

STUDY ON POTATO MARKET IN ROMANIA

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Abstract

This paper presents the evolution of potato market in Romania during 2010-2014 period of time. In order to realize a study to highlight essential aspects of this market, there were analysed certain indicators, as following: the area cultivated with potatoes; average production per hectare, potatoes consumption and so on. Statistical data used in this study were taken from the National Institute of Statistics. The research of potato market in Romania is mainly, a quantitative analysis, aiming at the fluctuations recorded from a period to another. The amendments in this market were determined by: the quality of seed potatoes used by farmers; domestic production realized in strong correlation with weather conditions and massive potatoes imports in this period. National potato market has a particular importance because Romanian people are great consumers. In accordance with official statistical data, Romania is on the 4th place regarding human potatoes consumption.

Key words: average consumption per capita, market, potatoes, total potatoes production, Romania

INTRODUCTION

The potato, due to the highly content of carbohydrates, vitamins, microelements and essential acids, is an almost complete element. It is considered a dietetic food of high digestibility.

For this reason, potato consumption is increased in strongly industrialized countries such as: the USA, France, Germany, United Kingdom of Great Britain and Northern Ireland, Japan and so on. [10]

Potatoes have a particular importance because they are being used for human consumption, animal feed and industry.

In Romania, potato market is the fourth one according to the value of vegetal farming after: corn market, vegetables and fruits one and grain one.

In Romania, due to favourable pedo-climatic factors and to the less intensive cultivation system, potatoes along with other vegetables, have the advantage of being tasty.

This aspect offers a great advantage to domestic producers, especially for those who aim to produce for export. [2]

Nowadays, major potatoes producers work almost 200 hectares, but the value of

production is not bigger than 1.5 million Euros/year. [14] An essential factor that influences the level of production, as well as the profitability one is represented by the seed potato. For this reason, in order to obtain a profitable potato production, farmers must annual purchase certified seed potatoes. [10]

MATERIALS AND METHODS

In order to realize the present study, there were processed and used data given by the National Institute of Statistics. There were also consulted various speciality materials chartered by the official site of the National Potato Federation in Romania, as well as other references in domain. The analysis of potato market in Romania was based on a series of relevant indicators, such as: area cultivated with potatoes; potatoes production both at total level and by categories; average potatoes production per hectare; basic and purchasing price and so on.

RESULTS AND DISCUSSIONS

The area attracted into culture represents an important element, influencing the quantity of

potatoes obtained by producers in Romania. In table no.1 is being presented an evolution of the area cultivated with potatoes, nationwide and at Macro-Regional level. One may easily observe that from 2010 to 2014, the cultivated surface registered variations. In 2014, only 198,540 hectares were cultivated with potatoes, representing a decrease in comparison with 2010 (241,349 hectares). At Macro-Regional level, in 2014 the largest cultivated area was into the 1st Macro-Region (89,985 hectares). The areas cultivated with

potatoes recorded decreases due to high expenditures of establishment of a hectare of potatoes (Lei 25,000-30,000) and adverse weather conditions. [8] Potato culture is a pretentious one and requires big efforts, especially for small producers. Big producers recorded more reduced expenditures, making investments in sorting and packaging stations. [7] According to official data, in Romania there is a reduced interest regarding the areas with seed lots. This situations has been driven by the lack of irrigation system. [8]

Table 1. The evolution of potatoes cultivated area, nationwide and at Macro-Regional level (ha)

Specification	2010	2011	2012	2013	2014	2014/2010 (%)
	Potatoes- total					
Romania	241,349	242,636	223,517	203,424	198,540	82.2
Macroregion one	103,778	111,160	98,891	88,265	89,985	86.7
Macroregion two	67,561	65,920	63,717	60,545	58,500	86.5
Macroregion three	21,313	20,925	19,998	20,411	18,123	85.0
Macroregion four	48,697	44,631	40,911	34,203	31,932	65.5
	Early, early mid and summer potatoes					
Romania	30,338	29,787	28,462	28,632	27,984	92.2
Macroregion one	3,226	2,950	2,975	3,750	3,457	107.1
Macroregion two	6,340	6,321	5,335	6,317	6,194	97.6
Macroregion three	10,414	10,653	10,673	11,396	9,994	95.9
Macroregion four	10,358	9,863	9,479	71,69	8,339	80.5
	Autumn potatoes					
Romania	211,011	212,849	195,055	174,792	170,556	80.8
Macroregion one	100,552	108,210	95,916	84,515	86,528	86.0
Macroregion two	61,221	59,599	58,382	54,228	52,306	85.4
Macroregion three	10,899	10,272	9,325	9,015	8,129	74.5
Macroregion four	38,339	34,768	31,432	27,034	23,593	61.3

