

## RESEARCH ON THE ROMANIAN WHEAT MARKET

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### **Abstract**

*The theme approached in this article aims knowledge of the evolution of the wheat market in Romania, from 2010 until 2015. To highlight the trends on this market, a number of specific indicators have been analyzed, such as total production of wheat; average production; prices; import; export. The following analysis was based on the empirical data provided by the National Institute of Statistics and Ministry of Agriculture and Rural Development. The analysis of the Romanian wheat market was performed especially from the quantitative perspective, capturing the changes recorded in the given interval. The wheat production increased in 2014 compared to the base year, contributing directly to the economic growth. A significant aspect is the growth of wheat exports compared to the imports. In conclusion, the wheat market is an important segment of our country's economy as it ensures the production needed to satisfy the human needs, but it also provides significant quantities for export.*

**Key words:** export, import, Romania, total production, wheat

### **INTRODUCTION**

According to the official data, worldwide, the wheat crop occupies the largest areas. Over time world wheat production registered a significant increase. This growth has been possible due to representative factors such as: cultivated areas and technological progress. [3]

An important characteristic for wheat is represented by its adaptability.

This allows the cultivation of wheat and obtaining favorable productions for farmers in different climate conditions. Wheat is on the one hand, the main raw material for the manufacture of bakery products, and on the other hand, it is used as animal feed. [5, 6]

It is appropriate to remind here the main nutrients that can be found in wheat: 65-70 % carbohydrates; 12-15% protein; 2-3% fat. Wheat is a basic product for consumption in Romania due to the food consumption model of the population and because of the low incomes. In our country the consumption of cereals and cereal products is higher compared to the EU average. [4]

Wheat holds a key place in the strategy of assuring the food security. This place is ensured by the fact that wheat has certain features such as contributing at obtaining

different bakery products; can be preserved for a long time; can be carried long distances without deteriorating. [8]

### **MATERIALS AND METHODS**

The statistical data underlying the realization of this research were provided by the National Institute of Statistics and Ministry of Agriculture and Rural Development. The main indicators considered in order to achieve the wheat market analysis were: the wheat acreage nationally and by region; total wheat production achieved; average production per hectare; average purchase prices on the domestic market, import and export. To highlight the essential aspects of the wheat market in Romania studies, journals and specialty books were consulted.

### **RESULTS AND DISCUSSIONS**

Wheat acreage nationwide is an important factor that directly influences the production realized by farmers. The evolution of the wheat cultivated area in Romania by development regions is presented in Table 1. It can be seen that in the period 2010-2014 wheat acreage recorded oscillations from one period to another.

Nationally the largest area cultivated was in 2010 (2,162,388 ha). According to data provided by the United Nations for Food and Agriculture, in 2010, in terms of wheat acreages, Romania took the sixth place at European level. This year, Romania has held a share of 3.9 % of the total of European wheat culture surfaces. The first places in the top of European countries with wheat cultivators in 2010, were the following countries: Russia, Ukraine, France, Germany, Poland. [9]

The smallest wheat acreage nationwide was recorded in 2011 (1,947,008 ha). In 2014, in Romania was recorded a decrease in wheat acreage (-2.3%), compared to 2010. In 2011, the surface cultivated with wheat nationwide occupied 36.8% of the total areas cultivated with cereal grains. In 2011, our country occupied the fifth place of all the Member States, in terms of cultured surface.

In the European Union it has been cultivated

an area of 25,596.6 thousand hectares. The first places in the ranking were occupied by: France (5,425.7 thousand ha); Germany (3,226.0 thousand ha); Poland (2,406.1 thousand ha); Spain (1,948.1 thousand ha). [13]

In 2013, our country was positioned in fourth place, in terms of cultivated area. This year the countries that have occupied the top places are: France; Germany; Poland. [7]

In 2014, Romania occupied the fifth position in the European Union regarding the wheat acreage. In terms of development regions it is found that South-Muntenia region owns the first place for wheat acreages. The largest area cultivated with wheat was recorded in 2012 (637,568 ha). [14]

