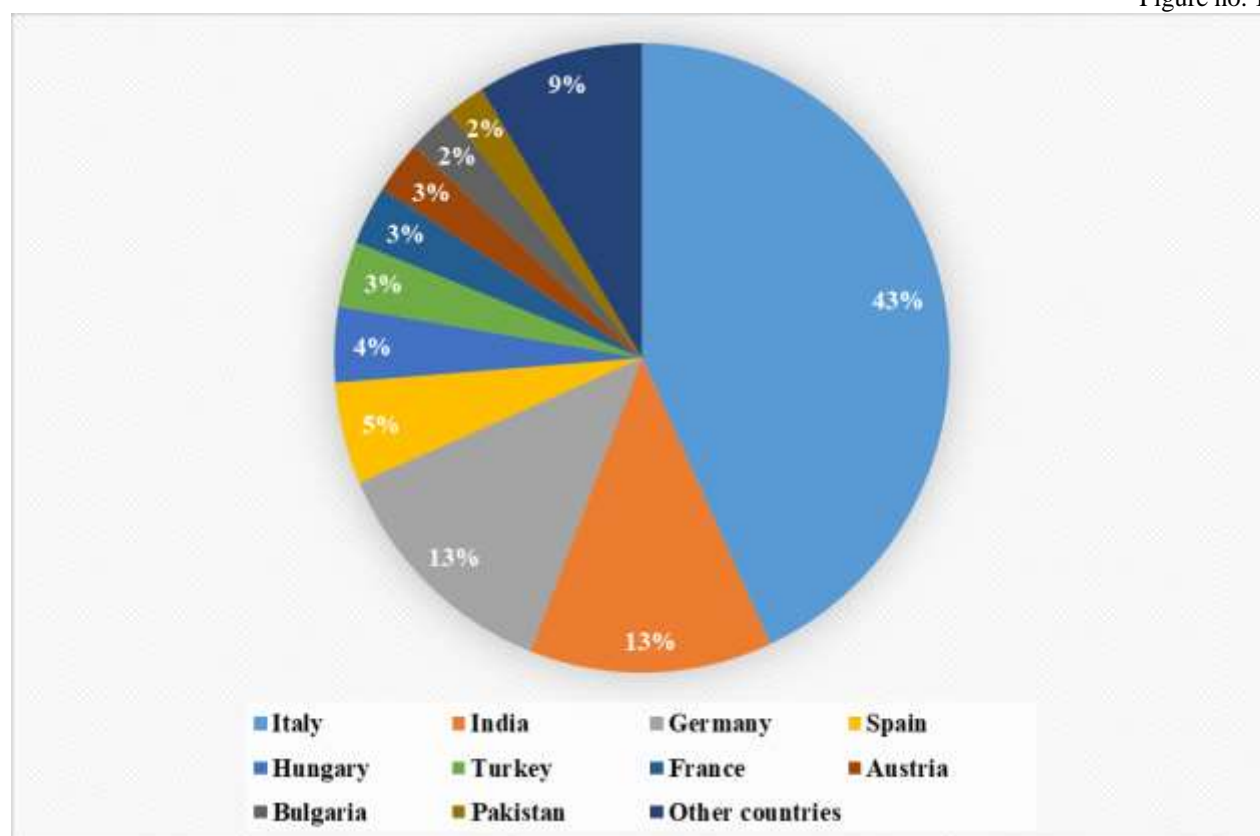
Main cultures	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015/2007
	UM: thousands of tons									%
Potatoes	3712.4	3649.0	4004.0	3283.9	4076.6	2465.2	3289.7	3519.3	2625.0	-29.3
Tomatoes	640.8	814.4	755.6	768.5	911.0	683.3	749.1	706.2	695.2	8.5
Eggplants	63.7	153.7	168.6	144.4	160.0	126.0	123.3	127.6	126.8	98.9
Dry onions	325.0	395.6	378.1	369.1	394.3	345.3	391.8	387.0	353.6	8.8
White cabbage	893.2	964.6	1001.9	981.2	1025.3	987.9	1156.4	1123.1	1066.3	19.4
Pepper	184.9	238.7	245.7	243.5	253.5	207.1	227.7	228.6	222.4	20.3

Source: processed data INSSE, access 29.09.2017;

Corresponding to the potato area, in 2015 there is a decrease of 29.3% compared to 2007, so that if in 2015 the production was 2625 thousand tons in 2007, it was over 3712 thousand tons (Table no. 3).

Also, in the case of eggplant production there is an increase of over 98%, so that if in 2007 the production was 63.7 thousand tons, in 2015 the registered production was about 127 thousand tons (Table no. 3).