Source: [9]; own calculations

Nationwide potatoes production is a key component for the market because the demand for this product is large, Romanian people being big consumers. The production depends mainly on potato seed quality and *Phytophthora infestans* attack.

In table no. 2 one may find the evolution of potatoes production, nationwide and at Macro-Regional level, during 2010-2014. The biggest potatoes production recorded in the analyzed period was in 2011 (4,076,570 tonnes). In 2014 there was recorded an increase of potatoes total production of 7.1% than in 2010. This was possible because of favourable weather conditions. [4] For “Early,

early mid and summer potatoes” category, one may observe an increase at national level in 2014 (+4.6%) than in the reference year, 2010. The most significant increase for this category was recorded in the 1st Macro-Region in 2014 in comparison with 2010 (+32.8 %). Concerning the “Autumn potatoes” category, there was an increase from 2,871,583 tonnes (in 2010) to 3,088,000 tonnes (in 2014). As to the production, Romania is situated on the 4th place within the European Union. However, our country is positioned far away from Germany, Holland and Poland in quantitative terms. [14]

Table 2. The evolution of potatoes production nationwide and at Macro-Regional level (tonnes)

Specification	2010	2011	2012	2013	2014	2014/2010 (%)
Romania	Potatoes– total					
	3,283,866	4,076,570	2,465,150	3,289,722	3,519,329	107.1
Macroregion one	1,451,768	1,954,093	1,002,572	1,524,622	1,749,311	120.4
Macroregion two	860,559	1,145,204	702,703	947,558	1,009,641	117.3
Macroregion three	341,077	356,656	286,363	349,144	312,577	91.6
Macroregion four	630,462	620,617	473,512	468,398	447,800	71.0
Romania	Early, early mid and summer potatoes					
	412,283	437,779	356,760	410,546	431,329	104.6
Macroregion one	38,313	46,431	38,637	54,043	50,890	132.8
Macroregion two	68,541	85,447	51,344	72,114	76,095	111.0
Macroregion three	184,016	183,093	163,301	201,931	193,365	105.0
Macroregion four	121,413	122,808	103,478	82,458	110,979	91.4
Romania	Autumn potatoes					
	2,871,583	3,638,791	2,108,390	2,879,176	3,088,000	107.5
Macroregion one	1,413,455	1,907,662	963,935	1,470,579	1,698,421	120.1
Macroregion two	792,018	1,059,757	651,359	875,444	933,546	117.8
Macroregion three	157,061	173,563	123,062	147,213	119,212	75.9
Macroregion four	509,049	497,809	370,034	385,940	336,821	66.1

Source: [9]; own calculations

In table, it is presented the evolution of average production at national and Macro-Regional level. In 2014, one may observe an increase of average potatoes production per hectares with 31.2% than in 2010. Regarding

the Macro-Regions situations, the 1st one recorded the biggest average production per hectare, in 2014 (19,363 Kg/ha) all over the analyzed period.

Table 3. The evolution of potatoes average production per hectare at national and Macro-Regional level (kg/ha)

