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Conference Paper

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Provided in Cooperation with:

The Research Institute for Agriculture Economy and Rural Development (ICEADR), Bucharest

Suggested Citation: Marin, Ancuța; Turek-Rahoveanu, Petruța (2015) : Comparative analysis of the production-medium consumption rate per inhabitant: Physiological requirement in Romania and in the EU countries, In: Agrarian Economy and Rural Development - Realities and Perspectives for Romania. 6th Edition of the International Symposium, November 2015, Bucharest, The Research Institute for Agricultural Economy and Rural Development (ICEADR), Bucharest, pp. 441-446

This Version is available at:

<https://hdl.handle.net/10419/163340>

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COMPARATIVE ANALYSIS OF THE PRODUCTION-MEDIUM CONSUMPTION RATE PER INHABITANT - PHYSIOLOGICAL REQUIREMENT IN ROMANIA AND IN THE EU COUNTRIES

ANCUȚA MARIN¹, PETRUȚA TUREK-RAHOVEANU²

Summary: *Mankind's concern for population's health and malnutrition prevention starts from the physiological requirement, from the food resources of each country, from the culinary customs and traditions from that area. According to the data published by NSI and EUROSTAT, the surface cultivated with vegetables and fruit trees has been constant, the variations were small from one year to another in both Romania and European Union countries, the differences from a country to another resulting from the average hectare production, the varieties and the used technologies. In Romania, the annual average vegetables, respectively fruits consumption, per inhabitant varied according to the data published by NSI between 148,7-162,9 kg fresh and processed vegetables and 65,7-74,7 kg fresh and processed fruits, per year. The surfaces in Romania cultivated with vegetables and fruit trees and the intern productions of vegetables and fruits placed under the consumption requirement, which let to substantial imports in order to complete it. In conclusion, it is recommended to support/fund the domestic producers of vegetables and fruits throughout the process, from the production to the production capitalization, for covering the intern consumption requirement from the domestic production, as well as to deliver the surplus production to export.*

Key words: *cultivated surface, average production, physiological consumption, eating habits*

INTRODUCTION

Mankind's concern is about the „public” and „individual” health of each country's population. This concern manifests by preventing, controlling and guarding people against diseases caused by some foods or by malnutrition. Starting from the physiological requirement, from the food resources of each country, from the culinary customs and traditions from that area, the individual food consumption is assessed. This takes under consideration the trading of fresh vegetables and fruits as well as processed ones. People's interest in cultivating plants, vegetables and fruits is old and imposed, just like any other activity, the necessity to name it. In short, „the science of cultivating the garden or the science of gardening” got the name of *Horticulture*. Today it becomes an „art” of cultivating fruits, vegetables and ornamental plants, because besides the actual cultivating technology it also includes the marketing of the horticultural products.

This paper, intends to make a comparative analysis of the production-consumption-requirement rate per inhabitant, in Romania as well as in the EU countries, in progress, on a 5 year period, in order to highlight it, to give changing solutions in favour of the final consumer.

MATERIAL AND METHOD

The used research method is the quality analysis by studying and analyzing the data published by the National Statistics Institute, by EUROSTAT, by the Ministry of Agriculture and Rural Development and by studying the specialized literature, that would highlight the potential of the vegetables and fruit trees cultivated surfaces in order to ensure the consumption requirement in Romania as well as in the EU countries.

RESULTS AND DISCUSSIONS

Through thier content of vitamines, carbohydrate and minerals, vegetables and fruits

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contribute in maintaining and increasing population's health. That's why they need to represent an important part of man's daily food requirement. In our country, in the last years, the change is detected on scientific bases, in the population mentality. Fruits and vegetables contribute substantially in balancing the food intake, their consumption, especially in a fresh state, preventing diseases caused by sedentarism, stress and other factors that have a negative influence on modern man's life.

