

TRENDS IN ROMANIA'S TRADE WITH WALNUTS IN THE PERIOD 2010-2022

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Abstract

The paper aimed to follow the recent developments regarding the production and Romanian trade with fresh or dried walnuts in shell or shelled. Both statistical and specific indicators of international trade are used. The results indicated that Romania increased its production of walnuts and performed well in trade with shelled walnuts, and the trade balance was positive in the entire analysed period. Is not the case of the trade with walnuts in shell, where the trade balance was consistently negative. Most part of the Romanian trade with walnuts is either with EU countries or with the neighbour countries which are not EU members.

Key words: walnuts in shell or shelled, trade, Romania, World

INTRODUCTION

The international exports of walnuts include fresh or dried walnuts which can be also in shell or shelled. Besides their contribution to the food and wood industry, the walnut trees which have powerful root system can help against soil erosion and can limit human negative activities effects [10]. Walnuts have demonstrated health and nutritional effects and their lipid contribution and bioactive apport is essential [9]. Some research showed the role of walnuts on brain, with positive effects on learning and memory [3], while other studies underlined the role of nuts as antioxidant, or their contribution in reducing atherosclerosis risk [11]. The papers focused on economic aspects related with nuts, are focused on various topics as: developing methods of walnuts production [6], evaluating aspects from the phase of production [12] until the walnuts are delivered to export [1].

Walnut trees growing is a profitable business [13].

The evolution of walnuts trade, which is the main topic of this paper, was also considered at national level and in world context by several authors, in their countries which are specialized in walnuts production like Turkey [2], Afghanistan [8] or Iran [4].

In this context, the study aimed to analyse Romania's production and trade with raw or dehydrated walnuts in shell or shelled in the period 2010-2022.

MATERIALS AND METHODS

Within this research we analysed the evolution of the walnut's surfaces and production in Romania and its international trade with raw or dehydrated walnuts. For this study we calculated statistical indicators as: the mean, the standard deviation, the coefficient of variation, the annual growth rate, and specific trade indicators as: evolution of quantitative and value of export and import and trade balance. The data were provided of Romanian National Institute of Statistics and the main provider of trade data is International Trade Center.

RESULTS AND DISCUSSIONS

An analyse of the evolution of walnuts tress in Romania indicated that in the last decade the number of walnuts trees had a positive evolution, reaching a peak of 2.3 million walnuts trees in 2022, while the minim for this period was recorded in 2011 when Romania had only 1.8 million walnuts trees.

If we take in consideration the trend of the entire number of walnuts trees in the all number of the trees with fruits in Romania, we can see that if in 1990 the share of walnuts trees was lower than 2%, in 2022 the walnuts trees over 3% of the total number of fruits trees cultivated in Romania (Fig. 1).

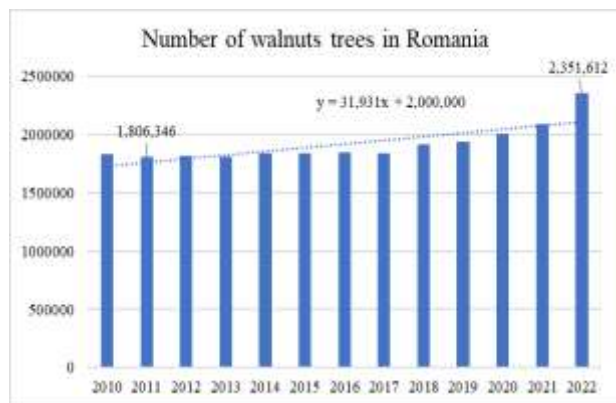


Fig. 1. Number of walnuts tree in Romania, 2010-2022
 Source: NIS, 2023 [7].

The increase of the number of walnuts trees led to the increase in the same period of time, of the walnuts production from a minimum of over 30.5 thousand to in 2012 to a maxim of over 56.2 thousand to in 2022. When we analysed the evolution of the total walnuts production in the total fruits production in Romania, the results indicated that, if in 1990 the share of walnuts production was only 1.79%, in 2022 the walnuts production

represented 3.72% of the total fruit production in Romania (Fig. 2). The increase of production can be related both with intern and extern increase in demand for both in shell and shelled walnuts.

