

STUDY ON THE VEGETABLES MARKET IN THE EUROPEAN UNION

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Abstract: *In the European Union, the vegetables and fruit sector accounts for 17% of the agricultural production value. This study aims at presenting and analysing the main specific indicators: cultivated areas, average yields per hectare, consumption, imports and exports. The data used in the paper were provided by: The National institute of Statistics, EUROSTAT, FAOSTAT, FAPRI and USDA. The analysis of the vegetables market at European Union level is first of all a quantitative analysis, but it was also necessary to present on the one hand the main weaknesses and strengths, and on the other hand to describe the implications of the community trade policies on the producers in the vegetables sector. During the analysed interval, this sector was under huge pressure due to the economic crisis, which led to the increase in the vegetable farmers' demand for an increased financial support provided to them.*

Key words: *vegetables, production, market, imports, exports*

INTRODUCTION

Vegetables and fruit are an important source of vitamins and minerals necessary to the human body, which has triggered significant changes in the food consumption pattern. At present, we notice a more and more obvious tendency to decrease bread consumption, in favour of increasing the consumption of vegetables, fruit and meat. Vegetables consumption is, on the one hand, an indicator for economic agents and, on the other hand, a representative indicator that leads to establishing the standard of living. In the European Union, there are countries with a high vegetable consumption level, among which: France, Spain, Italy, Holland, Belgium, etc. In these countries, the annual vegetable consumption ranges from 150 – 200 kg per capita. A part of the consumption is provided from the vegetable production obtained in the European Union, where the vegetable sector is competitive and market-oriented, while also protecting the environment. At world level, vegetable farming has a high economic efficiency because it accounts for 30% of the value obtained by agriculture, while the area it uses represents about 2.0%. This increased efficiency is due to vegetable farming characteristics and specificities as compared to other activity sectors. According to the approach, these characteristics may be related to: area, technology and economy. At present, special importance is associated with the economic aspect of vegetable farming because: it provides a large number of jobs; it makes it possible to grow vegetables all through the year; high yields are obtained per area unit and contribute to the increase in the economic agents' revenues; etc.

MATERIALS AND METHODS

In order to perform the current study, we used data provided by Romania Trade & Invest, the National Institute of Statistics, Eurostat, FAOSTAT, FAPRI and USDA for the interval 2005 – 2011. Specialised books, studies and magazines were also referred to. The study comprises the following indicators specific to the vegetable farming sector: cultivated area, overall production, overall consumption, annual average consumption per capita, imports and exports.

RESULTS AND DISCUSSIONS

In the European Union, vegetable and fruit account for approximately 17% of the agricultural production value, which triggers the existence of a competitive sector with development potential on the short and medium term. From the very beginning it is necessary to identify the position that the vegetable farming sector fills in the global economy. At present, the EU fills the second position in terms of both the production obtained and the exported one, and it fills the top position as importer. The vegetable farming sector has an advantage in comparison to other sectors. This advantage is the full and rational use of workforce. The vegetables market in the EU is influenced by production and prices. The production depends on several factors, among which: the cultivated area; the average yield per hectare; weather conditions; mechanisation level; etc. In table 1 we present the evolution of the cultivated area for the main categories of vegetables in the European Union, in the interval 2005-2011.

Table 1
The evolution of the cultivated areas for the main categories of vegetables, in the interval 2005-2011 (EU-27) (thou ha)

Specification	2005	2007	2009	2011	2011/2005 (%)
Beans	133.9	108	84.5	86.3	64.4
Green beans	94.6	92.5	85.2	75.4	79.7
Peas	823.7	591.6	538.9	708.7	86.0
Green peas	148.4	161.2	175.3	176.9	119.2
Potatoes	2301.1	2210.1	2081.4	1942.9	84.4
Cabbage and other brassicas	220.2	197.1	184.3	172.5	78.3
Spring onions	10.2	11.1	11.8	12.5	122.5
Onions	185.9	187.0	185.8	187.2	100.6

Source: EUROSTAT; FAOSTAT; FAPRI; USDA; Own calculations

The area cultivated with the main categories of vegetables has had a differentiated evolution from one year to another, but it is noteworthy that for a significant part of the analysed crops the area decreased in 2011 as compared to 2005, which is considered the basic year. Decreases were recorded for the following crops: beans (-35.6%); green beans (-20.3%); peas (-14.0%); potatoes (-15.6%); cabbage (-21.7%). During the analysed interval, we also notice increases in the areas that are cultivated for the following categories: onions (+0.6%); green peas (+19.2%); spring onions (+22.5%).

