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Comparative analysis of the production-average consumption proportion of the main fruits in Romania and the European Union

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COMPARATIVE ANALYSIS OF THE PRODUCTION-AVERAGE CONSUMPTION PROPORTION OF THE MAIN FRUITS IN ROMANIA AND THE EUROPEAN UNION

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Abstract: *Taking under consideration the importance of fruits in human food, this article aims to follow the evolution of surfaces, productions, annual average fruit consumption, the import and export in Romania compared to the E.U. with the purpose of evaluating the sector as well as their necessity in human food. The increasing predisposition of the annual average consumption starting 2011 is due to the people's orientation towards a healthy food based on fresh fruits and vegetables, which makes one of the elements necessary for a balanced life. Human consumption represented the main destination of the inland consumption (97%) in 2014/2015 as well as in the previous years. The import value has reached a maximum level of 2,14 times (2016) compared to reference year (2010). The fruit imports increase year by year, exceeding exports, because the fruit productions in the last years have been of low quality which is why they have been sent to the food industry in order to be processed.*

Keywords: *average consumption, import value, export value*

JEL Classification: *Q13, L11*

INTRODUCTION

Through its economic and social dimensions and through its ecological functions the horticultural sector represents an important national treasure of Romania.

Economy wise, the horticultural sector represents an important income for the state budget and offers the possibility of completing the country's currency reserves through export activities. On the other hand it offers the raw material needed in order to develop a processing and harnessing activity that can be achieved in small and medium units that are easily integrated in the rural communities.

Fruits represent the food category with the highest degree of surveillance regarding food safety in the European Union due to the traceability in the interstate commerce.

The importance of the vegetables and fruits consumption is replenished by their participation with an important share in creating ready-to-eat and ready cooked culinary recipes: we can say that there is no menu in which vegetables and fruits don't cut in, in a proportion that's pretty high sometimes.

MATERIALS AND METHODS

The research method used in the present article is the qualitative and comparative analysis with the most powerful states in the E.U., by studying and analyzing the data provided by the Ministry of Agriculture and Rural Development, National Institute of Statistics, Eurostat and FAOSTAT. We will highlight, with help from the research methods and the specific literature, the potential of the surfaces that are cultivated with fruit trees that insure the consumption demand.

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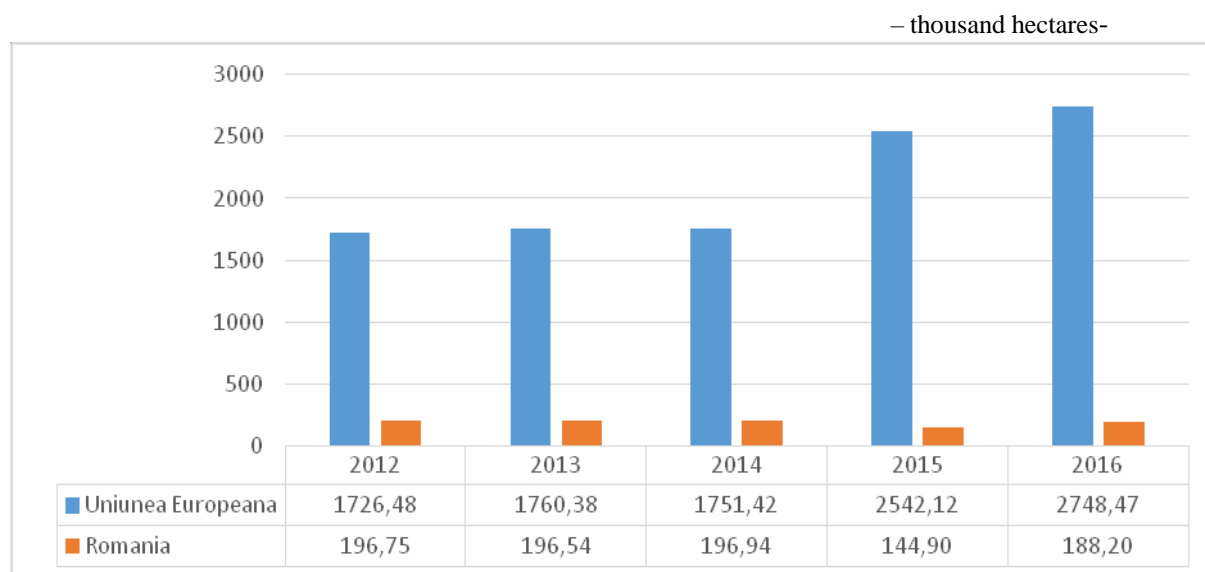
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RESULTS AND DISCUSSIONS