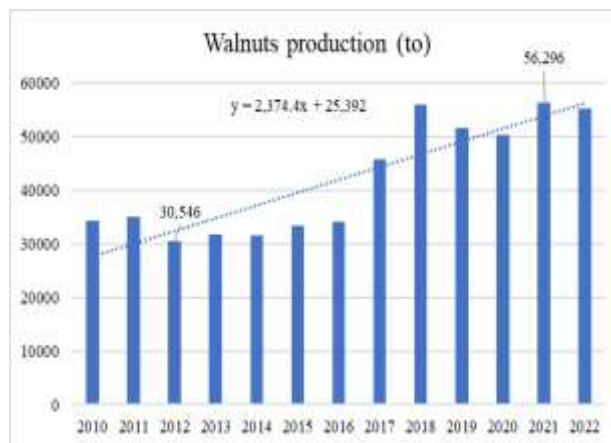


Fig. 2. Walnuts production in Romania (to)
 Source: NIS, 2023 [7].

An analyse of the total exports of fresh or dried walnuts shelled in Romania, showed that Romanian imports for this product increased from 1,563 to in 2018 to 6,203 to in 2023 (Table 1). For the period 2018-2022, Romania imported in average 3,401 to of walnuts shelled. The Czech Republic was the main exporter of walnuts shelled in 2022 in Romania, followed by Ukraine and Moldova.

Table 1. Top exporters of fresh or dried walnuts shelled in Romania (to)

Crt. no.	Exporters	2018	2019	2020	2021	2022	Average	St. Dev.	Coef. of variation (%)	Annual growth rate (%)	Evolution 2022/2018 (%)
	World	1,563	2,199	2,320	4,718	6,203	3,401	1,765	0.52	41.14	396.87
1.	Czech Republic	39	15	97	1078	2053	656	804	1.23	169.36	5,264.10
2.	Ukraine	979	1,133	817	1,501	1,420	1,170	259	0.22	9.74	145.05
3.	Moldova	60	235	633	361	574	373	212	0.57	75.87	956.67
4.	Belgium	57	15	6	5	547	126	211	1.68	76.01	959.65
5.	Austria	159	102	163	518	406	270	162	0.60	26.41	255.35

Source: own calculation based on INTRACEN data base [5].

While the Czech Republic had the highest annual growth rate from the countries that exported walnuts shelled in Romania, of 169% per year, Belgium, which increased its shelled walnuts exports to Romania from 57

to in 2018 to 574 to in 2022 had the biggest coefficient of variation, of 1.68% for this period of time. We can also notice that even if Czech Republic was the main exporter of walnuts shelled in Romania in 2022, in each

year of the analysed period, significant share of the walnuts shelled imports in Romania were from countries that are not part of the European Union, as Ukraine and Moldova, but the quality of neighbour of this countries, can be a significant reason for the level of imported quantities, which are brought in Romania with a low delivery cost, which compensates the customs duties between these countries. Romania imported even a small quantity of raw or dehydrated walnuts in shell between 2018 and 2022 (Table 2). In average Romania imported over 2.7 thousand to of

fresh or dehydrated walnuts in the analysed period. From 2018 to 2022 the annual growth rate of imported quantities was almost 3%, but the standard deviation was high, related with the small level of imports from 2020. Belgium was the main exporter of raw or dehydrated walnuts in shell in Romania, followed by Poland and France, but only the first two mentioned countries delivered important quantities in Romania during this time. In the case of the imports of walnuts in shell we can notice that the main part of imports was from EU countries.