Specification	2010	2011	2012	2013	2014	2014/2010 (%)
Romania	Potatoes– total					
	13,354	16,554	10,777	15,953	17,527	131.2
Macroregion one	13,893	17,502	10,056	17,185	19,363	139.3
Macroregion two	12,426	17,056	10,722	15,333	16,971	136.5
Macroregion three	15,051	16,049	13,306	16,570	16,706	110.9
Macroregion four	12,753	13,689	11,369	13,506	13,837	108.4
Romania	Early, early mid and summer potatoes					
	13,160	14,275	12,136	14,239	15,328	116.4
Macroregion one	11,559	15,384	12,654	14,207	14,588	126.2
Macroregion two	10,496	13,298	9,372	11,211	12,060	114.9
Macroregion three	16,829	16,368	14,492	17,663	19,303	114.7
Macroregion four	11,601	12,309	10,878	11,480	13,297	114.6
Romania	Autumn potatoes					
	13,382	16,873	10,579	16,234	17,888	133.6
Macroregion one	13,967	17,560	9,976	17,317	19,554	140.0
Macroregion two	12,626	17,455	10,845	15,813	17,553	139.0
Macroregion three	13,352	15,718	11,949	15,189	13,513	101.2
Macroregion four	13,064	14,081	11,516	14,043	14,028	107.3

Source: [9]; own calculations

On the opposite, the smallest average production per hectare was obtained in the 2nd Macro-Region in 2012 (10,056 Kg/ha).

According to official statistics, in 2012 there was recorded the smallest average production in the last 20 years. [11]

In table 4 there is presented the evolution of potatoes basic price in Romania, from 2010 to 2013. The basic price registered fluctuation a period to another. The highest price was recorded in 2013 (Lei 1,750 /tonne), and the lowest one was in 2012 (Lei 1,250/tonne).

For farmers is also very important the potato production cost. In 2014, producer's price was

Lei 0.4 per kg, being very similar to the cost one. Nowadays, due to it, some of the farmers in our country gave up to the seed import from other countries, using domestic one. This aspect has contributed to a decrease of seed acquisition costs and smaller farmers had the possibility to buy seed at a more reasonable price. [4]

Table 4. The evolution of potatoes basic price at national level, during 2010-2013

Specification	UM	2010	2011	2012	2013	2013/2010 (%)
Potatoes, including seed ones	Lei/tona	1,361	1,640	1,250	1,750	107.2

Source: [9]; own calculations

Potatoes average purchasing price is influenced by a series of factors as following: inner production, domestic consumption demand, external consumption demand and imported quantities. In table no. 5 is being presented the evolution of potatoes average

purchasing price, nationwide and by development regions. It is noticed a fluctuation of potatoes price: from year to year; one region to another and one season to another.

Table 5. The evolution of potatoes average purchasing price, nationwide and by development regions (Lei/Kg)

Specification	2010	2011	2012	2013	2014
	Early, early mid and summer potatoes				
Romania	1.17	1.07	0.78	1.14	0.86
North-West Region	-	1.51	0.61	1.28	0.66
Center Region	-	-	-	-	1.05
North-East Region	1.18	1.16	0.74	1.45	1.14
South-West Oltenia Region	1.18		1.01	1.43	1.22
	Autumn potatoes				
Romania	1.01	1.31	0.62	0.9	0.74
North-West Region	-	1.36	0.48	0.54	0.54
Center Region	-	-	-	-	0.73
North-East Region	0.96	1.27	0.6	1.1	1.05
South-West Oltenia Region	1.16	1.53	1.17	1.62	1.43

Source: [9]; own calculations

In winter, potatoes price increases and it is influenced by the growth of export demand. A relevant example is represented by the situation recorded in December, 2012, when producer prices doubled compared with November. This issue was determined by a higher demand from countries such as Germany, Slovakia, Austria and Hungary.

They realized small potatoes productions because of floods in 2012 and in order to cover the necessary of consumption, they resorted to massive imports. [13] During the analyzed period, nationwide there was registered a decrease from 1.17 RON/kg (in

2010) to 0.86 RON/Kg (in 2014), for "Early, early mid and summer potatoes" category. For "autumn potatoes" category, one may observe a decrease of average purchasing price in 2014 (0.74 RON/Kg) than in 2010 (1.01 RON/Kg). At regional level the smallest price recorded in 2014 was in North-West Region (0.66 RON/kg) for "Early, early mid and summer potatoes" category. In table 6 is presented the evolution of annual average potatoes consumption and production per capita in Romania. During 2010-2013 period of time there was recorded constant potatoes consumption. This high level led to

