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# STUDY ON THE POTATO MARKET AT THE LEVEL OF ROMANIA IN THE PERIOD 2012-2017

EDUARD ALEXANDRU DUMITRU<sup>1</sup>, ROXANA FRANZUTTI<sup>2</sup>

**Abstract:** *Potato is a basic food for the Romanian consumer, and not because of the special nutritional qualities, but rather the consistency it has. Given the low level of living, in Romania it is an extremely consumed food, both in the urban environment, but especially in the rural area. Exceptional storage qualities cannot be left aside, offering the possibility of consumption even in the cold season. In 2017 (28 million euros), there was an increase of 80.3% compared to the value of imports registered in 2012 (16 million euros).*

**Keywords:** *potatoes, vegetable sector, vegetables*

**JEL Classification:** *Q13, Q17*

## INTRODUCTION

Considering that the population of our country is in a sharp and continuous decrease, the need for vegetables is on an upward trajectory due to the increase of the standard of living, in conjunction with the disappearance of the family households, which represented an important source of assurance of the need for products. farm.

Romania has benefited from a whole series of financial aids, including those for the vegetable sector, both by granting direct payments and by the possibility of accessing European funds for investments at sector level. However, the investments were not sufficient to ensure the internal needs of fresh vegetables at country level, Romania being dependent on imports from countries such as the Netherlands, Turkey or Italy.

The problems that the vegetable producers claim, refer in particular to the fact that they do not have a safe market, there being periods when they failed to market part of the production, resulting in significant losses. The surfaces cultivated with vegetables register a marked decrease from year to year, being replaced by the surfaces cultivated in protected spaces, which have special advantages over the modality of cultivation in the field (Table no. 1.).

**Table no.1-The evolution of the area cultivated with potatoes at the level of Europe in the period 2012 - 2017 (1000 ha)**

Country	2012	2013	2014	2015	2016	2017	2017/2012 (%)
Poland	373,00	337,00	267,12	292,50	300,70	321,26	-13,9
Germany	238,30	242,80	244,80	236,70	242,50	250,50	5,1
France	154,10	160,96	168,02	167,26	179,00	192,22	24,7
Romania	229,27	207,61	202,67	196,07	186,24	171,92	-25,0
Netherlands	150,00	156,00	156,00	155,66	155,59	160,79	7,2

Source: Basic data Eurostat.eu, accessed 24.09.2018

Poland cultivated the largest area with potatoes in 2017, over 320 thousand hectares, but down from 2012 when it cultivated over 370 thousand hectares. Only France presents an upward evolution of the cultivated area, so that if in 2012 it was 154 thousand hectares, in 2017 it was over 192 thousand hectares, increasing by about 25% (Table no. 1).). In Romania, the trend is a downward one, due to the massive imports from countries like Poland, at a lower price, which led to the reorientation of farmers to other agricultural crops, because due to the low selling price imposed by competition they made this culture to be unprofitable for some of the farmers. It should be noted that the area cultivated in 2012 was 229 thousand hectares, while in 2017 it was only 171 thousand hectares, decreasing by 25% (Table no. 1).

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## MATERIALS AND METHODS

The research is based on the statistical data provided by the National Institute of Statistics, Eurostat and by TradeMap, which will determine the evolutions recorded by the surfaces, the productions, the average productions, the prices, the imports and the exports using the quantitative and qualitative research methods such as, and the method of comparison.

## RESULTS AND DISCUSSIONS

In 2017, the largest potato production was registered by Germany of 11.72 million tonnes, up 9.9% from the production obtained in 2012, when it was 10.66 million tonnes, and an average production of 46.8 t / ha (Table no. 2.).

**Table no.2-Evolution of potato production in Europe between 2012 and 2017 (1000 t)**

Country	2012	2013	2014	2015	2016	2017	2017/2012	Average annual production / ha (t / ha)
Germany	10.665,60	9.669,70	11.607,30	10.370,20	10.772,10	11.720,00	9,9	46,8
Poland	9.041,30	7.110,90	7.424,11	6.151,80	8.624,00	8.956,04	-0,9	27,9
France	6.376,06	6.953,28	8.054,52	7.114,49	6.959,61	8.529,36	33,8	44,4
Netherlands	6.766,00	6.577,00	7.100,00	6.651,69	6.534,34	7.391,90	9,3	46,0
UK	4.553,00	5.685,00	5.921,00	5.598,00	5.373,00	5.555,00	22,0	-
Turkey	4.822,00	3.955,00	4.175,00	4.763,00	4.751,00	4.801,00	-0,4	-
Belgium	2.811,50	3.428,00	4.121,45	3.665,46	3.404,64	4.290,74	52,6	-
Romania	2.465,15	3.289,72	3.519,33	2.699,68	2.689,73	3.127,52	26,9	19,5

Source: Basic data Eurostat.eu, accessed 24.09.2018

Although the cultivated area has decreased, the potato production in Romania increased by approximately 27%, so that if in 2012 it was 2.46 million tonnes, in 2017 it registered no less than 3, 12 million tonnes, due to higher average yields due to investments made in the last period (Table no. 2). We note that in Belgium the lowest price of potatoes was recorded, of only 6.47 euros / 100 kg, decreasing by 61% compared to 2012. Also, during the analyzed period, the average selling price of potatoes was only 11, 4 euros / 100 kg, the lowest of all the countries analyzed (Table no. 3.)