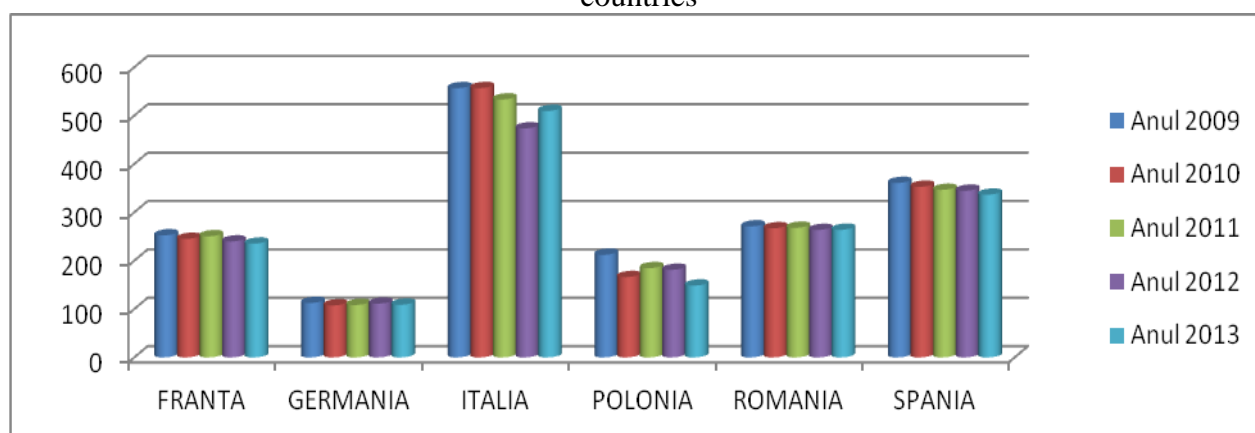
According to the data published by NSI and EUROSTAT, the surface that was cultivated with vegetables was relatively constant, the variations were small from one year to another, in Romania as well as in the European Union countries (*Table nr.1 and Chart nr.1*).

Table nr.1

THE SITUATION OF THE SURFACES CULTIVATED WITH VEGETABLES IN ROMÂNIA AND IN THE EU COUNTRIES – thousands of ha					
	Year 2009	Year 2010	Year 2011	Year 2012	Year 2013
FRANCE	252,3	245,03	250,49	239,65	235,21
GERMANY	112,55	107,51	108,34	111,18	108,78
ITALY	556,66	556,8	533,27	473,53	509,56
POLAND	212,13	165,97	184,48	181,07	148,47
ROMANIA	270,78	266,94	268,00	263,44	263,75
SPAIN	360,59	352,79	346,39	344,59	336,41

Source: data processing N.S.I., FAOSTAT and EUROSTAT

Chart nr. 1 – The situation of the surfaces cultivated with vegetables in România and in the EU countries



As evidenced in Table nr.1, the country with the largest vegetable surface is Italy, while the smallest vegetable area is in Germany. In Romania, the vegetable surface was situated a little under the calculated averages (between 294,17 and 267,03 thousands ha) for the analyzed countries, varying between 92-98% from the average.

In Romania, the vegetable total production registered a maximum in 2011, and the smallest value was in 2012, as it results from Table nr.2 and Chart nr.2. Even though production increased, the agrarian producer representatives face difficulties regarding production sale due to:

- imports with very small prices,
- tax evasion and
- the existence of multistage agents.

Regarding productions, the biggest total production is registered in Italy, while Spain and Germany register the biggest production per hectare (Chart nr.3). The explanation is given by the fact that these countries use more productive soils and technologies.