At the opposite pole, the lowest wheat acreage was Bucharest-Ilfov region. In 2014, wheat crops in this region occupied an area of 18,359 ha. [2]

Table 1. Area cultivated with wheat nationwide and by development regions, 2010-2014 (ha)

SPECIFICATION	2010	2011	2012	2013	2014	2014/2010 (%)
ROMANIA	2,162,388	1,947,008	1,997,633	2,103,985	2,112,866	97.7
North-West Region	116,226	120,130	118,220	119,514	122,922	105.7
Center Region	92,715	99,074	76,299	90,046	91,308	93.9
North-East Region	156,158	137,276	182,914	152,736	158,401	101.4
South -East Region	528,222	421,563	466,165	515,020	507,013	95.9
South Muntenia Region	628,723	600,021	637,568	597,630	590,583	93.9
Bucharest –Ilfov Region	17,351	15,354	18,290	19,358	18,359	105.8
South-West Oltenia Region	403,705	350,049	311,349	387,170	382,036	94.6
West Region	219,288	203,541	186,828	222,511	242,244	110.4

Source: [12]; own calculations

Wheat production achieved nationally represents an important segment for cereals, because it contributes directly in providing the consumption needs for the population, and it is also used for animal feed. Wheat production has influenced the evolution of the selling price obtained on the internal plan.

The evolution of the wheat production for the period 2010-2014 is presented in Table 2. It must be remarked that although our country has favorable conditions for growing cereals grains respectively wheat, the production realized during the analyzed period recorded oscillations. In Romania, the production increased in 2014 by 30.5% compared to 2010. [1]

This increase in production is due to

increasing yields per hectare. It finds that most of the wheat production in the analyzed period was 7,584,814 tons (2014), and the lowest production was 5,297,748 tons (2012). In 2013, Romania was ranked sixth in the top of producing countries from the European Union after: France, Germany, UK, Poland and Spain. [3]

Romania was placed fifth in terms of production achieved in the year 2014. In this year it was given a more favorable rank compared to 2013. The most significant productions were obtained from: France, Germany, the United Kingdom and Poland. [14]

Regarding the production realized by region, it is found that South-Muntenia obtained the

highest production of wheat during 2010-2014. It got a maximum of production in 2011 (2,293,514 tons). In this region, in 2011, it was achieved 31.5 % of the total production of wheat in Romania. The lowest production was achieved in 2010 (1,647,875 tons). In

2014, the wheat production in South-Muntenia increased by 34.2 % compared to 2014. The lower productions are found in Bucharest-Ilfov region. In 2014, this region had an increase of 41.9 % compared to 2010.

Table 2. Production of wheat nationwide and by development regions, 2010-2014 (tons)

SPECIFICATION	2010	2011	2012	2013	2014	2014/2010 (%)
ROMANIA	5,811,810	7,131,590	5,297,748	7,296,373	7,584,814	130.5
North-West Region	339,408	434,917	350,895	455,524	472,422	139.1
Center Region	255,240	362,235	201,988	298,193	337,776	132.3
North-East Region	421,021	462,060	423,787	484,599	529,045	125.6
South -East Region	1,439,392	1,573,168	1,097,107	1,660,490	1,767,518	122.7
South Muntenia Region	1,647,875	2,293,514	1,701,501	2,254,405	2,212,388	134.2
Bucharest –Ilfov Region	52,186	58,209	52,046	80,805	74,085	141.9
South-West Oltenia Region	1,000,332	1,126,897	745,916	1,096,190	1,221,507	122.1
West Region	656,356	820,590	724,508	966,167	970,073	147.7

Source: [12]; own calculations

In Romania, according to data from the Ministry of Agriculture and Rural Development, wheat production is maintained through various forms of support, as it follows:

-*Direct payment schemes* (single area payment scheme, redistributive payment, payment for agricultural practices beneficial for the climate and the environment, payment for young farmers, simplified scheme for small farmers);

-*National transitional aids* - granted for the vegetal domain, in accordance with the annual budget allocated to the Ministry of Agriculture and Rural Development;

-State aid for the gas used in agriculture. [16]

The evolution of the average production per hectare of wheat nationally and by regions of development is presented in Table 3. A representative aspect of the wheat manufacturing sector is the yield increase per hectare. Nationally, in 2014, the average production of wheat increased by 33.5 % compared to 2010. The lowest yield was recorded in 2012 (2,652 kg/ha) and the highest yield was achieved in 2011 (3,663 kg/ha). Obtaining superior yields depends on many factors including: climate conditions; soil fertility; allocation of fertilizers; realization of agricultural works in the optimal periods; technical equipment of farmers, etc.