**Table no.3-The evolution of the price for potatoes in the period 2012-2017 (euro / 100kg)**

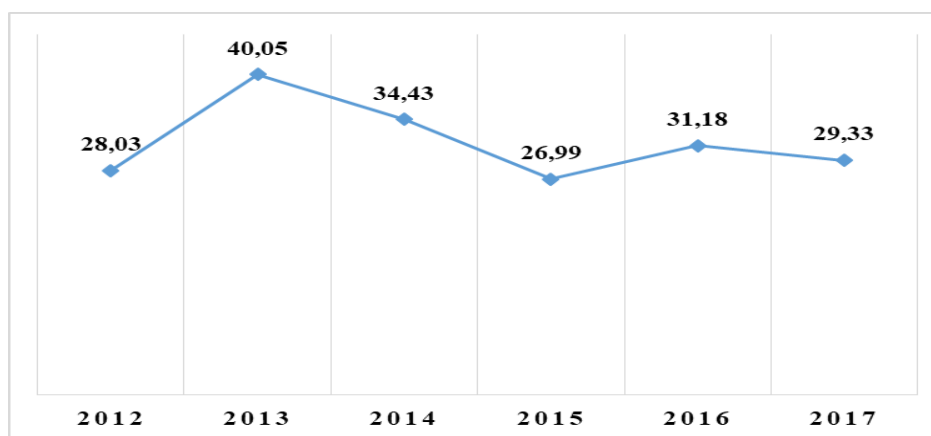
Country	2012	2013	2014	2015	2016	2017	2017/2012	Average annual production / ha (t / ha)
Cyprus	34,50	39,50	31,60	35,90	35,50	52,00	50,7	38,2
Greece	42,54	53,75	44,83	47,89	48,98	43,74	2,8	47,0
Italy	36,69	47,26	37,06	36,34	41,39	40,58	10,6	39,9
Malta	32,14	36,45	28,25	32,71	39,34	30,08	-6,4	33,2
Romania	28,03	40,05	34,43	26,99	31,18	29,33	4,6	31,7
Sweden	25,52	32,49	26,62	27,22	29,73	25,60	0,3	27,9
Denmark	16,29	23	24,13	25,58	24,92	25,00	53,5	23,2
Luxembourg	38,01	38,08	20,81	31,20	30,03	24,28	-36,1	30,4
Slovakia	21,03	26,06	26,77	24,72	25,73	23,18	10,2	24,6
Portugal	18,79	34,13	15,78	19,56	33,07	22,95	22,1	24,0
Austria	16,91	25,63	12,25	18,85	14,83	22,35	32,2	18,5
Hungary	15,88	27,11	19,26	21,60	22,94	20,89	31,5	21,3
UK	20,29	24,96	17,75	19,60	22,89	20,30	0,0	21,0
Bulgaria	19,02	23,91	20,37	19,76	19,40	19,74	3,8	20,4
Slovenia	15,52	32,67	16,45	13,11	16,43	18,10	16,6	18,7
Finland	16,03	23,81	14,61	17,74	20,02	17,97	12,1	18,4
Czech Republic	11,25	22,36	17,69	16,57	19,12	16,41	45,9	17,2
Croatia	15,82	22,43	15,54	14,39	16,53	16,03	1,3	16,8
Netherlands	14,6	19,62	10,19	11,50	17,13	15,83	8,4	14,8
Lithuania	11,39	17,24	15,43	11,52	14,09	15,45	35,6	14,2
Latvia	13,26	15,81	15,85	13,62	14,14	14,06	6,0	14,5
Poland	10,75	15,35	12,43	12,22	11,98	12,32	14,6	12,5
Belgium	16,81	14,79	2,73	9,96	17,36	6,47	-61,5	11,4

Source: Basic data Eurostat.eu, accessed 24.09.2018

Also, Poland recorded a low price of potatoes, occupying the second position, with a price of 12.32 euros / 100 kg, increasing compared to 2012 (Table no. 3).

We can see that Romania ranks among the countries with the most expensive potatoes in Europe, being 29.33 euros / 100kg. This can also be attributed to their quality at the expense of potatoes produced by other states (Table 3).

Figure no. 1.