Table nr.2

THE SITUATION OF THE VEGETABLE PRODUCTIONS IN ROMANIA AND EU COUNTRIES							
Specification		MU	2009	2010	2011	2012	2013
FRANTA	Total production	thousand tons	5.685,13	5.593,00	5.494,49	5.283,46	5.235,33
	Average production	tons /ha	22,53	22,83	21,93	22,05	22,25
GERMANIA	Total production	thousand tons	3.661,99	3.350,70	3.593,62	3.820,72	3.416,09
	Average production	tons /ha	32,54	31,16	33,17	34,36	31,41
ITALIA	Total production	thousand tons	15.481,77	14.564,98	14.242,28	12.960,90	13.049,17
	Average production	tons /ha	27,81	26,16	26,71	27,37	25,61
POLONIA	Total production	thousand tons	5.804,78	5.113,40	5.801,70	5.656,02	5.210,69
	Average production	tons /ha	27,36	30,81	31,45	31,23	35,09
ROMANIA	Total production	thousand tons	3.912,81	3.876,81	4.191,54	3.550,57	3.976,65
	Average production	tons /ha	14,45	14,52	15,63	13,47	15,08
SPANIA	Total production	thousand tons	13.342,98	12.728,85	12.714,07	12.962,76	12.701,30
	Average production	tons /ha	37,01	36,08	36,71	37,61	37,75

Source: data processing N.S.I., FAOSTAT and EUROSTAT

Chart nr. 2 – The situation of the total vegetable productions in Romania and EU countries

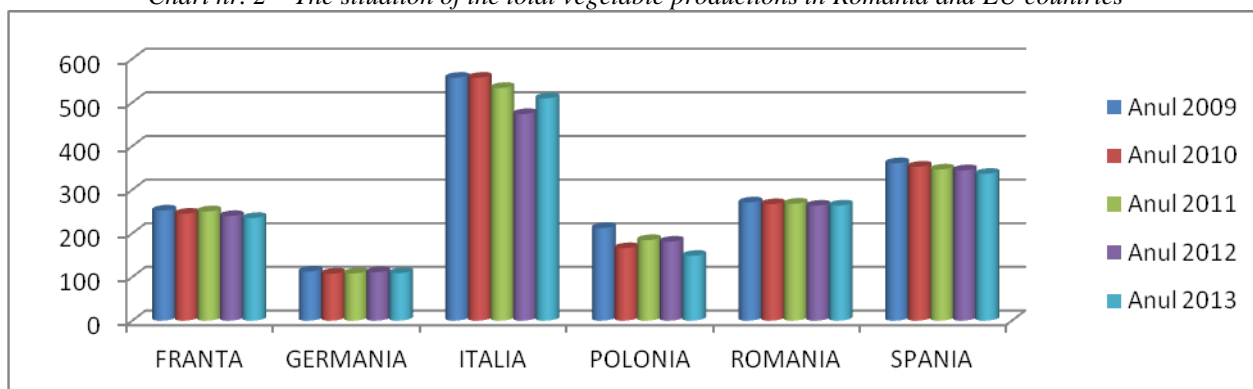
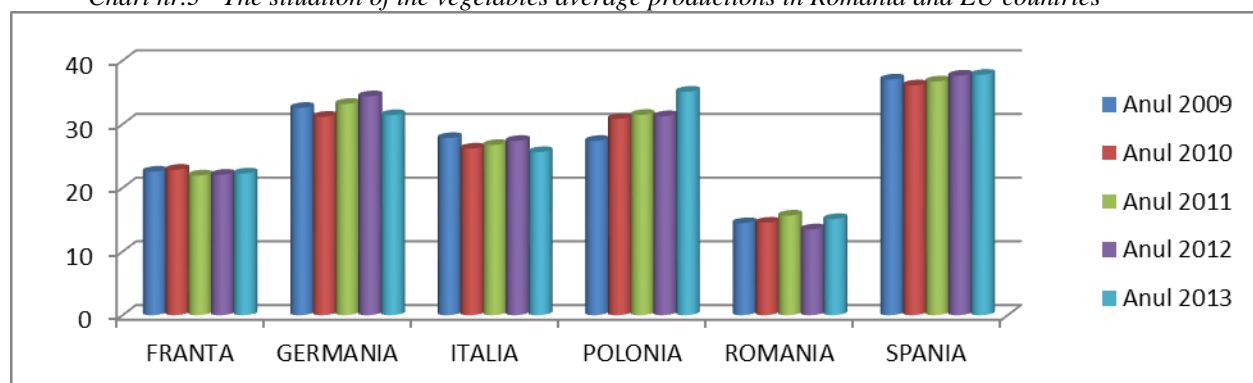


