

The Competitiveness of The Romanian Agri-Food Sector in Comparison with European Countries

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Abstract

The competitiveness of the Romanian agri-food sector benefits from the significant agricultural potential of our country, characterized by a favorable climate and fertile soils, which offer the possibility of diversifying cultivated agri-food products and, implicitly, the complex satisfaction of consumer needs. Unfortunately, in Romania, most of the factors that can contribute to increasing agri-food competitiveness are not exploited to their true potential. Among the main elements on which the effort for development, modernization and growth should be focused, with an impact on Romanian agriculture, are investments for innovation, advanced technological solutions, infrastructure, synergy between the actors involved, penetration of foreign markets, etc. The objective that Romania must have in mind is to improve its positioning compared to European countries, in terms of average production per hectare. In order to determine where Romania stands in European statistics, we processed the primary data from the Eurostat databases for the years 2020-2022 and analyzed the indicators of cultivated area and average production per hectare for cereal crops, vegetables and grape vines for all European countries.

Key words: *competitiveness, agri-food products, sustainability.*

JEL Classification: *O10, Q13*

DOI: 10.24818/REJ/2023/86/06

1. Introduction

The competitiveness of the Romanian agri-food sector benefits from the significant agricultural potential of our country, characterized by a favorable climate and fertile soils, which offer the possibility of diversifying cultivated agri-food products and, implicitly, the complex satisfaction of consumer needs. Unfortunately, in Romania, most of the factors that can contribute to the increase of agri-food competitiveness are not exploited to their true potential. Among the main elements on which the development, modernization and growth effort should be focused, with an impact on Romanian agriculture, are investments for innovation, advanced technological solutions, infrastructure, synergy between the actors involved, penetration of foreign markets, etc. the objective that Romania must have in mind is to improve

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To establish where Romania stands in European statistics, we processed primary data from Eurostat databases for the years 2020-2022 and analyzed the indicators of cultivated area and average production per hectare for cereal crops, vegetables and grape vines for all countries European.

Economic competitiveness, in general, presupposes the ability of an individual or a collective to develop and preserve its assets in a competitive environment. These assets are reflected in economic activities in several forms and their relevance differs depending on the specifics of the organization. Thus, they can represent economic advantages:

- the ability to produce goods and services of superior quality at competitive costs;
- the ability to innovate and develop technologies in the field served;
- obtaining funds and adopting an efficient economic behavior;
- attracting qualified human resources and identifying resources to expand the activity undertaken across borders, by adapting to global trends, etc.

Focusing attention on the development of some fundamental elements in the development of agricultural activities can be the main engine for improving the competitive character of the Romanian agri-food sector. Among the key aspects with an impact on Romanian agriculture, which have been intervened over time at a low level, are:

- attracting investments for innovation;
- the implementation of advanced technological solutions;
- development of the necessary infrastructure for agricultural processes;
- low synergy between the actors involved (farmers, local and national authorities, research institutions, etc.);
- developing a country brand and entering foreign markets, etc.

2. Literature review

Economic growth is directly influenced by the size of agricultural production. This, in turn, depends on objective and subjective factors, internal or external, that can determine agricultural performance. Among the most important factors that contribute to population growth in agriculture is the human factor (Popescu, 2016).

Sandu (2016) believes that Romanian agriculture presents a disadvantage due to the fragmentation of land, the lack of advanced technologies, the non-cultivation of land on as extensive a surface as possible and the insufficiency of equipment with agricultural machinery. Agricultural diversification, the implementation of

appropriate government policies and the modernization of agricultural practice can be the engine of economic growth and ensuring food security.

The development of rural areas in Romania is a priority including for the European Union, as the economy in those areas is greatly affected by the lack of solutions and methods of solving them. To increase investments and develop underprivileged areas, the European Union and the Government of Romania have implemented the National Rural Development Plan in the period 2014-2020, for the granting of non-reimbursable funds (Giucă et.al., 2022).

The digitization of the processes and mechanisms used in the practice of agriculture is a particularly important component for the development of the agricultural sector. The importance of the widest possible implementation of digitization derives from the fact that it will bring benefits both in increasing working time, processing a much larger volume of data and also in the efficiency and accuracy of decisions adopted by farmers (Gandea et al., 2023).

3. Findings

The first objective that Romania must have in mind is to improve its positioning compared to European countries, in terms of average production per hectare.

We considered it relevant to identify the level of performance of our country to analyze in parallel the indicators of cultivated area and average production per hectare for grain crops, vegetables and grape vines. As for the grape vine data, it is collected once every 5 years. The average production per hectare resulted from the calculation of the ratio between production and the national area. By processing the data, I aimed to identify the yield that Romania has, in relation to the other European states. As can be seen in the tables below, although Romania ranks 5th in the ranking of cultivated area in Europe, our country ranks 25th in average production per hectare.

Table 1 The area cultivated with cereals, vegetables and grape vines in Europe (1000 hectares)

Country	Cereals			Vegetables			Grape vines
	2022	2021	2020	2022	2021	2020	2020
France	8967.43	9326.65	8904.73	274.63	274.75	267.99	792.57
Poland	7150.17	7451.27	7466.68	160	172.9	175.8	
Germany	6112.5	6063.5	6074.9	122.68	128.47	123.04	103.55
Spain	5804.21	6034.58	6069.24	366.85	396.57	380.98	910.86
Romania	5331.92	5356.95	5341.51	93.1	113.15	113.02	180.68