Source: INSE basic data, accessed 24.09.2018;

Price evolution for potatoes grown in Romania (euro / 100kg)

The price of potatoes has an oscillating evolution, with significant variations, ranging from 26.99 euros / 100 kg to 40.05 euros / kg. This is due in large part to the total production obtained, but also to the decrease in potato consumption in Romania (Table no. 1).

Vegetables play an extremely important role in human nutrition, so they should not be lacking, as it is necessary that at least 70% of the composition of a meal, be made of vegetable food to maintain a healthy lifestyle.

Table no.4-Evolution of annual average consumption per capita (kg) between 2012 and 2017

Product	2012	2013	2014	2015	2016	2017	2017/2012
Potatoes (kg)	41,8	39,8	39,8	38,4	36,7	36,9	-11,7
Vegetables and canned vegetables (kg)	90,9	91,4	92,7	90,6	92,7	95,8	5,4
Cabbage is cooping	8,9	9,6	10,0	9,4	9,7	10,3	15,8
Tomatoes (red tomatoes)	12,0	12,1	12,1	12,6	13,1	13,1	8,8
Carrots and other edible roots	9,5	9,7	10,3	9,7	9,9	10,5	10,6
Dried onions	10,0	10,2	10,2	10,4	10,4	10,8	8,3

Source: INS data processing

The average annual potato consumption shows a decreasing trend, so that if in 2012 it was 41.8 kg / capita, in 2017 it registered a decrease with 11.7%, reaching 36.9 kg / capita . This decrease can be accounted for by several factors, such as the decrease of the population, the increase of the standard of living (the minimum wage on the economy increased from 700 lei in 2012 to 1450 lei in 2017), so that the consumer turned to other products considered more nutritionally rich (Table 4). The need for consumption of vegetable products is influenced on the one hand by the annual average consumption, and on the other hand it is influenced by the evolution of the population.

Table no.5-Need for consumption of vegetable products in the period 2012 -2017

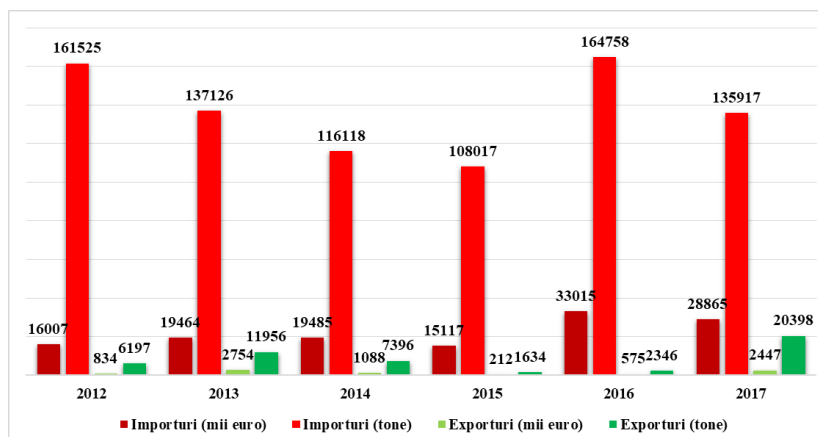
Product	2012	2013	2014	2015	2016	2017	2017/2012
	thousands of tons						%
Potatoes (kg)	839,2	796,2	793,5	762,3	726,1	724,4	-13,7
Vegetables and canned vegetables (kg)	1826,7	1829,9	1849,9	1801,4	1832,0	1881,9	3,0
Cabbage is cooping	178,5	191,7	198,7	186,3	191,4	202,0	13,2
Tomatoes (red tomatoes)	241,4	242,9	241,1	250,4	259,2	256,7	6,3
Peppers and lentils	101,3	94,9	97,0	100,4	103,2	103,7	2,4
Carrots and other edible roots	190,8	193,6	205,2	193,0	195,2	206,3	8,1
Dried onion	201,1	203,5	204,2	206,8	205,4	212,9	5,8

Source: own calculations

According to the table above we can see that in 2017, the consumption of potatoes has a value of 724 thousand tons (down 13.7% compared to 2012), vegetables and canned 1.9 million tons (in increase by 3% compared to 2012) or cabbage and cauliflower in quantities of 202 thousand tons (up 13.2% compared to 2012) (Table no. 5).

Regarding the import from the point of value of the potatoes, we observe an oscillating evolution during the analyzed period. However, it is noted that in 2017 (28, million euros), there was an increase of 80.3% compared to the value of imports registered in 2012 (16 million euros) (Figure no. 2.).

Figure no. 2.



Source: TradeMap basic data, accessed 03.10.2018

Potato import and export in Romania between 2012-2017

In the case of potato value export, there is an upward trend, with minimum values reached in 2015 of 212 thousand euros and a maximum reached in 2013 of 2.7 million euros (Figure no. 5.9.).