The European Union allocated in 2016 a surface of approximate 2,7 million hectares for fruit production from which 6,2% (188.2 hectares) in Romania. (Diagram nr.1)

The fruit cultivated surface has been relatively constant until 2014, the variations being small from year to year, in Romania as well as in the European Union countries. In the following years (2015, 2016) the surface increases surprisingly in the European Union compared to Romania where it registered a substantial decrease according to the data published by INS and EUROSTAT.

Diagram nr. 1.Fruit tree cultivated surface on a European level



Source: Eurostat

In the analyzed period, the situation of the cultivated surfaces with the six categories of fruit trees is not very hopeful, especially starting 2013 when it registers a downfall, followed by a straightening with little increases until 2016

Table nr. 1. The status of the surfaces cultivated with fruit trees in Romania and the E.U.

– thousand hectares -

Specification	2012		2013		2014		2015		2016	
	Romania	E.U.	Romania	E.U.	Romania	E.U.	Romania	E.U.	Romania	E.U.
Apples	55.37	1726.48	60.28	1760.38	56.13	524.50	55.88	537.91	55.68	519.94
Pears	3.90	558.62	3.91	536.75	3.46	120.38	2.91	117.01	3.15	117.07
Plums	68.48	129.42	68.01	124.66	66.55	157.36	65.67	154.18	65.56	150.96
Cherries	6.83	166.39	7.08	162.01	6.45	170.13	6.31	173.35	6.10	170.75
Peaches	1.95	173.21	1.93	1358.82	1.68	162.40	1.69	157.55	1.69	157.52
Apricots	2.50	166.04	2.84	163.50	2.98	69.14	2.62	69.25	2.21	70.35

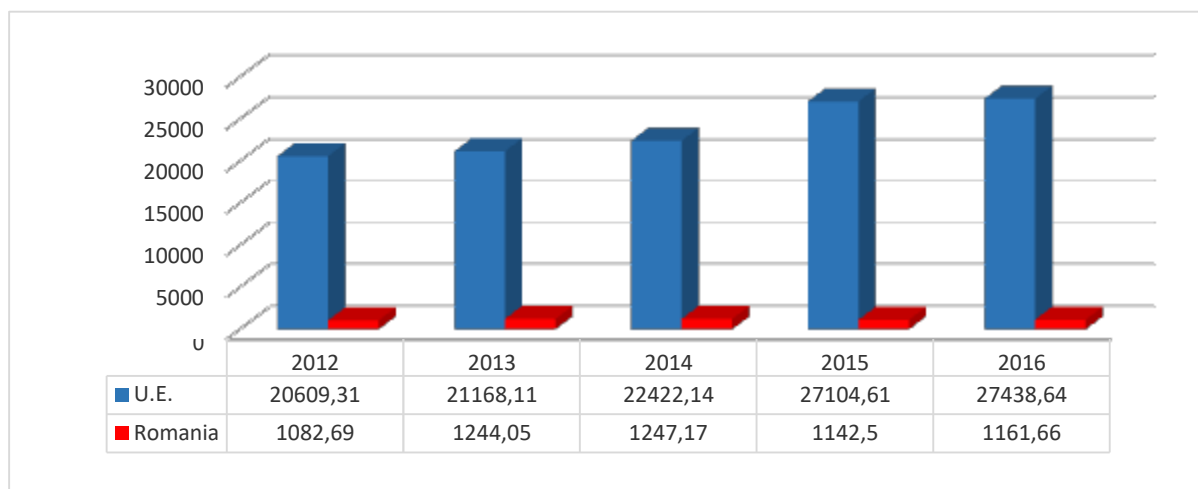
Source: Eurostat

The six species of fruits covered in 2016 a surface of 1,18 million hectares in E.U. that is 6,1% less than in 2012 (77,06 thousand hectares).

The apple orchards are more frequently cultivated in E.U. and cover 19% of total surface in 2016, 13,4% less than in 2012.(Table nr.2).

Diagram nr. 2. The status of the fruit productions on a European level

- thousand hectares -



Source: Eurostat

Romania's share in the European Union regarding fruit production is of 5,25% in 2012 decreasing in 2016 up to 4,23%.

