

The Romanian Grain Market: A Complete Analysis of the Evolution and Current State

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Abstract

The grain market in Romania comprises a variety of products, identical to those found on the world market. However, the Romanian grain trading system is undergoing a remarkable evolutionary change, the dimensions of which are unprecedented.

Romania's main cereal crop is maize, which accounts for more than half of national production. Of the rest, 40% goes to wheat and barley, and the last part brings together cereals grown in smaller quantities, such as rye, oats and rice.

The main objective of the paper is to study the mechanism of the cereal market, as well as to identify priority directions for improving this sector, the need to develop agricultural markets at regional level, being a response to the new challenges of the external economic environment.

Therefore, the aim of the paper is to develop recommendations on optimising grain production and sales efficiency based on the analysis of the current situation and identifying trends in agricultural development in the regions of Romania and includes quantitative research methods such as data analysis and observation by analyzing the current situation of grain market.

Key words: grain; production; trade balance; average consumption; price; cultivated area

Румънският зърнен пазар: пълен анализ на еволюцията и настоящото състояние

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Резюме

Пазарът на зърно в Румъния включва разнообразни продукти, идентични с тези, които се намират на световния пазар. Румънската система за търговия със зърно обаче претърпява забележителна еволюционна промяна, чиито размери са безпрецедентни.

Основната зърнена култура в Румъния е царевичката, която представлява повече от половината от националното производство. Останалите 40% отиват за пшеница и ечемик, а последната част обединява зърнени култури, отглеждани в по-малки количества, като ръж, овес и ориз.

Основната цел на статията е да се проучи механизмът на пазара на зърнени култури, както и да се определят приоритетни насоки за подобряване на този сектор, необходимостта от развитие на селскостопански пазари на регионално ниво, като отговор на новите предизвикателства на външната икономическа среда. Следователно целта на статията е да разработи препоръки за оптимизиране на производството на зърно и ефективността на продажбите въз основа на анализа на текущата ситуация и идентифициране на тенденциите в развитието на земеделието в регионите на Румъния.

Ключови думи: зърно; производство; търговски баланс; средно потребление; цена; обработваема площ

Introduction

Cereals are the most widespread agricultural crops in the world and grain grains are used in human nutrition, animal feed and as a raw material in industry.

Cereal cultivation occupies the largest areas in lowland areas, therefore vegetable production has a strong cereal character.

The cereals market in Romania comprises a variety of products, identical to those found on the world grain market, but have certain peculiarities.

Some of the most common features of the cereals market are the following:

Compared to other marketing subsystems, there is, overlooking, a dynamic relationship between grain supply and demand. The cereals market is a means of stabilising the market, covering products forming part of an economic sphere of great interest to the whole population, and establishing the most satisfactory balance between supply and demand can have a very important economic and social effect;

The Cereals Market in Romania is an indicator of the market, which can predict changes and directions of action for companies in its sphere of influence, but also for the commercial environment;

Buyer's behaviour can be less influenced by both emotional and impulsive factors, as buyers are dispersed and consumption is somewhat constant, regardless of income or price level, if consumption is rationally determined;

The cereal marketing lines are large, given that a growing number of specialized intermediate bodies are involved, for which the promotional activity usually has a small share, and international trade is dominated by large commercial enterprises, specialized in a particular field of activity (Manole, 2005).

Material and Methods

This paper presents in synthesis the most important results concerning the cereal production, trade, consumption, price and stocks, position in terms of market share in Romania and includes quantitative research methods – Data analysis & Observation by analyzing the current situation of grain market.

In this purpose, there were analyzed: production of maize, wheat, oats, rye and barley, cultivated area, exported and imported quantities and value, trade balance and consumption.

The study was based on the published data from literature and focused on the period between 2014 and 2019 collected from Tempo online Data Base, the National Institute of Statistics, INTACEN and TRADMAP.

Results and Discussion

Offer

After the Romanian market for cereals – corn, wheat and barley – recorded the lowest in the last four years (as in the case of the Paris stock exchange), in 2016 we witnessed a stabilisation of the market, characterized by a slight return of quotations compared to previous years, supports a Rodbun Grup report, which means a slight increase in feed costs for Romanian livestock farmers.

As can be seen from Table 1, during the period under review, maize, wheat, barley and oats are the cereals with the largest areas cultivated. As regards other cereals, such as rye, sorghum and rice, they are grown on restricted areas, i.e. 10,000 and 18,000 hectares, compared to the main cereals which are grown on areas between 520,000 and 2,668,000 hectares.