In 2014, in terms of average production per hectare of wheat, Romania is ranked at the bottom of the table. The first places were occupied by Germany (8,630 kg/hectare); United Kingdom (8,616 kg/hectare); Denmark (7,461 kg/hectare); France (7,361 kg/hectare); Sweden (6,803 kg/hectare); Czech Republic (6,498 kg/hectare), etc. [14] In 2014, our country achieved only 41.5% of the average production per hectare of wheat in Germany.

Price is an important indicator both for the producer and for the purchaser. In Romania, the prices of agricultural products do not provide manufacturers a reasonable profit.

The evolution of average purchase prices for wheat nationally and by regions of development is presented in Table 4. In the period 2010-2015, average prices of acquisition have evolved differently from one period to another.

Lowest price of the acquisition was recorded in 2010 (0.59 euro/kg), and the highest acquisition price was recorded in 2012 (0.91 euro/kg).

In 2013, wheat prices were lower than in 2012. This is partly due to the favorable conditions that determined the realization of a significant internal production and the declination of the international prices.

Table 3. Average production per hectare of wheat nationally and by regions of development, 2010-2014 (kg/hectare)

SPECIFICATION	2010	2011	2012	2013	2014	2014/2010 (%)
ROMANIA	2,688	3,663	2,652	3,468	3,590	133.5
North-West Region	2,920	3,620	2,968	3,811	3,843	131.6
Center Region	2,753	3,656	2,647	3,312	3,699	134.3
North-East Region	2,696	3,366	2,317	3,173	3,340	123.8
South -East Region	2,725	3,732	2,353	3,224	3,486	127.9
South Muntenia Region	2,621	3,822	2,669	3,772	3,746	142.9
Bucharest –Ilfov Region	3,008	3,791	2,846	4,174	4,035	134.1
South-West Oltenia Region	2,478	3,219	2,396	2,831	3,197	129.0
West Region	2,993	4032	3,878	4,342	4,005	133.8

Source: [12]; own calculations

At the Chicago Commodities Exchange the trading price for wheat was over 22 percent lower in 2013 compared to 2012. [10]

From 2012 to 2015 the price for wheat is on a

downtrend. By regions of development it appears an oscillation of prices from one period to another.

Table 4. Average purchase prices for wheat nationally and by regions of development (lei/kg)

SPECIFICATION	2010	2011	2012	2013	2014	2015	2015/2010 (%)
ROMANIA	0.59	0.88	0.91	0.85	0.76	0.74	125.4
North-West Region	0.63	0.94	0.95	0.82	0.72	0.73	115.8
Center Region	0.60	1.03	0.99	0.91	0.79	0.79	131.6
North-East Region	0.67	1.07	1.05	1.06	0.93	0.80	119.4
South -East Region	0.55	0.76	0.88	0.83	0.76	0.74	134.5
South Muntenia Region	0.74	0.99	1.02	0.89	0.81	0.81	109.4
Bucharest –Ilfov Region	0.60	0.83	0.92	0.86	0.79	0.76	126.6
South-West Oltenia Region	0.56	0.90	0.90	0.87	0.74	0.74	132.1
West Region	0.57	0.93	0.90	0.83	0.68	0.73	128.0

Source: [12]; own calculations

Foreign trade with wheat for 2010-2014 is presented in Table 5. It can be easily observed that Romania exported a superior net amount of wheat compared to the imports. The amount of wheat exported by Romania was placed on the markets of the European Union countries and also on the market of third countries. The main destinations of wheat exports from our country in season 2012/2013 were Spain (242,000 tons), Italy (194,000 tons) and Greece (102,000 tons). [15]

