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Ion CERTAN[1], Dan-Marius VOICILAȘ[2,3], Camelia GAVRILESCU[2], Irina-Adriana CHIURCIU[1]

[1] *University of Agronomic Sciences and Veterinary Medicine, Bucharest*
[2] *Institute of Agricultural Economics, Romanian Academy, Bucharest*
[3] *Hyperion University, Faculty of Economic Sciences*
ion.certan@qlab.usamv.ro / dmvoici@yahoo.com / cami_gavrilescu@yahoo.com / chiurciu.irina@manaagusaamv.ro

DYNAMICS OF THE CEREAL MARKET IN THE BLACK SEA BASIN – ROMANIA'S POSITION

ABSTRACT

The paper presents the dynamics of the grain market in the Black Sea Basin, a rather important subject, given the major challenges posed by the Russian-Ukrainian conflict, the international economic crisis, globalisation, or climate change. The Black Sea Basin has an important role not only at European level, but also in international grain trade. The analysis focuses on the Romanian grain trade. The main objective of the paper is to provide a global picture of the changes in the grain trade in this area and the contribution of the Romanian market.

The applied methodology is based on statistical analysis of the grain trade flows using series of data from the Romanian National Institute of Statistics and the Ministry of Agriculture and Rural Development, from EUROSTAT and FAO databases, as well as from statistical institutes or other countries in the region. Qualitative analysis based on interviews and opinions of experts in the field was also used. The results show that the Romanian grain market has had positive evolutions. The current geopolitical context and the climate change have significantly influenced the dynamics of grain trade, in Romania and in the Black Sea Basin as well.

Key words: cereals, trade, Black Sea Basin, Romania.

JEL Classification: F14, O57, Q18, Q17.

I. INTRODUCTION

Nowadays, the international cereal market is undergoing a dynamic evolution. The international economic, financial and political situation, the various challenges in Eastern Europe, such as the war in Ukraine, have a direct influence on trade, agri-food trade in general and cereal trade in particular.

The analysis carried out starts from several key questions: "Why are we analysing the Black Sea region?", "Why the cereal market?", "How will the war in Ukraine influence the cereal market in the selected region?".

The analysed region is a vast area and includes several very important cereal producers and traders on the international market (Figure 1), such as Russia,

Ukraine, Turkey or Romania. The situations occurred in recent years have put pressure on the agro-environmental policies of the future. All member states are thinking about efficient agriculture, but it seems that once again this should aim at food security for the population in the first place.

Source: Russia and Ukraine sign deal to resume grain exports in Black Sea (cnbc.com).

Figure 1. Cereals producing and exporting countries in the Back Sea Basin.

To answer the above questions, the article analyses the Romanian cereal supply, the regional cereal market, current challenges and perspectives, ending up with some conclusions and reflections.

2. STATE OF KNOWLEDGE

The cereal market has often been analysed by various authors from Romania and other countries. Since it is an important crop production sector, it seems useful to delve deeper into this topic. The cereal market will be analysed from another perspective, that of international cereal trade in the Black Sea Basin in the context of the war in Ukraine; the present paper is an extension of the analyses carried out in authors' previous works (Voicilaș, 2013, 2014; Gavrilescu & Voicilaș, 2014; Voicilaș & Certan, 2019; Voicilaș & Kalaman, 2020; Chiurciu *et al*., 2022, 2023). Pevious research by other Romanian authors was also used for this study (Gîndu *et al*., 2007; Sima, 2009; Popescu *et al*., 2022; Alexandri & Bucur, 2022; Creţu, 2023).

In addition to the publications by local authors, various sources of foreign authors were used (Riabko, 2014; Gyarmati, 2017; Ivanenko, Porudeyeva & Andriushchenko, 2020).

These literature sources were supplemented by publications of statistical institutes and reports of international institutions (European Commission, 1999, 2024; Black Sea Trade&Development Bank, 2023).