Areas cultivated with rye are increasingly decreasing from year to year, falling from 14,557

hectares in 2010 to 9,355 in 2019, representing a decrease of up to 34%. Regarding wheat, it has constant values, oscillating between 2,112,886 hectares in 2014 and 2,168,370 hectares in 2019, with the lowest values recorded in 2017. As for barley, it was cultivated in the smallest propor-

tion in 2018 with a total of only 250,797 hectares, and the year with the largest cultivated area was 2014 with a value of up to 515,996 hectares.

The largest area is cultivated with maize, which represents about 50% of the total areas cultivated during this period. The year with the largest

Table 1. Evolution of cereals-grown areas in the period 2014–2019 – hectares

Cultures	2014	2015	2016	2017	2018	2019
Rye	10168	9579	10461	9588	10264	9355
Wheat	2112866	2106591	2137731	2052917	2116154	2168370
Barley	515996	468453	295996	268826	250797	285065
Oats	179650	172353	170347	165757	161484	161188
Corn	2512809	2604475	2580975	2402082	2439842	2678504
Sorghum	18845	13486	9160	13993	15929	15712
Rice	12719	11106	9435	9125	8251	7427
TOTAL	5363053	5386043	5214105	4922288	5002721	5325621

Source: Own processing based on the data, available on the <http://statistici.insse.ro>

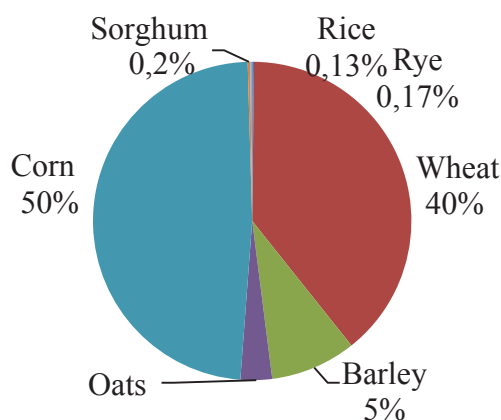


Fig. 1. Share of areas cultivated with main cereal crops in 2019

Source: Own processing based on the data, available on the <http://statistici.insse.ro>

Table 2. Evolution of grain production in the period 2014–2019 – tonnes

Cultures	2014	2015	2016	2017	2018	2019
Rye	24362	24319	25931	28158	28636	26182
Wheat	7584814	7962421	8431131	10034955	10143671	10297107
Barley	1085573	1072770	1267722	1271734	1276620	1340389
Oats	381626	347975	381359	407795	383722	361573
Corn	11988553	9021403	10746387	14326097	18663939	17432223
Sorghum	51543	31728	24413	54282	76309	60010
Rice	45159	49773	43635	43311	43355	39991
Total	21161630	18510389	20920578	26166332	30616252	29557475

Source: Own processing based on the data, available on the <http://statistici.insse.ro>

area cultivated with grain maize was 2019 with 2,678,504 hectares and the smallest area was cultivated in 2017, respectively 2,402,082 hectares.

Corn today occupies an important place for our agriculture and the trade in maize for sale is a successful one due to the fact that it is also used in human nutrition as well as for feeding animals and birds.

In terms of maize production at the regional level, in 2019, South-Muntenia is the region with the highest maize production, the quantity of maize in this region exceeding by a little 3,500,000 tonnes.

The evolution of maize production in this region in 2019 compared to 2014 was 31%, and the share of maize production compared to total production is 21%.

Although wheat production is well-sold-purchased well above that of maize production (and due to the use of maize as feed), the market of wheat is still well below the level recorded in other European countries.

The region with the largest areas cultivated with wheat is South-Muntenia followed with values quite close to the South-East region, of course this is due to the plains as a form of relief that predominates in these regions.

As we can see the South-Muntenia region has the highest wheat production in the last 6 years with a year-on-year evolution. Even though areas under this type of grain are decreasing, total production has a significant increase of 26% in 2019 compared to 2014. At the level of the South-East region we also have an increase in wheat production here, with the exception of 2012 as in the South-Muntenia region.

Given the area cultivated with barley at regional level in the period 2014–2019, production was also analysed. Thus, it can be observed that

all the south-east and South-Muntenia regions record the highest values.