The first place in the fruit ranking is occupied by apples, with a production of 12,7 million tons in 2015 (approximate 25 kg/per capita in UE).(Table nr.2)

Table nr. 2. The status of the fruit productions in E.U.

- thousand hectares -

Specification	2012		2013		2014		2015		2016	
	E.U.	Romania	E.U.	Romania	E.U.	Romania	E.U.	Romania	E.U.	Romania
Apples	11098.09	453.78	12075.76	502.95	12893.90	502.44	12757.70	459.05	12081.90	450.38
Pears	2099.08	51.74	2534.69	64.04	2566.24	58.51	2512.98	41.77	2323.59	49.96
Plums	1288.90	412.97	1405.31	501.03	1462.50	484.34	1,381.21	467.29	1431.56	485.43
Cherries	736.94	67.93	870.80	77.36	909.18	79.72	890.86	71.11	843.09	69.88
Peaches	2577.50	16.43	2,452.73	17.99	2878.94	23.34	2787.99	20.50	2690.55	22.32
Apricots	699.16	27.82	657.97	27.01	747.57	42.29	701.05	29.48	651.91	29.26

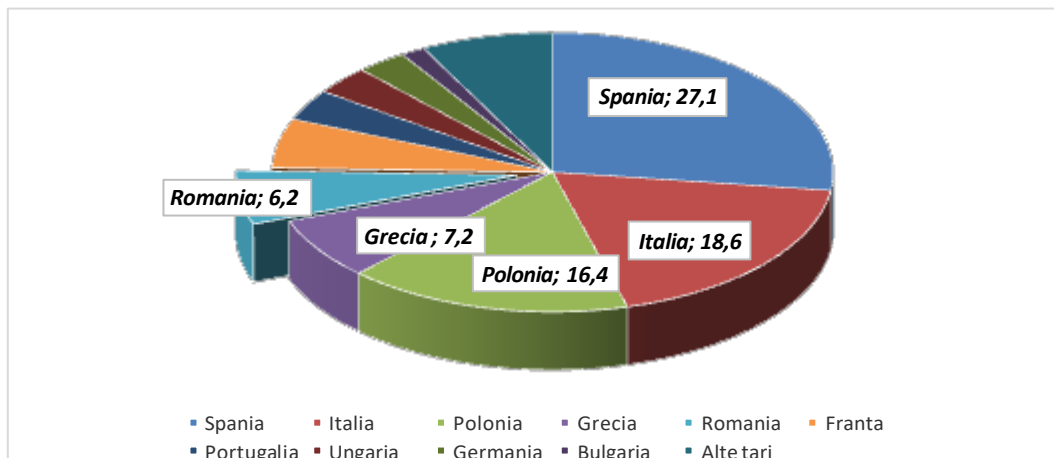
Source: Eurostat

Regarding the apples production, the main producers in the E.U. are Poland with a percentage of 25% of production total, followed by Italy with 19,2% and France with 15,5%. Regarding apple production Romania ranked 7, with a percentage of 3,6 % of production total (459,6 thousand tons).

Regarding the cherries, the main producer from the European Union in 2015 has been Poland (25,8%), then Italy with 12,6 %, Spain with 10,7% and Greece with 10%. With a percentage of 7,7% of total fruits produced in E.U., Romania placed 6th in the top of European countries who produce cherries.

In the peaches production's case, Spain is the main producer in the E.U. with 34,4%, followed by Italy with 32,9% and Greece with 23,3% of total fruit production, producing together approximate 90% of the peaches from the E.U. (Table nr.1)

Diagram nr. 3. Fruits production top in E.U. by country of origin, 2015
(% of total production in the E.U.)