Chart nr.3 - The situation of the vegetables average productions in România and EU countries



According to official statistics, Romania loses every year around 250 million euro in the vegetable sector alone. The balance between vegetable export and vegetable import is scarce. In 2012, according to data published by the Ministry of Agriculture and Rural Development, the vegetable export was 11.575 tons, while the import was 242.775 tons.

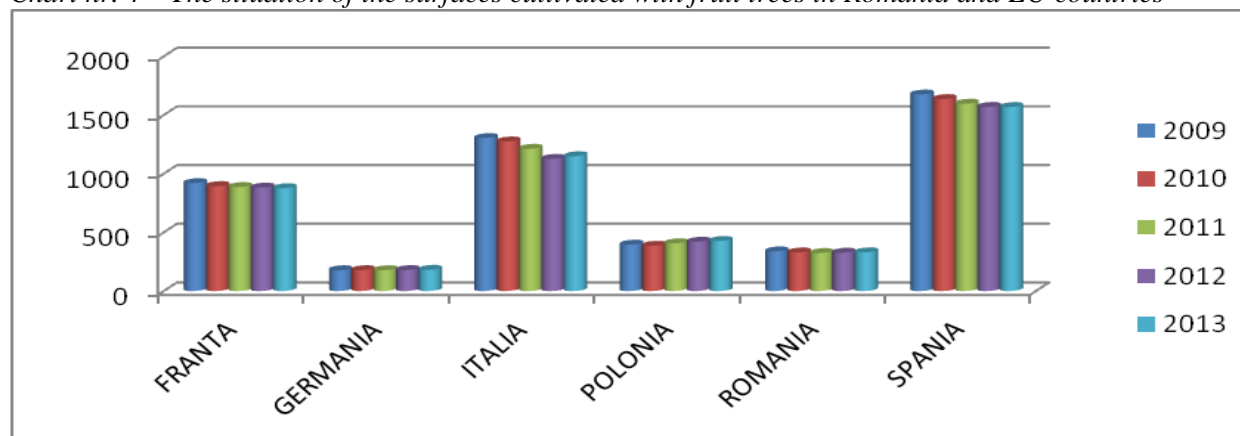
Regarding the fruit trees cultivated surfaces, according to data published by NSI and EUROSTAT we can see in Table nr.3 and Chart nr.4 that Spain is the country with the largest surface covered with orchards. Romania is situated well below the average of the calculated surfaces for the 6 countries, which varies between 750,49 and 801,71 thousands hectares.

Table nr. 3

THE SITUATION OF THE FRUIT TREES CULTIVATED SURFACES IN ROMÂNIA AND IN EU COUNTRIES – thousands of hectares					
	2009	2010	2011	2012	2013
FRANCE	919,69	894	886,34	881,53	876,36
GERMANY	178,08	178,13	177,85	178,83	180,93
ITALY	1.303,47	1.274,92	1.211,84	1.126,51	1.148,77
POLAND	395,74	385,85	407,37	420,49	426,83
ROMANIA	338,08	329,45	323,95	326,68	329,94
SPAIN	1.675,21	1.636,48	1.596,54	1.568,90	1.568,32

Source: data processing N.S.I., FAOSTAT and EUROSTAT

Chart nr. 4 – The situation of the surfaces cultivated with fruit trees in Romania and EU countries



However, using quality breed led to the increase of the fruit total production, as it results from Table nr.4 și Chart nr.5.