The regions with the lowest barley yields are the same regions that recorded the smallest cultivated areas. Thus, the Bucharest-Ilfov Region recorded the lowest production in 2018 with only 11,077 tons and the highest production in 2014 with a total of 14,212 tons of barley. Here is recorded the lowest barley production in the total regions of the country. If the Region of South-Muntenia, the region with the highest barley production, 36% of total national barley production, the Bucharest-Ilfov region registers the lowest percentage, respectively 1%.

As regards the price, it can be observed that the price of wheat is below the price of barley and below the price of maize. Wheat decreases from 0.76 lei/kg in 2014 to 0.74 lei/kg in 2015 and 0.63 lei/kg in 2016, then to 0.73 lei/kg year-on-year.

For barley, it drops from 0.9 lei/kg in 2014, continues to decrease to 0.74 lei/kg in 2017, and then increases to 0.87 lei/kg in 2019.

Corn keeps its prices somewhat consistent, falling from 0.76 lei/kg in 2014 to 0.68 lei/kg in 2017, increasing to 0.71/kg in 2018 and 0.72 lei/kg in 2019.

Demand

Demand is a component of the market, which together with supply define the content of the market concept, which constitute two interdependent subsystems.

In theory, demand means the quantity of a particular commodity that the buyer intends and is willing to purchase, within a certain period of time, and at different price levels (Sin, 2005).

In the figure above we can see the fluctuations in the average consumption of cereals and cereal products per capita in the period 2014–2019, the

Table 3. Price fluctuation – lei/kg

lei/kg	2014	2015	2016	2017	2018	2019
Corn	0.76	0.76	0.74	0.68	0.71	0.72
Wheat	0.76	0.74	0.63	0.65	0.68	0.73
Barley	0.9	0.89	0.82	0.74	0.8	0.87

Source: Own processing based on the data, available on the <http://statistici.insse.ro>

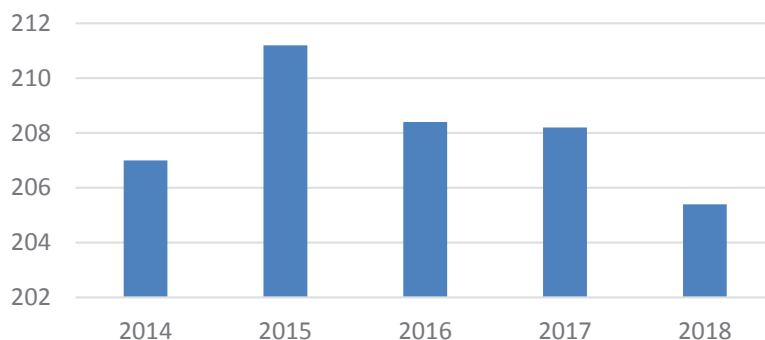


Fig. 2. Average annual consumption per inhabitant of cereals and cereal products – kg
 Source: Own processing based on the data, available on the <http://statistici.insse.ro>

Table 4. Average monthly consumption of corn flour and flour per person, by regions – kg

Development regions	Periods									
	Quarter I 2019		Quarter II 2019		Quarter III 2019		Quarter IV 2019		Quarter I 2020	
Region	Corn flour	flour	Corn flour	flour	Corn flour	flour	Corn flour	flour	Corn flour	flour
North-West	0.281	0.845	0.277	0.886	0.318	0.822	0.282	0.852	0.425	1.274
Center	0.343	0.638	0.313	0.621	0.375	0.632	0.367	0.624	0.556	0.986
North-East	0.485	0.538	0.399	0.644	0.391	0.46	0.361	0.475	0.479	0.643
South-East	0.514	0.514	0.537	0.648	0.452	0.577	0.495	0.591	0.662	0.722
South-Muntenia	0.454	0.352	0.495	0.437	0.469	0.328	0.537	0.459	0.724	0.805
Bucharest- Ilfov	0.393	0.458	0.328	0.442	0.325	0.399	0.351	0.436	0.386	0.442
South-West Oltenia	0.369	0.373	0.34	0.433	0.311	0.337	0.344	0.468	0.411	0.625
West	0.392	0.767	0.398	0.719	0.373	0.799	0.328	0.836	0.481	0.996

Source: Own processing based on the data, available on the <http://statistici.insse.ro>

maximum consumption was reached in 2015 in the amount of 211 kg/cap/year, and the minimum consumption is in 2018 reaching the amount of 205 kg/cap/year.