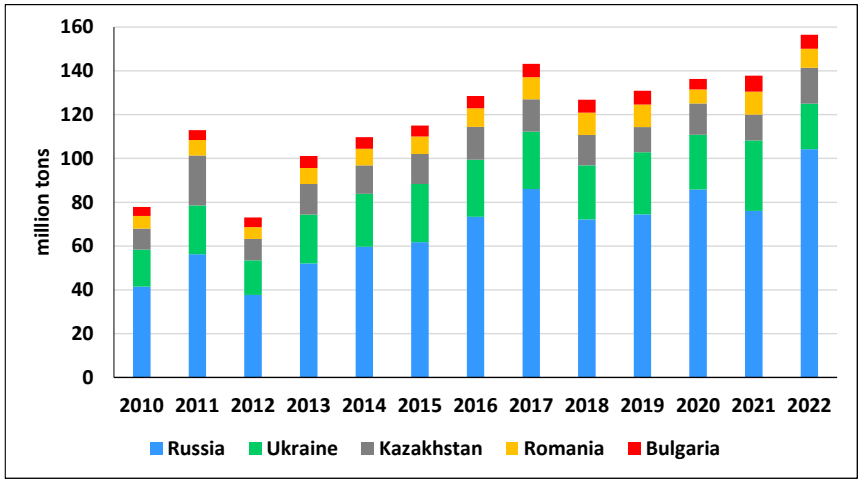
3. MATERIAL AND METHOD

The methodology used is based on statistical analysis of cereal trade flows, using data series from the Romanian National Institute of Statistics and the Ministry of Agriculture and Rural Development, EUROSTAT, USDA, OECD and FAO databases, as well as from statistical institutes from other countries in the region. Comparisons were made between countries. Qualitative analyses based on interviews and opinions of international experts in the field were also used.

4. RESULTS AND DISCUSSIONS

In Romania, in the last two decades, the areas under cereals have remained relatively constant (yet slightly decreasing). The same cannot be said about the productions and average yields per hectare, which have experienced great volatility, mainly due to weather conditions, more precisely to the lack of rainfall. As a general trend, an increase in these productions has been noted, for maize, wheat and barley in particular.

The analysis of wheat production in the Black Sea Basin, based on statistical data, shows who the main producers are (Figure 2).

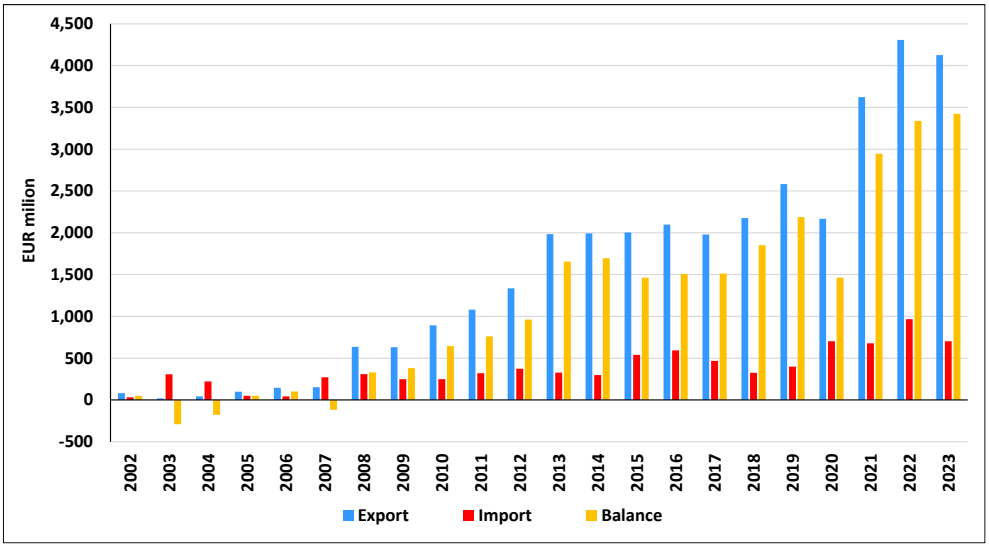


Source: Calculations using FAOSTAT data.

Figure 2. Main wheat producers in the Black Sea Basin (2010–2022).