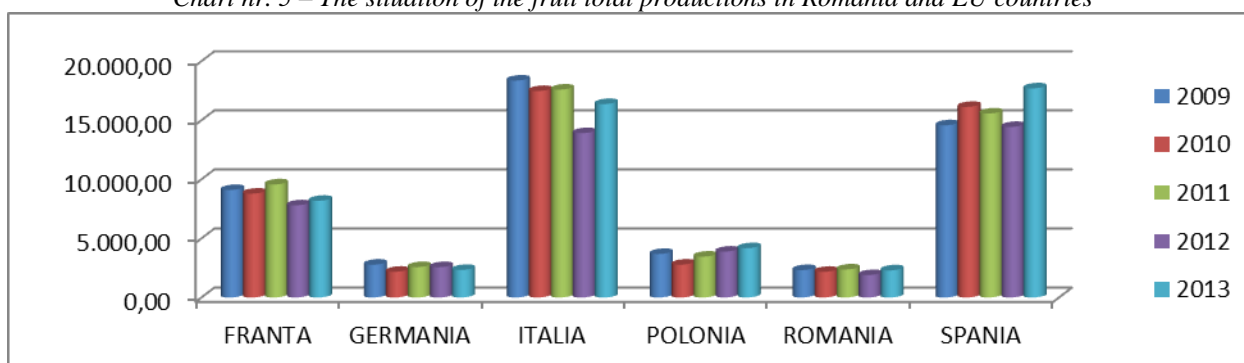
Table nr. 4

THE SITUATION OF THE FRUIT PRODUCTIONS IN ROMANIA AND EU COUNTRIES							
		MU	2009	2010	2011	2012	2013
FRANCE	Total production	thousand tons	9.098,08	8.791,36	9.573,09	7.800,55	8.183,10
	Average production	tons /ha	9,89	9,83	10,8	8,85	9,34
GERMANY	Total production	thousand tons	2.778,97	2.176,50	2.571,52	2.569,08	2.333,81
	Average production	tons /ha	15,61	12,21	14,46	14,36	12,9
ITALY	Total production	thousand tons	18.361,94	17.478,46	17.596,70	13.913,79	16.370,57
	Average production	tons /ha	14,09	13,71	14,52	12,35	14,25
POLAND	Total production	thousand	3.685,28	2.780,66	3.461,94	3.888,60	4.176,69

		tons					
	Average production	tons /ha	9,31	7,21	8,5	9,25	9,78
ROMANIA	Total production	thousand tons	2.320,57	2.173,92	2.373,26	1.898,31	2.294,27
	Average production	tons /ha	6,86	6,59	7,32	5,81	6,95
SPAIN	Total production	thousand tons	14.573,00	16.131,59	15.574,28	14.436,25	17.699,31
	Average production	tons /ha	8,7	9,86	9,75	9,2	11,28

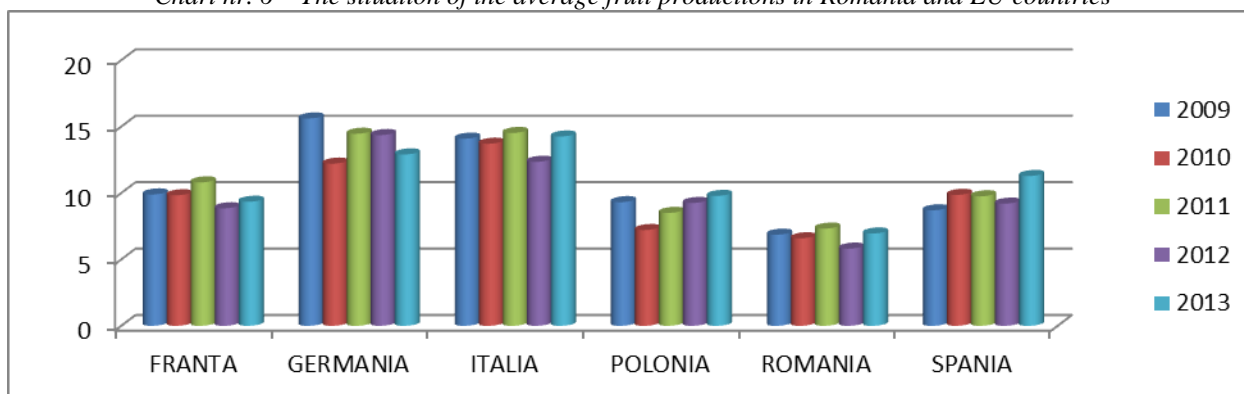
Source: data processing N.S.I., FAOSTAT and EUROSTAT