Figure no. 1.



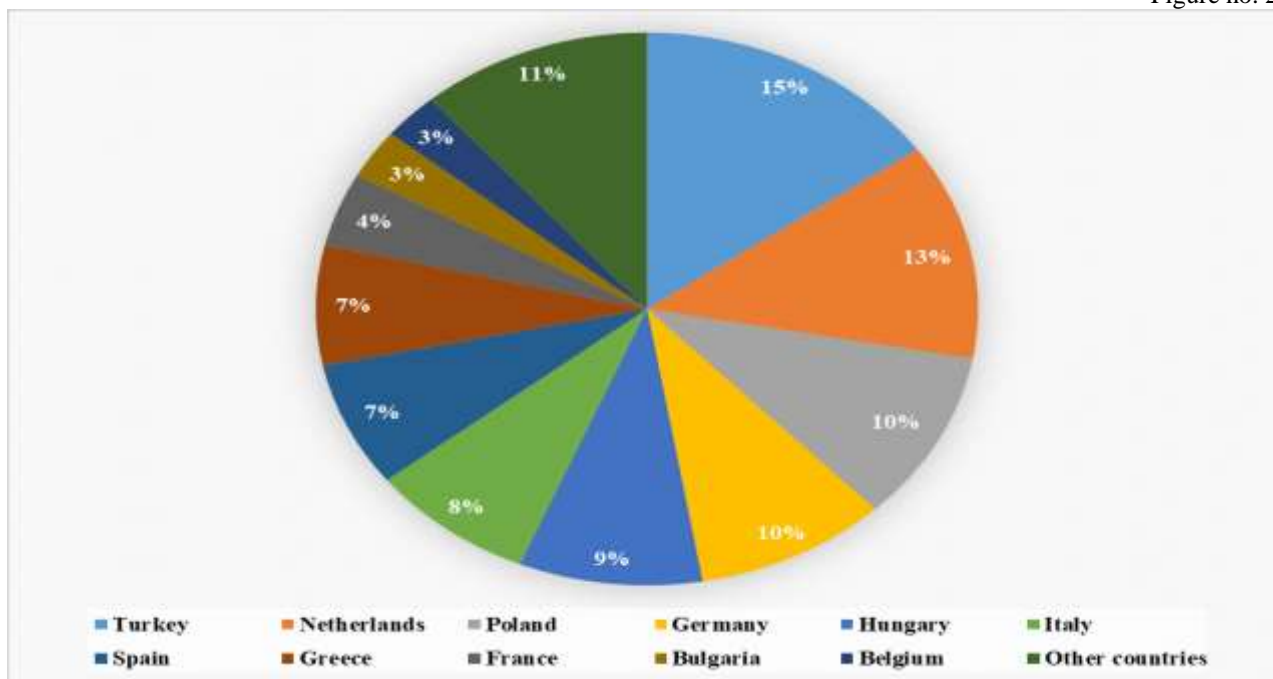
Source: processed data INSSE, access 29.09.2017;

Percentage distribution of fresh vegetables (value) exports in 2016

At the level of 2016, Romania exported vegetables worth 86.7 million euros, up 103.8% compared to value exports registered in 2007 when it was only 42.5 million euro (Figure no. 1).

Thus, in 2016 the representative countries to which Romania exported fresh vegetables include Italy with 37.4 million euros (an increase of 23.4% compared to 2007), India which entered directly the second place in the list of countries importing vegetables from Romania with about 11 million euros, as well as Germany with a value of imports of vegetables in Romania worth 10.9 million euros (Figure 1).

Figure no. 2.



Source: processed data INSSE, access 29.09.2017;