Russia is the main producer in the Black Sea Basin, followed by Ukraine and Kazakhstan. Until the invasion of Ukraine, Russia maintained its leading position in wheat production in the region. Romania has a small share compared to the first two countries, but with constant developments. Bulgaria is the 5th producer in the region, but with significantly lower productions, even compared to Romania.

Following Romania's performance in cereal production, its supply on international markets has been increasing. Figure 3 shows the evolution of Romania's cereal trade in the last two decades.



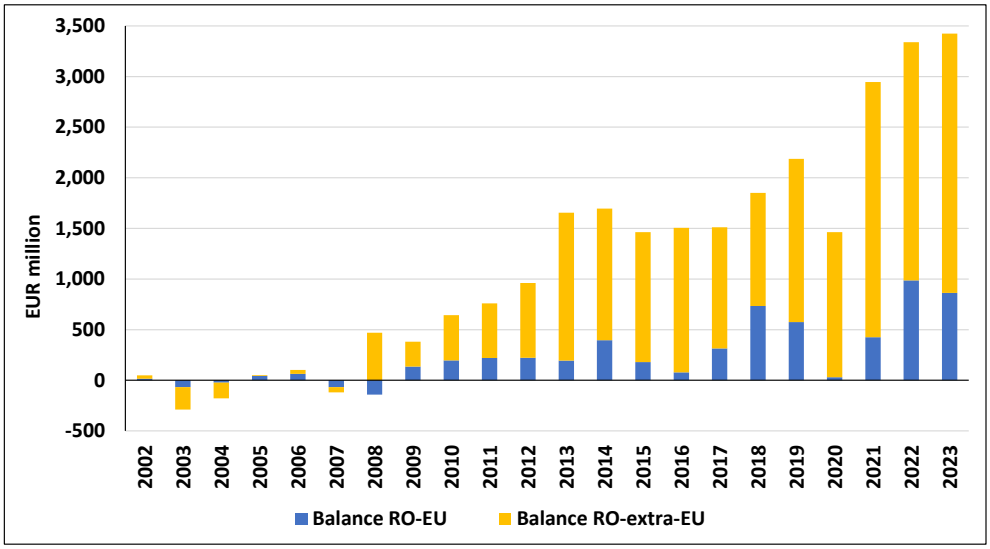
Source: Author's calculations using Eurostat data.

Figure 3. Romanian cereals trade (2002–2023).

While in early 2000s, Romania's cereal trade, in value terms, was poorly represented on international markets and there were several years with a negative trade balance, after the accession to the European Union (EU) its positive effects were also reflected in grain trade. Exports have been constantly increasing (except for those years with severe drought), reaching a peak in recent years (2021–2023), after the start of the conflict in Ukraine. Even though imports also increased in the analysed period, the cereal trade balance has been permanently positive since 2008.

When analysing the cereal trade balance by main destinations, statistical data show that it has been permanently positive since 2009, both in relation to EU member states and in relation to non-EU countries (Figure 4).

After joining the EU, except for the first 2 years (2007–2008), Romania had a positive trade balance in cereals with EU member countries. However, a significantly larger trade surplus in cereals with non-EU countries is noted.



Source: Author's calculations using Eurostat data.

Figure 4. Romania's trade in cereals (2002–2023).

Comparing cereal production with exports, one can notice that the share of exports in production has significantly increased in the last two decades (Table 1).

Table 1

Share of exports in cereal production (%)

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
6	1	2	5	8	8	20	31	32	23	42	44	46	54	54	41	38	46	62	57	67	76

Source: Author's calculations using Eurostat data.

Thus, while prior to EU accession. the share of exports did not exceed 8%, in recent years, especially after 2015, it exceeded 50%, to reach 76% in 2023. This evolution is closely related to the increase in both total production and exports.

Since the main reason for the positive evolution of the trade balance is export to non-EU countries, it is also important to see the breakdown by main destinations in 2010 and 2023 (Table 2).

In both analysed years, South Korea was the main destination. While in 2010 other important partners were Saudi Arabia, Turkey and the Philippines, in 2023 exports shifted towards Egypt, Algeria and Morocco. These last three countries are major importers of cereals, especially from the Black Sea Basin, mostly from Ukraine and Russia.