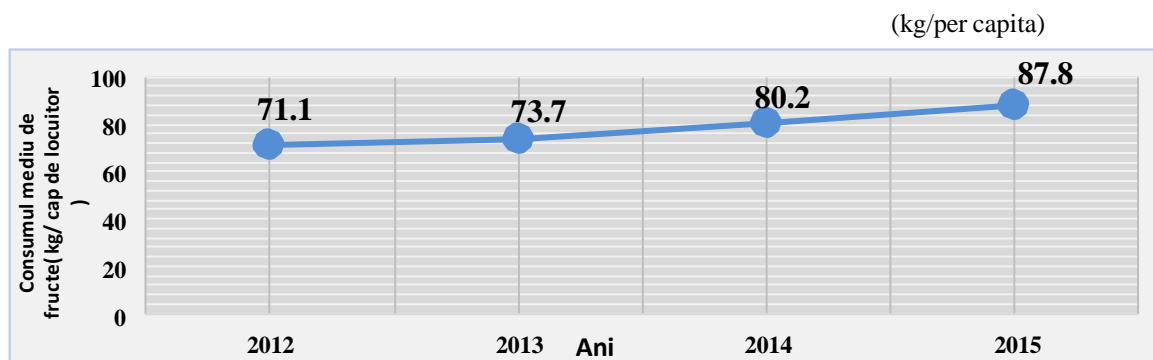
Source: Self calculations according to Eurostat data

Poland has been the main apple producer in the E.U. in 2016, having a percentage of 28,7% of total fruit production in the E.U., being followed by Italy with 19,6% and France with 14,5%. Poland has also been the main producer of cherries with 29,3% of total, followed by Spain 11,9% and Italy 11,2%.

Romanians are placed last in the European Union ranking regarding fruit consumption, it being 10 kilograms below the E.U. average.

The increasing predisposition of the annual average consumption starting with 2012 (Diagram nr.4) is due to people's orientation towards healthy food based on fresh fruits and vegetables, which makes one of the necessary elements of a balanced life. The highest average consumption of fruits and fruit products has been of 87.8 kg/per capita in 2015, that being 19 % higher than the one from the reference year 2012 .

Diagram nr. 4. The evolution of the annual fruit consumption in Romania



Source: INSSE

The annual average fruits and fruit products consumption per capita has increased with 7,6 kg in 2015, compared to previous year, mainly due to the increase of the annual average consumption per capita.

The vegetal origin lipids input in the making of the daily average lipids consumption has been higher by 0,5 percentage points compared to 2014, mainly due to the increase of the daily average consumption share of lipids derived from fruits and fruit products by 0,5 percentage points and daily average consumption share of lipids derived from vegetal fats by 0,2 percentage points.

Table nr. 3. The annual average fruit consumption in Romania

Specification	(kg/per capita)				
	2012	2013	2014	2015	2015/2014 %
Fruits and fruit products equivalent to fresh fruits	71.1	73.7	80.2	87.8	109.5
Apples	24.3	23.5	25.2	25.9	102.8
Plums	4.3	4.5	4.7	4.6	97.9
Apricots and Mirabelle plums	1.6	1.6	2.2	1.9	86.4
Sweet Cherries - Cherries	3.3	4	4	3.8	95.0
Peaches - Nectarines	3.4	3.1	4.1	5.9	143.9
Southerner and exotic fruits	20.6	23.1	25.7	29.8	116.0
Other fruits	7.3	7.2	8.1	9	111.1

Source: INSSE

The largest share in the average fruit consumption total is held by apples with a percentage of 34,1 % (2012) and 29,49 % (2015), closely followed by the southerner and exotic fruits with a percentage of 29 % (2012) and 33,94 % (2015). The lowest average consumption of fruits and fruit products per capita is registered for apricots and mirabelle plums in 2012 of 1,3 kg, staying low throughout the whole analyzed period.

In the southerner and exotic fruits category there have been registered increases of the annual average consumption per capita in 2015 compared to 2012 by 9,2 kg.

In the European Union, more than a third of the population (34,4%) doesn't eat vegetables and fruits every day, while less than 15% (14,1%) eat at least five portions every day.

Table nr. 4. Daily average fruit consumption in the European Union -2014

-%-

	0 portions	From 1 to 4 portions	5 portions or more
European Union (28 countries)	34.4	51.4	14.3
Belgium	16.1	71.3	12.6
Bulgaria	58.6	37.0	4.4
Germany	45.2	44.9	9.9
Greece	30.1	62.1	7.8
Spain	25.0	62.6	12.4
France	34.7	50.4	14.9
Croatia	27.5	65.5	7.0
Italy	23.0	65.1	11.8
Cyprus	32.6	51.3	16.1
Hungary	33.1	56.8	10.1
Poland	33.2	56.8	10.1
Portugal	20.7	61.1	18.2
Romania	65.1	31.4	3.5

Source: Eurostat

According to data provided by Eurostat in 2014 (Table nr.4), approximate 65,1% of Romania's population doesn't eat fruits and vegetables every day, being placed last in the European Union in this section. At a small distance from Romania is placed Bulgaria also with 58,6% of

population declaring that they don't eat fruits and vegetables every day. The biggest fruits and vegetables daily consumption was registered in Portugal with a percentage of 79,3 % of population that eats fruits and vegetables every day, followed by Spain with 75 % and Croatia with 72,5%.