In 2013, Romania exported 9.6% of the total production of wheat outside the European Union. The average export price for this quantity was 183 euro/ton. It should be noticed that Egypt is a constant partner of Romania. Egypt has imported wheat in August 2013 (181 thousand tons), and in November 2013 the quantity imported in August was supplemented by an additional 60 tons. This amount was imported at a price of

224 euros/ton. [10]

We can observe an increase of the price due to higher prices on the domestic market in our country. Egypt has expressed interest in Romanian wheat also in the season 2014-2015, according to the official data published by the competent authorities. The largest amount was exported in 2014 (4,965,442.7 tons), while the smallest quantity exported was recorded in 2011 (1,568,734.0 tons). In 2014, the amount of wheat exported has doubled compared to 2010. According to official data, Romania is ranked tenth in the top for the wheat exporters worldwide, in season 2014-2015.

This season our country has exported 4 million tons of wheat. The quantity exported was lower compared to the one in the 2013-2014 season (4.9 million tons of wheat). Although Romania was in the top ten exporters of wheat in the world, it can't exert

influence in order to determine the selling price. This is due to the fact that our country exports a small amount of wheat compared with the United States (over 25 million tons), Russia (19.5 million tons), France (18.6 million tons), Germany (8.7 million tons). [17]

Regarding imports is noted that these are

smaller than the exports, which is a positive aspect for the Romanian economy. The smallest amount of wheat was imported in 2012 (531,827.0 tons), and the largest amount was in 2010 (719,954.0 tons). In 2014, the wheat imports decreased by 6.9 % compared to 2010.

Table 5. Foreign trade of wheat in the period 2010-2014 (tons)

SPECIFICATION	2010	2011	2012	2013	2014	2014/2010 (%)
Export	2,480,143.0	1,568,734.0	2,314,888.2	4,773,293.8	4,965,442.7	200.2
Import	719,954.0	559,138.5	531,827.0	679,827.7	670,919.4	93.1

Source: [16]; own calculations

The evolution of the value of wheat exports and imports is presented in Table 6. According to data from the Ministry of Agriculture and Rural Development, the total earnings from exports of wheat in 2014 increased by 152.8 % compared to 2010. The highest earnings from the wheat exports were made in 2013 (977,679.5 thousand Euros).

This is explained by the increase of the exported amount and also by the increase of the price for exports. The lowest earnings from exports of wheat were obtained in 2011 (309,768.9 thousand Euros). In 2014, these have been 116,079.9 thousand euros. The costs for the wheat imports rose by 3 % in 2014 compared with 2010.

Table 6. Export and import of wheat in the period 2010-2014 (thousand Euros)

SPECIFICATION	2010	2011	2012	2013	2014	2014/2010 (%)
Export	379,446.1	309,768.9	544,095.9	977,679.5	959,356.8	252.8
Import	112,444.4	124,235.5	118,663.4	122,897.1	116,079.9	103.2

Source: [16]; own calculations

In Romania, a great importance is granted for the growth of the grain production, given that the share for agriculture in GDP is 5-6 %. Cereal production directly influences the economic growth in our country. In these conditions, certain measures are imposed to increase the competitiveness of this sector:

- the development of the infrastructure for processing, storage and marketing of grain products;
- upgrade the processing of grain production by implementing new technologies;
- better utilization of cereal products regionally by creating opportunities for processing, storage and marketing cereal products;

- attracting local and foreign investments in order to process higher quality cereal products;
- efficient use of human resources and factors of production, etc. [11]

## CONCLUSIONS

After analyzing the wheat market in Romania have resulted the following:

- wheat acreage has reduced in 2014 (2.3%) compared to 2010;
- the total of wheat production increased by 30.5 % in 2014 compared to 2010;
- the average production per hectare of wheat

increased by 33.5 % in 2014, compared to the base year;

-the average purchase prices have evolved differently from one period to another . This was influenced by the achieved production and consumer demand;

-wheat exports were higher than imports, both in terms of quantity and value. In the period 2010-2014, Romania has achieved a positive trade balance for wheat, which is a positive aspect for the economy.

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