Romania imported potatoes in 2017 (in terms of value) from countries such as: Poland (7.5 million euros), Greece (5.7 million euros) and Germany (3.5 million euros) and exported to countries such as: Republic of Moldova (1.8 million euros), Poland (392 thousand euros) and Greece (109 thousand euros) (Figure no. 2.).

Table no.6-Comparative prices on potato import and export

Import	2012	2017	2017/2012	Export	2012	2017	2017/2012
	Euro / tonne	Euro / tonne	%		Euro / tonne	Euro / tonne	%
Total	99,1	212,4	114,3	Total	134,6	120,0	-10,9
Poland	51,5	137,2	166,4	Republic of Moldova	116,7	104,6	-10,4
Greece	146,5	312,3	113,1	Poland	166,7	212,9	27,8
Germany	120,9	235,7	94,9	Greece	-	224,3	-

\*Grand total

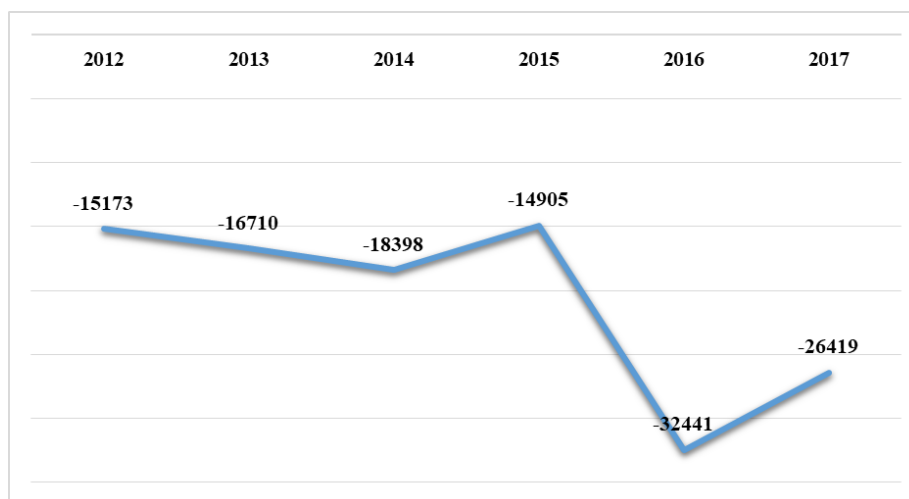
\*\* the first 3 importing / exporting countries

Source: TRADE MAP data processing;

According to the table above it is noted that the import price of potatoes increased by 114%, so that if in 2012 it was 99.1 euro / tonne, in 2017 it exceeded 200 euro / tonne, which due to the increased demand for this product (Table no. 6).

Also in the case of the export price of potatoes, a decrease of approximately 11% compared to 2012, with a price of 134.6 euros / tonne (Table no. 6).

Figure no. 3.



Source: Trade Map data processing;

#### The evolution of the trade balance with potatoes in the period 2012-2017 (thousands of euros)

It is noted that the highest deficit was registered in 2016, being 32.4 million euros. Due to higher production in 2017, the trade deficit registered a decrease reaching 26.4 million euros, down 18.6% (Figure no. 3).

### CONCLUSIONS AND RECOMMENDATIONS

The fluctuations recorded in the vegetable crops, are directly influenced by the surfaces on which they are cultivated, on the one hand, and on the other hand, these fluctuations are determined by the weather conditions that condition the satisfactory production of vegetables.

Although we cultivate significant areas (ranking in the first countries in terms of cultivated areas), when it comes to yields, they are low compared to other countries in Europe. Two of the main causes are: weather conditions, and the degree of technology available to Romanian vegetables, so that facilitating bank loans under favorable conditions, but also facilitating access to European funds can be two measures that help to remedy this problem by acquiring high performance equipment.

In Romania, the trend is a downward one, due to the massive imports from countries like Poland, at a lower price, which led to the reorientation of farmers to other agricultural crops, because due to the low selling price imposed by competition they made this culture to be unprofitable for some of the farmers. It should be noted that the area cultivated in 2012 was 229 thousand hectares, while in 2017 it was only 171 thousand hectares, decreasing by 25%.

Although the cultivated area has decreased, the potato production in Romania increased by approximately 27%, so that if in 2012 it was 2.46 million tonnes, in 2017 it registered no less than 3, 12 million tonnes, due to higher average yields due to investments made in the last period.

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The average annual potato consumption shows a decreasing trend, so that if in 2012 it was 41.8 kg / capita, in 2017 it registered a decrease with 11.7%, reaching 36.9 kg / capita . This decrease can be accounted for by several factors, such as the decrease of the population, the increase of the standard of living (the minimum wage on the economy increased from 700 lei in 2012 to 1450 lei in 2017), so that the consumer turned to other products considered more nutritionally rich.

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