Table 2

Extra-EU destinations for the Romanian cereal exports

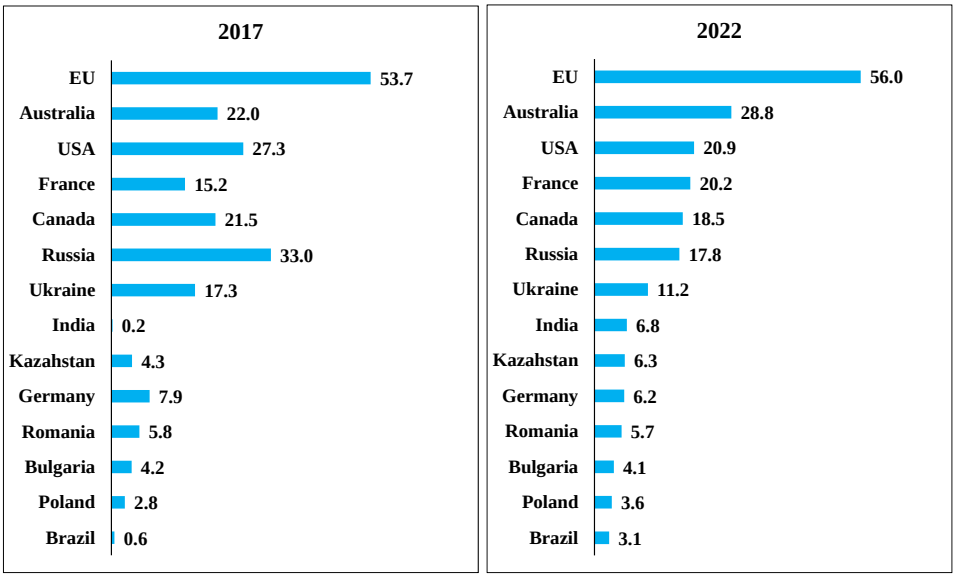
2010				**2023**			
	1000 tons	***% in extra-EU***	***% in total exports***		**1000 tons**	***% in extra-EU***	***% in total exports***
TOTAL EXPORT to extra-EU	**2,725**	***100.00***	***50.60***	**TOTAL EXPORT to extra-EU**	**11,602**	***100.00***	***73.22***
South Korea	507	*18.59*	*9.41*	South Korea	1,583	*13.64*	*9.99*
Saudi Arabia	335	*12.29*	*6.22*	Egypt	1,428	*12.31*	*9.01*
Turkey	331	*12.16*	*6.15*	Algeria	1,335	*11.51*	*8.43*
Philippines	270	*9.92*	*5.02*	Saudi Arabia	1,144	*9.86*	*7.22*
Bangladesh	213	*7.82*	*3.96*	Morocco	984	*8.48*	*6.21*
Syria	207	*7.59*	*3.84*	Jordan	811	*6.99*	*5.12*
Israel	188	*6.91*	*3.50*	Iran	724	*6.24*	*4.57*
Libya	130	*4.78*	*2.42*	Sri Lanka	446	*3.84*	*2.81*
Tunisia	99	*3.63*	*1.84*	Bangladesh	380	*3.28*	*2.40*
Vietnam	77	*2.84*	*1.44*	Pakistan	338	*2.91*	*2.13*
Thailand	72	*2.64*	*1.34*	United Arab Emirates	288	*2.48*	*1.82*
Lebanon	66	*2.43*	*1.23*	Turkey	244	*2.10*	*1.54*
Egypt	53	*1.96*	*0.99*	Tunisia	239	*2.06*	*1.51*
Jordan	41	*1.51*	*0.76*	Mauritania	181	*1.56*	*1.14*

Source: Author's calculations using Eurostat data.

At global level, if wheat and maize are analysed separately, as the most important produced and traded cereals, the main wheat exporters are presented in Figure 5.