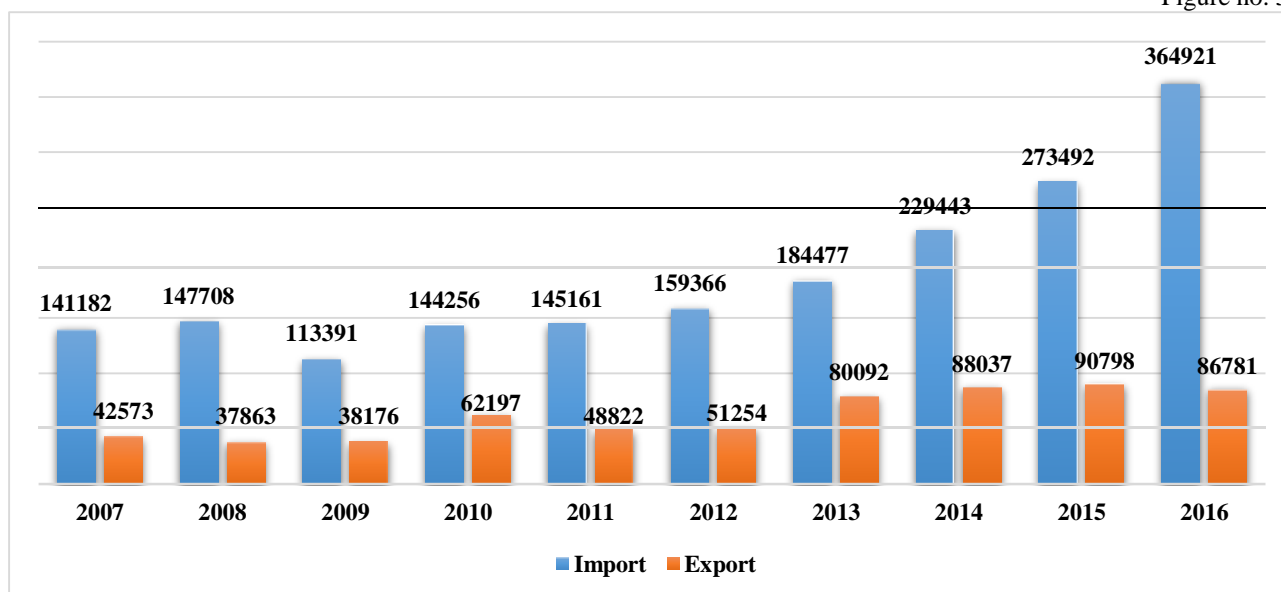
Percentage distribution of fresh vegetable (value) imports in 2016

Even if, as we have seen above, vegetable production in Romania is well developed, even if the specific measures for domestic production are applied at European and national level, it is still not possible to reduce the quantity of imported vegetables.

The value of vegetable imports in 2016 was more than 4 times higher than that of fresh vegetable exports, with a value of approximately 365 million euro, 158% higher than the value of imports in 2007, when totaled not less than 141 million euros (Figure no. 2).

However, the main country from which Romania imports fresh vegetables at the level of 2016 is Turkey, with import values of over 55.4 million euro (19.6% higher than the value of the imports made in year 2007). The podium is complemented by the Netherlands with imports totaling more than € 46.2 million (up 291% over 2007) and Poland with over € 36.5 million (up 320% over 2007 ) (Figure no. 2).

Figure no. 3.



Source: processed data INSSE, access 29.09.2017;

The evolution of the trade balance of fresh vegetables between 2007 and 2016

Trade balance has an imbalanced situation with regard to the import and export of fresh vegetables, so that if in 2016 the value of the imports stood at EUR 364.9 million while the export value was only 86.7 million Of euro. Since 2007, the very large difference in value of imports and exports of fresh vegetables is maintained during the analyzed period, Romania being dependent on these imports of fresh vegetables (Figure no. 3).

## **CONCLUSIONS AND RECOMMENDATIONS**

It is noted that the area cultivated with vegetables has decreased sharply, except for the vegetables that have been grown in protected areas, which can not contribute to covering the fresh vegetables needs, which is why Romania has to import impressive amounts of vegetables from countries such as Turkey, Italy or the Netherlands, benefiting on the one hand from the pedoclimatic conditions, but above all the important areas of greenhouses where vegetables are grown, allowing them to obtain both superior and qualitative production, but above all that they offer the possibility of producing vegetables during the pre-season period.

The selling price of vegetables, influenced among other things by the production obtained, as well as by the different country-to-country financial aids, according to their objectives, succeeds in making serious competition for indigenous products where the main criterion for the selection of the Romanian consumer, is the 'marketing price' of the product.

Although the value of exports increased in 2016 as compared to 2007, the value of exports is well below the value of imports, so if Romania manages to export quantities of vegetables during the season, during the pre-season the quantities imported by Romania are impressive, cumulating in 2016, not less than EUR 364 million, which is more than 4 times higher than exports, so the development of protected area cultivation systems is an absolutely necessary measure to reduce dependence on imports.

If for some vegetables the level of imports is so high due to the drought and the relatively low production reported by the Romanian farmers, the overall situation remains alarming. Romania imports more vegetables a year, while domestic production either exports (a small part) or is sold at very low prices to agricultural intermediaries.

The measures taken by the Ministry of Agriculture to help tomato growers financially support the cultivation of these plants in order to prolong the tomato season so as to be as little dependent on tomatoes (originally) imported from Turkey, Italy, the Netherlands, seems to be a measure that could help Romania's trade balance for the beginning.

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