Chart nr. 5 – The situation of the fruit total productions in Romania and EU countries



By comparison, in a few of the EU member countries the situation of the surfaces covered with orchards and fruit productions in the studied period was the following (Chart nr. 6):

Chart nr. 6 – The situation of the average fruit productions in Romania and EU countries



By calculating the productions average per hectare, there is an increasing trend throughout the analyzed period. Just like the vegetable sector, in the fruit production also the producers have difficulties, due to small and very small price imports and due to a lack of legislation that would prevent tax evasion in this sector.

In the country there are counties, like Gorj, Caraș-Severin, Hunedoara, Alba, Sibiu, Maramureș, Bistrița, Harhita, Covasna, Brașov, Prahova, in which the vegetable demand surpasses production, which leads to a considerable shortage. The shortage is determined on the one hand by the high relief and the agro-climate conditions that don't favor vegetable crops, and on the other hand the large number of inhabitants in these counties, which implicates higher consumption.

The surfaces, the total vegetable and fruit productions and the productivity reflected by average production per hectare reflects upon the average consumption per inhabitant. From the data published by NSI, FAOSTAT and EUROSTAT, we processed and got the following situation:

Table nr.5

AVERAGE VEGETABLE CONSUMPTION PER INHABITANT IN ROMANIA AND EU COUNTRIES – kg/person			
	2009	2010	2011
FRANCE	105,17	102,62	103,63
GERMANY	91,71	90,13	94,25
ITALY	174,84	144,49	144,51
POLAND	126,09	113,51	129,35
ROMANIA	148,7	155,7	162,9
SPAIN	158,5	140,7	123,8

Source: data processing N.S.I., FAOSTAT and EUROSTAT

Annual average vegetable consumption per inhabitant varied in Romania, between 148,7 - 162,9 kg fresh and processed vegetables. At country level, the produced vegetable quantity covers the annual average consumption, throughout the analyzed period, the registered values being over the physiological requirement of 140 kg/inhabitant.

Table nr. 6

ANNUAL AVERAGE FRUIT CONSUMPTION PER INHABITANT IN ROMANIA AND EU COUNTRIES			
	2009	2010	2011
FRANCE	115,84	111,24	110,09
GERMANY	79,09	76	80,37
ITALY	163,62	141,37	140,79
POLAND	54,69	53,4	54,31
ROMANIA	65,7	67	74,7
SPAIN	71,84	85,29	79,65

Source: data processing N.S.I., FAOSTAT and EUROSTAT

One can't say the same thing about the fruit consumption. The fruit production was under the annual average consumption, the difference being covered by imports. Production, as well as fruit consumption registered values well under the physiological requirement of 100 kg/inhabitant, due to Romanian's eating habits and to high selling prices of fresh fruits, and especially of the processed fruits.

In order to reduce the shortages and syncope in the vegetables and fruits domestic production supply it's important to zone the crops. By zoning one understands distribution or territorial casing of the crops based on climate, relief and soil factors that favors or diminishes the capitalizing possibilities of the biological potential of the plants.

CONCLUSIONS AND RECOMMENDATIONS

The vegetables and fruit trees cultivated surfaces in Romania and the vegetables and fruits domestic productions were under the consumption requirement, which led to substantial imports in order to supplement it.

In conclusion, it is recommended to support/ fund the vegetable and fruit domestic producers throughout the process, from the production to the production capitalization, for covering the internal consumption requirement from the domestic production, as well as to deliver the surplus production to export.

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