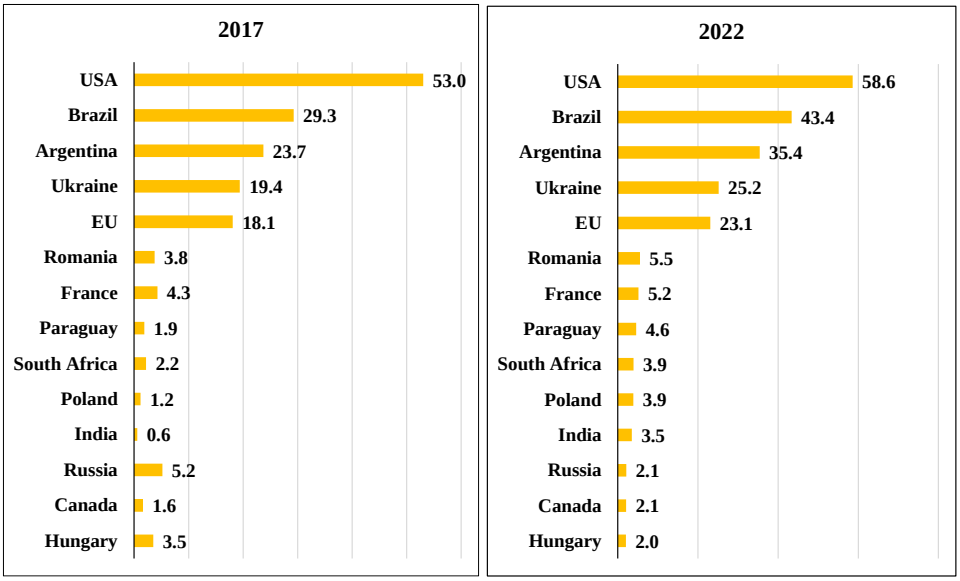
In both 2017 and 2022, the top 14 global exporters include countries from the Black Sea Basin: Russia, Ukraine, Kazakhstan, Romania and Bulgaria. These countries accounted for around 60% of global exports in 2017 and around 45% in 2022. These values show the importance of the region on a global scale, but also the negative influences of the conflict in Ukraine, especially in terms of the quantities exported by Russia and Ukraine.

As for maize, the largest exporters are those presented in Figure 6.



Source: Author's calculations using Eurostat data.

Figure 5. Wheat – top world exporters (million tons).



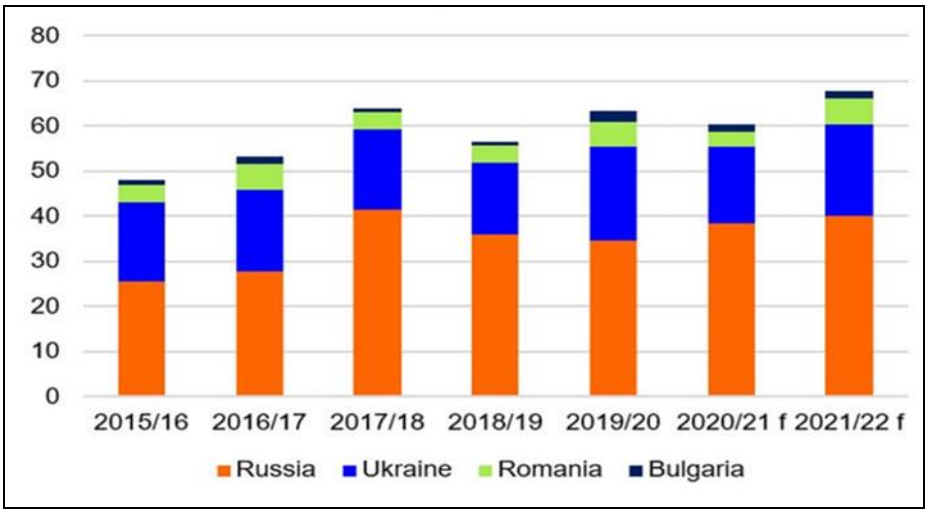
Source: Author's calculations using Eurostat data.

Figure 6. Maize – top world exporters (million tons).

For maize, the most important exporters in the Black Sea Basin are Ukraine, Romania and Russia, regardless of whether we refer to 2017 or 2022. In the

analysed years, there was an increase in Ukrainian exports and a decrease in Russian exports due to the restrictions imposed by the war. Romania remained in a similar position (ranking 6th in the world) in this period, with approximately 4–5% of world exports.