In table 2 we present the evolution of the overall vegetable production at European Union level in the interval 2005-2011.

Table 2
The evolution in productions according to categories of vegetables in the interval 2005- 2011 (EU-27) (thou tons)

Specification	2005	2007	2009	2011	2011/2005 (%)
Beans	176.6	136.6	137.6	145.4	82.3
Green beans	910.7	884.6	817.3	703.5	77.2
Peas	2,499.8	1,451.3	1,400.4	1440.4	57.6
Green peas	1164.5	1,093.2	1273.4	1265.0	108.6
Potatoes	62,469.4	63753.4	62383.1	62414.4	99.9
Cabbage and other brassicas	5833.4	5533.8	5529.5	5440.0	93.2
Spring onions	162.9	215.0	251.5	267.6	164.2
Onions	5403.0	5342.7	5827.2	6617.2	122.4

Source: EUROSTAT; FAOSTAT; FAPRI; USDA; Own calculations

In terms of the vegetable productions recorded, we notice that they had a fluctuating evolution from an interval to another, some of them displaying an upward trend, others taking a downward one. In the vegetables group, in 2011 we recorded productions of 1,265.0 thou tons of green peas (+8.6%); 267.6 thou tons of spring onions (+64.2%); 6,617.2 thou tons of onions (+22.4%). Decreases were recorded for the following: beans (-17.7%); green beans (-22.8%); peas (-42.4%); potatoes (-0.1%) and cabbage (-6.8%). The decrease in productions was mainly due to: the decrease in cultivated areas; diminishing yields per hectare; unfavourable weather conditions. This led to the quantitative and value increase in imports during the analysed interval.

In table 3 we present the evolution of the annual vegetables consumption in the interval 2005-2009, in the European Union. The consumption for the main categories of vegetables had a differentiated evolution, from one year to another. Decreases were recorded in 2009 as compared to 2005 in the following categories of vegetables: peas (-11.0%); potatoes (-3.8%) and other vegetables (-3.0%). These decreases were caused by the decrease in the population's purchasing power and by the replacement with other more accessible products or categories of vegetables. During the analysed interval, increases in consumption were recorded for the following categories: tomatoes (+2.9%); peppers (+0.5%); onions (+4.1%); beans (+5.2%). The increase in vegetable consumption for certain categories can be explained by the consumers' preferences and the decrease in prices during certain times of the year.

Table 3
The evolution of consumption according to categories of vegetables, in the interval 2005-2009 (EU-27) (thou tons)

Specification	2005	2006	2007	2008	2009	2009/2005 (%)
Peas	655.3	710.7	713.4	610.5	583.7	89.0
Potatoes	38218.9	37148.5	36899.3	37112.9	36785.1	96.2
Tomatoes	15375.7	13487.3	14033.6	13808.2	15830.6	102.9
Peppers	56.2	63.0	63.9	52.9	56.5	100.5
Onions	4404.6	4316.9	4635.1	4554.2	4588.8	104.1
Beans	385.5	410.3	415.4	418.6	405.7	105.2
Other vegetables	39598.6	39353.2	39697.2	38193.3	38428.1	97.0

Source: EUROSTAT; FAOSTAT; FAPRI; USDA; Own calculations

Another important indicator that helps determining the standard of living is represented by the annual average consumption per capita. In table 4 we present this indicator's evolution in the interval 2005-2009.