Romania's placement among the largest potatoes consumers. [12] At the European Union's level, our country is placed on the 4th position in this ranking after: Portugal (126.9 kg/capita/year), Ireland (118.7 kg/capita/year) and Great Britain (112.4 kg/capita/year). [5] The highest consumption per capita was recorded in 2012 (104.7 Kg), while the

smallest one was in 2013 (103.0 Kg). Concerning the potatoes production/capita one may observe that the biggest production was obtained in 2011 (202.3 Kg) and the smallest one, in 2012 (122.9 Kg). [3] A very important aspect is that Romania produces potatoes both for ensuring inner consumption and covering a part of external demand. [1]

Table 6. The evolution of annual potatoes consumption and production per capita at national level

Specification	UM	2010	2011	2012	2013	2013/2010 (%)
Romania	Average annual consumption per capita					
	Kg	103.9	103.3	104.7	103.0	99.9
	potatoes production per capita					
	Kg	162.2	202.3	122.9	164.6	101.4

Source: [9]; own calculations

Table 7 presents a dynamics of monthly average monetary costs per person for potatoes acquisition, both at national and Macro-Regional level. In accordance with official statistics, in 2014, monthly average expenditures per person for potatoes

purchasing were 3.5 RON, with 2.9% higher than the ones in 2010. At Macro-Regional level, one may notice that the greatest costs were recorded in the 3rd Macro-Region (5.1 RON) in 2011. The lowest costs were noticed in the 1st Macro-Region (1.9 RON) in 2012.

Table 7. The evolution of potatoes acquisition costs at national and Macro-Regional level (monthly averages/person)

Specification	2010	2011	2012	2013	2014	2014/2010 (%)
Romania	3.4	4.1	2.9	4.1	3.5	102.9
Macroregion one	2.1	2.8	1.9	2.7	2.4	114.2
Macroregion two	3.5	4.2	2.9	4.1	3.4	97.1
Macroregion three	4.4	5.1	3.8	5.3	4.5	102.2
Macroregion four	3.4	4.4	2.9	3.7	3.4	100

Source: [9]; own calculations

The evolution of potatoes economic accounts in agriculture are being presented in table 8. The value at potatoes producer's price registered significant fluctuations a period to another. It increased in 2010 with 16% compared with 2010. An issue that has a negative influence onto the potatoes sector in Romania is represented by the lack of subsidies on products, starting with 2011.

On the opposite, the smallest average production per hectare was obtained in the 2nd Macro-Region in 2012 (10,056 Kg/ha).

Concerning the export, in 2013 only 11.955 tonnes took the path of foreign markets. [11] During the analyzed period of time, there was noticed an increase of exports when potatoes

productions obtained in the Community countries were strongly affected by adverse weather conditions.

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In order to rise the exported potatoes quantity, certain producers are focused on cultivating sweet potatoes. This category of potatoes are similar to sugar beet and are consumed in big quantities in South Korea.

Table 8. Economic accounts in agriculture at national level during 2010-2014

Specification	2010	2011	2012	2013	2014
Potatoes, including seed ones	2. Economic Accounts for Agriculture (current prices – Lei millions)				
Value to producer's price	4,358.67	6,598.61	3,025.29	5,693.87	5,057.57
Subventions for products	3.69	-	-	-	-
Value to base price	4,362.35	6,598.61	3,025.29	5,693.87	5,057.57
	3. Economic Accounts for Agriculture (prices of previous year- Lei millions)				
Value to producer's price	3,909.98	5,472.02	3,969.17	4,067.05	5,900.5
Subventions for products	3.01	4.63	-	-	-
Value to base price	3,913	5,476.64	3,969.17	4,067.05	5,900.5

Source: [9]; own calculations

The cultivation of sweet potato presents economic considerable advantages for domestic producers because: the outlet is ensured and the sale price reaches Euro 3-4 per kg.[6]

CONCLUSIONS

Following the analysis of potato market in Romania, resulted aspects, such as:

- the area cultivated with potatoes was reduced in 2014 in comparison with 2010;
- the most significant potatoes production was obtained in 2011 (4,076 thousand tonnes)
- the average potatoes production per hectare increased in 2014 with over 30% than in 2010;
- the basic potatoes price recorded fluctuations from a period of time to another;
- the potatoes average consumption remains at a high level;
- potatoes imports are significant due to lower prices;
- exports are not as the production, but are being favoured when the production in Community countries is below the level of consumption necessary.

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