Analysing only the most important grain-producing countries in the Black Sea Basin, we focus on a few countries that are formidable international competitors as cereal exporters, namely Russia, Ukraine, Romania and Bulgaria. Of these, Russia and Ukraine play an important role in world exports, while Romania and Bulgaria have a secondary role (Figure 7).



Source: Grab (2021).

Figure 7. Wheat exports from the Black Sea Basin (million tons).

One can say that there is increased competition between the largest consumers in the markets of North Africa and the Middle East; they import mainly from Ukraine and Russia, and to a lesser extent from Romania. Until the outbreak of the war in Ukraine, Russia was the geographical leader.

5. CONCLUSIONS

The prospects for the cereal market in the analysed region are mentioned in an OECD-FAO report (2021), even though it was prepared before the outbreak of the conflict in Ukraine. Many of the statements in the report are still valid and some of them are mentioned below. According to the OECD-FAO report, forecasts say that over 50% of the increase in global wheat production will come from India, Russia and Ukraine. For other secondary cereals (barley, oats, rye, sorghum, millet, etc.),

Russia, Ukraine, Ethiopia and India will be the key producers. A 21% increase in world cereal trade is estimated, to reach 542 million tonnes by the year 2030.

Russia surpassed the EU in 2016, to become the world's largest wheat exporter. It is expected to strengthen its lead over the forecast period, after the end of the conflict with Ukraine. It is likely to account for 22% of global exports by 2030.

The EU, Australia and the Black Sea region are also expected to continue to be the main exporters of other minor grains.

Compared to the current military conflict between Russia and Ukraine, the impact of the COVID-19 pandemic on grain markets has been relatively modest.

The harvested area in developed countries is expected to increase by 4 million hectares due to increases in cereal areas in Russia, Ukraine and Australia.

In the Black Sea region (Russia, Ukraine and Kazakhstan), additional wheat areas will account for more than 60% of the net global area increases. No significant area increases are forecast for Romania.

For other coarse grains, the Black Sea region will contribute by one fifth to the increase in global production, mainly through barley and oats, with higher production in Russia (+3.4 million t) and Ukraine (+2 million t).

Production in the major wheat-producing countries of the Black Sea region (Russia, Kazakhstan and Ukraine) has been volatile over the past decade, mainly due to yield fluctuations.

Russia and Ukraine can play a role in these markets, with higher quality, but will be more competitive in other soft wheat markets, such as the Middle East and Central Asia, due to proximity reasons.

For other coarse grains, the top five exporters will remain the EU (mainly through the contribution of France, Germany and Romania), and Australia, Russia, Ukraine and Canada from extra-EU.

In conclusion, it is clear that the implementation of trade agreements aims to facilitate and increase trade between partners and is expected to benefit all partners by expanding exports. But differences in efficiency and scale of production, as well as changes in supply and demand, whether in partners or in international markets, can generate different outcomes. Moreover, unexpected events (such as the Covid crisis or the war in Ukraine) are likely to have further disruptive effects on trade flows.

Russia and Ukraine have maintained their leading position in cereal production (especially in wheat and maize) in the region. Even though there have been major restrictions on exports, these countries have remained in the top world grain exporters, with a significant evolution, from Russia in particular.

More than 50% of world exports came from the countries of the Black Sea Basin, which shows the importance of the region on a global scale, even in the conditions of the war in Ukraine.

Considering the cereal production and trade of Russia and Ukraine, Romania seems to have a secondary role. However, Romania has become an important country in regional geopolitics, not only through its constantly growing production

and trade, but also through its ports on the Danube and the Black Sea, which play an important role in the regional configuration, through exports that are made not only from domestic production, but also from the production of other EU states, or countries that are not in the EU but export cereals (Serbia), or production from Ukraine.

Despite all the present barriers, Russia, Ukraine and the EU (through its main cereal producers, including Romania), will play an important role in world production and export in the period following the end of the conflict in Ukraine.

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