According to data provided by INSSE, the import value for the fruit group – apples, pears and quinces has reached a maximum in 2016 of 63328 thousand euro, due to the fact that consumption demand couldn't be met from inland production only. It is important to highlight the fact that the import value for this fruit group surpassed by 2,25 times the one from the reference year. (Table nr. 5).

Table nr. 5. Import and export value by fruit groups in Romania

-thousand Euro-

Fruit groups	2012		2013		2014		2015		2016	
	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export
Fresh apples, pears and quinces	28094	4131	30547	5667	34057	2751	51601	3731	63328	1513
Fresh apricots, sweet cherries, cherries, peaches, plums and sloe	18387	3506	18761	3389	20482	1850	32494	2198	38604	1254
Other fresh fruits	9556	2951	14070	2794	15359	3422	21966	2723	29244	5875
Fruits, boiled or not, in water or steamed, frozen, even with added sugar or other sweeteners	2526	15180	2828	15230	2999	16919	3513	13029	6004	8038
Provisional canned fruits	1113	2992	616	3237	846	3138	1441	4454	1824	4694
Dried fruits, other mixes of dried fruits or hard-shelled fruits in this section	7909	392	7816	390	9001	587	14018	492	16937	652

Source:INSSE

Fruit imports increase year by year, in 2013 reaching the point where they surpassed the exports because the fruit productions from some years have been of low quality and so, they have been sent to the food industry in order to be processed.

In 2015 Romania has reached many records regarding the increase of imports for different vegetables and fruit categories, so that 40% of the apple quantity, 60% of the pear or 86% of the peach in the local market has been brought from abroad.

2016 has registered the lowest export value in the last 5 years for apples, pears and quinces, being by 85,35% more diminished compared to the one from 2011.

The export value for apricots, sweet cherries, cherries, peaches and plums in the analyzed period 2012 – 2016 is fluctuant, reaching a minimum in 2016 (1254 thousand euro) and a maximum in 2012 (3350 thousand euro).

The most profitable group is the processed fruits group (boiled and frozen), the export value reaching 16919 thousand euro in 2014, but it continues to drop, reaching a decrease of almost 50% in the last year of the analysis (8038 thousand euro).

Romania got to insure almost 40% of consumption with fruits from abroad so that 60% of the pears eaten by Romanians, 86% of peaches and 66% of the grapes come from import.

CONCLUSIONS

Even though Romania is cultivating with fruits and vegetables an area that is larger than other countries that are European Union members, the harvested quantity is smaller due to scarce agricultural infrastructure, lack of funds and the low degree of mechanization.

The imports have reached the maximum level of the analyzed period in 2016, with an increase of 55,6% compared to the minimum level (2012).

The vegetables and fruits supply in the Romanian market can be structured in two categories: inland production and imports. In the fruit supply's case there are registered two peak period: summer and autumn season. Because the inland fruit supply doesn't cover the whole year, importing is necessary and the peak periods are: winter and spring.

The Romanian market has the tendency to direct the consumption of inland fruits that are considered to have a natural taste.

The inland consumption of fresh fruits from Romania has registered an increase of 19,02% compared to the minimum level (2012). The main destination of inland consumption has been represented by human food (approximate 97%) in 2015 as well as in the previous years.

Compared to the European Union countries Romania has an average consumption market for fruits and vegetables with a share of approximate de 4,8%.

European Union is a traditional importer of fruits and vegetables of some assortments for which Romania is well-established. The situation of the food sector in our country needs support through operational projects emphasizing on pre-production and production.

BIBLIOGRAPHY

1. Bilanțuri alimentare, INS România, 2012 -2016
2. Bilanțuri de aprovizionare pentru principalele produse agroalimentare, INS România , 2015
3. Agricultural Commodity Markets - Fruits and Vegetables, An analysis of consumption, production and trade based on statistics from the Food and Agriculture Organisation (FAO)