The average monthly consumption of flour per person is around 0.5 kg in most regions of Romania, which is decreasing nationally, regardless of the region analyzed. In the Northwest is the highest consumption of flour, followed by the North-East region in the first quarter of 2020.

In the South-Muntenia region, it is the highest average monthly consumption per person of dough in the first quarter of 2020, here we even have a 50% increase compared to the first quarter of 2019. Overall consumption has a slight growth trend in the first quarter of 2020 compared to the first quarter of 2019.

Foreign Trade

According to the data presented, the quantity of wheat exported is about 4 times that imported and the value is up to 7 times higher.

According to the data in Table 5, we can see that the amount of grain exported has increased from 10,491,217 tonnes in 2015 to 13,005,494 tonnes in 2019, as well as the value of exports, increased from EUR 1,971,321 in 2015 to EUR 2,588,109 in 2019.

On closer examination, we can see that the value of one kilo of grain for export decreases from year to year: 2012 – 0.00029 euro/kg; 2013 – 0.00027 euro/kg; 2014 – 0.00025 euro/kg; 2015 – 0.00019 euro/kg; 2016 – 0.00017 euro/kg, 2017 and 2018 – 0.00018 euro/kg; 2020 – 0.00020 euro/kg

Table 5. Import/Export of grain

Year	Import		Export		Commercial balance	
	unit	tons	tons	euro		
2015		2.874.608	10.491.217	525.364	1.971.321	1.445.957
2016		3.283.187	11.798.520	576.489	2.056.143	1.479.654
2017		2.235.039	11.115.485	424.112	1.966.822	1.542.710
2018		1.472.296	11.956.812	322.269	2.158.053	1.835.784
2019		1.755.090	13.005.494	397.813	2.588.109	2.190.296

Source: Own processing based on the data, available on the <http://intracen.org/>

According to the data analyzed we can see that the amount of grain imported has decreased from 2,874,608 in 2015 to 1,755,090 in 2019, but also the value of imports from 525,364 euro in 2015 to 397,813 euro in 2019. On closer analysis we can see that the value per ton of wheat on import increases from year to year, as follows: 2015 and 2016 – 0.00018 euro/kg, 2017 – 0.00019 euro/kg, 2018 – 0.00022 euro/kg, 2019 – 0.00023 euro/kg.

Wheat produced in Romania is exported to other countries in the form of feed wheat because it does not meet the standards for the manufacture of bread. Thanks to these standards for the manufacture of bread our country has to import non-cash wheat from the manufacture of bread.

Trade balance

The trade balance is the difference between a country's imports and its exports over a certain period of time. The trade balance is the largest component of the country's balance of payments. A country that imports more goods and services than it exports has a trade deficit. On the other hand, a country that exports more goods and services than it imports has a trade surplus. The formula for calculating the trade balance may be simplified for imports minus exports.

It is found that Romania had a favorable trade balance throughout the period under review, due to the higher value of exports than imports, which is also supported by an increase in production.

Conclusions

Following this study, the following conclusions emerge:

- The largest area is cultivated with maize, which represents about 50% of the total areas cultivated during this period.

- Maize currently occupies an important place for our agriculture and the trade in maize for sale is a successful one due to the fact that it is also used in human nutrition as well as for feeding animals and birds.

- Barley may be used as feed, in food, beer fermentation and others. In recent decades, the importance of barley has decreased, so the cultivated area has narrowed up to 3–4 times.

- As regards the price, it can be observed that the price of wheat is below the price of barley and below the price of maize. Wheat decreases from 0.76 lei/kg in 2014 to 0.65 lei/kg in 2018, then increases to 0.73 lei/kg in 2019. Corn was the same evolution as wheat, decreased from 0.76 lei/kg in 2014 to 0.68 lei/kg in 2017.

- The average monthly consumption of flour per person is around 0.5 kg in most regions of Romania. In the Northwest is the highest consumption of flour, followed by the Western region at the level of the first quarter of 2020.

- The average monthly consumption of corn flour per capita in the Bucharest-Ilfov region decreases slightly from the first quarter of 2019 until the first quarter of 2020.

- In general, Romania is a state with a favourable trade balance, this being due to a continuous increase in the value of grain exports from year

to year, which is also supported by an increase in the level of production.

In order to make this sector more efficient, specialized studies recommend the following:

- Investments for retrofitting and modernization;
- Removing the current technical and productive gaps;
- Enhancement of organic cereal products;
- Increasing the quality of cereals;
- Resizing Romania's image as a real power on the international market.

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