	Cereals			Vegetables			Grape vines
Italy	3014.94	2978.39	3011.73	385.56	413.86	413.74	688.99
Hungary	2208.81	2361.64	2337.65	76.64	80.96	83.22	62.11
Bulgaria	1897.7	1956.33	1966.04	20.65	24.56	23.87	60.17
Lithuania	1335.72	1356.51	1382.43	12.49	11.94	12.07	
Denmark	1306.95	1359.7	1367	11.66	11.78	11.95	
Czech Republic	1386.01	1345.84	1344.88	11.12	11.99	11.14	18.1
Sweden	953.34	983.34	993.34	16.03	15.48	14.7	
Finland	977.01	953.82	951.5	11.02	11.95	12.29	
Austria	754.95	747.46	764.87	18.48	18.74	18.22	46.27
Latvia	774.9	767.8	750	3.26	3	3.7	
Slovakia	718.38	717.7	747.32	8.09	7.8	6.58	13.08
Greece	675.77	723.81	739.88	74.17	76.84	73.26	103.06
Croatia	525.6	519.78	535.76	7.79	8.4	8.44	17.63
Estonia	361.82	367.12	370.12	1.45	1.62	2.05	
Belgium	323.07	310.2	304.34	64.51	70.15	68.68	
Ireland	282.46	274.66	265.63	4.41	4.54	4.45	
Portugal	208.75	209.24	215.83	56.23	63.76	59.25	173.25
Netherlands	185.41	169.73	172.27	92.84	104.02	96.53	
Slovenia	103.58	102.05	101.5	6.09	6.22	6.98	15.36
Cyprus	24.58	26.45	26.52	2.62	2.68	2.69	7.61
Luxembourg	27.74	26.3	25.48	0.28	0.2	0.17	1.29

Source: Author's own research, based on data from <https://ec.europa.eu/eurostat/data>

Table 2 Average production per hectare of cereals, vegetables and grape vines in Europe (U.M. tons per hectare)

Country	Cereals			Vegetables			Grape vines
	2022	2021	2020	2022	2021	2020	2020
Belgium	8.52	7.91	8.43	36.40	35.56	31.86	2.64
Netherlands	8.88	7.87	7.92	51.51	53.81	54.56	6.91
Slovenia	5.56	6.86	7.39	14.89	18.48	19.38	3.59
Austria	6.90	7.11	7.38	36.49	36.02	35.41	
Germany	7.12	6.99	7.13	30.71	33.15	31.60	
Ireland	8.69	8.61	7.13	35.22	35.80	34.26	7.92
Croatia	5.86	7.06	7.05	20.49	20.07	23.72	11.93
Denmark	7.24	6.35	6.93	20.98	22.98	23.15	
Hungary	4.02	5.92	6.66	16.35	17.27	17.11	

	Cereals			Vegetables			Grape vines
	France	6.65	7.17	6.38	21.57	22.47	20.57
Slovakia	4.55	6.00	6.13	16.51	18.95	18.74	
Czech Republic	5.93	6.11	6.04	22.14	22.96	22.66	
Sweden	6.11	5.06	5.99	24.16	26.31	26.74	
Luxembourg	6.15	5.60	5.74	20.07	21.65	21.82	7.00
Italy		5.58	5.65	32.03	32.54	31.87	3.04
Portugal	4.89	5.39	4.89	43.02	45.95	42.06	5.16
Lithuania	4.21	3.94	4.73	19.76	19.12	17.31	10.04
Poland	4.84	4.56	4.69	33.26	30.57	29.52	4.93
Latvia	4.19	3.90	4.66	20.62	21.70	22.97	
Spain	3.28	4.23	4.50	37.80	40.16	38.92	7.42
Estonia	4.22	3.50	4.41	26.19	27.44	25.63	
Bulgaria	5.16	5.95	4.37	21.88	19.88	19.06	4.99
Greece	3.79	4.28	4.20	30.12	32.25	33.45	7.48
Finland	3.77	2.78	3.59	26.15	23.68	24.06	
Romania	3.60	5.19	3.40	14.40	20.53	20.38	6.76
Cyprus	2.42	1.94	2.30	29.43	29.62	28.51	

Source: Author's own research, based on data from <https://ec.europa.eu/eurostat/data>

Analyzing the two situations provided above, we find that Romania practices a non-performing agriculture, the area it has being exploited at a net lower level, compared to other states that do not benefit from the same extension and climate conditions.

As can be seen, in Romania, a 40% drop in productivity was recorded in 2022 compared to the previous year for cereals and 30% for vegetables. This difficult agricultural year was mainly influenced by the drought, but there were other factors that led to a decrease, such as: the energy crisis, the increased prices of fertilizers, the lack of irrigation systems, etc.

Looking at the other states, especially those located at the top of the ranking, we find that during the 3 years analyzed, their average production per hectare registers a constant. This fact is due to the practice of efficient agriculture, based on the use of modern methods and an advanced level of technologies and equipment available in the activity.

Results and conclusions

Romania could minimize the negative effects induced by natural factors (low precipitation, less fertile surfaces, climate change, floods and other extreme weather

phenomena) through a series of measures and strategies to eliminate the vulnerabilities of the agri-food system. The key points on which the exponents involved should channel their efforts, especially farmers and national authorities, are:

- the modernization of the technologies and equipment used, which lead to an increase in productivity and yield;
- the development of the infrastructure, namely of transport, of irrigation systems, of processing and storage capacities;
- streamlining the system of subsidies granted to agricultural practitioners and eliminating excessive bureaucracy;
- improving cooperation and dialogue between the factors involved in agricultural processes;
- combining lands to facilitate the application of effective work methods (large machinery, advanced technologies, etc.) and to eliminate unproductive traditional agriculture;
- facilitating access to information regarding access to financing, credits and support for investments;
- improving education regarding innovative agricultural practices and modern technologies used to increase the competitiveness of the agri-food sector.

Practicing agriculture in an inefficient system, with low yields throughout the production chain (from cultivation to marketing) has a direct negative effect on Romania's economic competitiveness in the world.

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