Table 4
The evolution of average annual consumption per capita according to categories of vegetables, in the interval 2005-2009 (EU-27) (kg/per capita)

Specification	2005	2006	2007	2008	2009	2009/2005 (%)
Peas	1.3	1.4	1.4	1.2	1.2	92.3
Potatoes	77.9	75.4	74.5	74.7	73.7	94.6
Tomatoes	31.3	27.4	28.3	27.8	31.7	101.2
Peppers	9.0	8.8	9.4	9.2	9.2	102.2
Onions	8.0	8.0	8.0	8.0	8.0	100.0
Beans	80.7	79.8	78.2	76.8	77.0	95.4

Source: EUROSTAT; FAOSTAT; FAPRI; USDA; Own calculations

This indicator's evolution is closely related to the evolution of the vegetables

consumption for the main categories in the interval 2005-2009. No significant increases or decreases were recorded in the average annual consumption in 2009 compared to 2005. On the medium term, an increase in the average annual vegetables consumption is forecast. Providing the main categories of vegetables for human consumption was possible by resorting to imports. It is well known that each country imports certain products, although some of them are also obtained domestically. This is also valid at European Union level.

In table 5 we present the foreign trade status according to categories of vegetables in the interval 2005-2010.

Table 5
The foreign trade in the main categories of vegetables,
in the interval 2005-2010 (EU-27) (thou tons)

Specification	Flow	2005	2006	2007	2008	2009	2010
Beans	Import	497.9	528.0	564.0	596.2	565.0	550.9
	Export	149.0	118.5	128.5	154.0	157.3	137.5
	E-I	-348.9	-409.5	-435.5	-442.2	-407.7	-413.4
Green beans	Import	358.3	318.2	337.6	363.4	365.7	341.9
	Export	187.2	150.7	185.7	166.4	169.9	178.7
	E-I	-171.1	-167.5	-151.9	-197.0	-195.8	-163.2
Cabbage	Import	498.0	530.4	586.4	607.6	587.6	624.0
	Export	564.0	499.8	593.2	658.0	589.6	652.3
	E-I	66.0	-30.6	6.8	50.4	2.0	28.3
Onions	Import	1216.0	1395.3	1581.4	5532.1	1497.3	1567.9
	Export	1497.9	1642.8	1526.1	1762.5	1936.2	2188.2
	E-I	281.9	247.5	-55.3	-3769.6	438.9	620.3
Spring onions	Import	53.0	37.2	37.5	38.2	32.7	34.2
	Export	64.0	64.0	47.2	35.6	39.5	54.5
	E-I	11.0	26.8	9.7	-2.6	6.8	20.3
Peas	Import	1925.3	1498.4	601.2	452.1	511.8	554.2
	Export	740.2	648.9	565.4	479.6	338.4	469.9
	E-I	-1185.1	-849.5	-35.8	27.5	-173.4	-84.3
Green peas	Import	127.0	126.2	116.8	148.6	161.2	118.6
	Export	74.1	74.1	68.2	67.1	87.6	74.1
	E-I	-52.9	-52.1	-48.6	-81.5	-60.9	-74.4
Peppers	Import	82.1	92.7	94.1	86.9	88.3	99.7
	Export	25.9	29.7	30.1	34.0	31.7	32.9
	E-I	-56.2	-63.0	-64.0	-52.9	-56.6	66.8
Potatoes	Import	6233.3	6459.6	6640.9	6478.4	6099.0	6779.0
	Export	6308.4	6968.6	7019.8	6724.5	7270.7	7945.1
	E-I	75.1	509.0	378.9	246.1	1171.7	1166.1
Tomatoes	Import	2412.9	2608.3	2666.7	2820.8	2909.3	2826.0
	Export	2291.2	2382.6	2493.6	2705.9	2607.8	2489.2
	E-I	-121.7	-225.7	-171.1	-114.9	-301.5	-336.8

Source: EUROSTAT; FAOSTAT; FAPRI; USDA; Own calculations

In the interval 2005-2010, both imports and exports fluctuated from one year to another. An explanation would be given by the evolution of the vegetables production and

the prices level in the European Union. The highest imported amount was recorded for potatoes, namely 6779.0 thou tons (year 2010), and the lowest imported amount was of 32.7 thou tone, for spring onions, in 2009. The most significant exports were recorded for 7945.1 thou tons (year 2010). The decrease in exported amounts for certain categories of vegetables in the analysed interval had a negative impact on the GDP.

Value exports and imports according to categories of vegetables are presented in table 6. They had fluctuating evolutions in the interval 2005-2010. For certain categories of vegetables, such as: beans, green beans, cabbage, onions, peas, green peas and tomatoes there were negative trade balances. Positive trade balances were recorded for potatoes and spring onions in the analysed interval and in certain intervals for onions (years 2009-2010).

Table 6

**Exports, imports and trade balance for the main categories of vegetables,
in the interval 2005-2010 (EU-27) (millions dollars)**

Specification	Flow	2005	2006	2007	2008	2009	2010
Beans	Import	354.5	400.1	493.9	658.8	568.0	578.6
	Export	109.6	100.2	139.5	170.5	150.4	146.6
	E-I	-244.9	-299.9	-354.4	-488.3	-417.6	-432.0
Green beans	Import	509.6	519.3	607.5	618.1	582.6	585.7
	Export	191.7	192.8	228.8	230.8	212.7	213.7
	E-I	-317.9	-326.5	-378.7	-379.3	-369.9	-372.0
Cabbage	Import	365.8	404.7	459.1	544.4	469.2	536.5
	Export	317.3	322.0	433.8	519.4	402.7	459.7
	E-I	-48.5	-82.7	-25.3	-25.0	-66.5	-76.8
Onions	Import	437.6	630.8	957.2	791.1	677.4	925.6
	Export	412.6	566.2	791.5	702.6	688.2	1010.6
	E-I	-25.0	-64.6	-165.7	-88.5	10.8	85.0
Spring onions	Import	35.7	40.3	52.2	66.1	39.0	38.4
	Export	41.9	51.8	60.2	68.2	47.0	57.8
	E-I	6.2	11.5	8.0	2.1	8.0	19.4
Peas	Import	269.3	310.7	222.4	245.1	209.3	216.5
	Export	173.8	166.0	205.0	246.1	165.7	194.7
	E-I	-95.5	-144.7	-17.4	-1.0	-43.6	-21.8
Green peas	Import	152.2	158.0	178.0	207.6	193.0	152.9
	Export	54.0	55.2	70.8	86.0	89.5	77.3
	E-I	-98.2	-102.8	-116.2	-121.6	-103.5	-75.6
Peppers	Import	189.0	237.2	366.2	400.9	325.6	409.0
	Export	92.8	108.3	154.8	194.4	161.1	178.0
	E-I	-96.2	-128.9	-82.3	-206.5	-191.5	-231.0
Potatoes	Import	1274.5	1769.7	2339.6	2181.1	1890.9	2303.3
	Export	1275.2	1982.6	2516.9	2314.4	2102.7	2477.3
	E-I	0.7	212.9	177.3	133.3	211.8	174.0
Tomatoes	Import	3170.0	3301.6	4246.1	4318.7	4053.0	4472.2
	Export	2947.7	3049.5	3802.1	4132.0	3686.4	4128.9
	E-I	-222.3	-252.1	-444.0	--186.7	-366.6	-343.3

Source: EUROSTAT; FAOSTAT; FAPRI; USDA; Own calculations

It is worth mentioning that the vegetable farming sector in the EU is undergoing a reorganisation process with an emphasis on the support provided to producers. During the analysed interval, the EU took action by means of a foreign trade regime for the category of fresh vegetables, through a wide system of: season restrictions; import contingencies and preferential agreements. All these are targeting the import prices system. Also during this interval, an influence factor in the evolution of the vegetables market is represented by food safety regulations. These regulations imply certain aspects for the non-traditional exporters that want to enter the community market.

CONCLUSIONS

The vegetables market in the EU in the interval 2005-2011 was mainly characterised by the following:

- the area cultivated with the main categories of vegetables had a differentiated evolution, from one year to another;
- the decrease in production for certain categories of vegetables was caused mainly by: decreases in cultivated areas, diminishing yields per hectare and unfavourable weather conditions;
- on the medium term, an increase in the average annual vegetables consumption per capita is forecast;
- providing the main categories of vegetables for human consumption was possible by means of increasing imports;
- mainly negative trade balances were recorded for many vegetable categories, except for potatoes and spring onions, where trade balances were positive.

An important factor in the evolution of the vegetables market is represented by the food safety regulations within the European Union.

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