Table 2. Top exporters of fresh or dried walnuts in shell in Romania (to)

Crt. no.	Exporters	2018	2019	2020	2021	2022	Average	St. Dev.	Coef. of variation (%)	Annual growth rate (%)	Evolution 2022/2018 (%)
	World	3,101	2,647	715	3,589	3,489	2,708	1,050	0.39	2.99	112.51
1.	Belgium	1,265	942	461	2,440	2,761	1,574	882	0.56	21.55	218.26
2.	Poland	605	399	118	268	223	323	168	0.52	-22.08	36.86
3.	France	82	161	-	126	214	146	48	0.33	-	260.98
4.	Ukraine	50	122	10	340	113	127	114	0.90	22.61	226.00
5.	Spain	53	77	19	-	73	56	23	0.41	-	137.74

Source: own calculation based on INTRACEN data base [5].

The price per tonne of walnuts imported in Romania made some changes in the ranking of top exporters of fresh or dried walnuts shelled in Romania. In average, Romania imported walnuts shell worth 16,368 thousand Euro for the period 2018-2022 (Table 3). The annual growth rate in terms of value was lower than the annual growth rate in terms of

quantities, which means that the imports prices were attractive for Romanian market, putting pressure on the domestic producers, even if the quality of the imported walnuts shelled could be a topic for the consumers, which often take in consideration only the price.

Table 3. Export value of fresh or dried walnuts shelled in Romania registered by the top exporters (thousand Euro)

Crt. no.	Exporters	2018	2019	2020	2021	2022	Average	St. Dev.	Coef. of variation (%)	Annual growth rate (%)	Evolution 2022/2018 (%)
	World	8,349	9,787	10,968	22,799	29,935	16,368	8,511	0.52	37.61	358.55
1.	Czech Republic	343	136	587	5,553	11,348	3,593	4,371	1.22	139.83	3,308.45
2.	Ukraine	4,491	4,901	3,610	6,401	5,820	5,045	982	0.19	6.70	129.59
3.	Germany	834	1,807	2,074	2,117	2,910	1,948	668	0.34	36.67	348.92
4.	Moldova	415	1,085	2,735	1,649	2,435	1,664	853	0.51	55.64	586.75
5.	Austria	1,082	424	758	3,137	2,154	1,511	999	0.66	18.78	199.08

Source: own calculation based on INTRACEN data base [5].

The top exporters regarding the value of raw or dehydrated walnuts in shell in Romania are

EU countries: Belgium, Poland and France. We could notice that in the top 5 of raw or

dehydrated walnuts in shell exporters in Romania between 2018 and 2022 are only countries members of the European Union. The annual growth rate of the imports of walnuts in shell was by only 2.02%. The average exports in terms of value for this period reached 4,055 thousand Euro, while the

highest value was recorded in the year 2022, of over 5,2 million Euro. Belgium was the main exporter of walnuts shell in Romania, the value of the export reaching a peak of 4.3 million Euro in 2022, from a total value of 5.2 million Euro recorded in the World in that year by Romania (Table 4).

Table 4. Export value of fresh or dried walnuts in shell in Romania registered by the top exporters (thousand Euro)
 Source: own calculation based on INTRACEN data base [5].

Crt. no.	Exporters	2018	2019	2020	2021	2022	Average	St. Dev.	Coef. of variation (%)	Annual growth rate (%)	2022/2018 (%)
	World	4,866	3,620	1,393	5,124	5,271	4,055	1,453	0.36	2.02	108.32
1.	Belgium	2,152	1,795	1,079	3,590	4,365	2,596	1,205	0.46	19.34	202.83
2.	Poland	437	518	86	276	269	317	150	0.47	-11.42	61.56
3.	France	124	218	-	150	243	147	85	0.58	-	195.97
4.	Spain	55	91	24	-	81	63	26	0.41	-	147.27
5.	Slovakia	-	-	43	90	76	42	37	0.89	-	-

Source: own calculation based on INTRACEN data base [5].

Romania exported in average 5,637 to of walnuts shelled between 2018 and 2022. In 2021 Romania exported the highest quantities of walnuts shelled, of over 7.1 million to. Most part of the Romanian exports went to the EU countries, mainly in Germany, Austria and France. The annual growth rate of walnuts shelled exports from Romania reached in

average 11.18%, while the highest increase of walnuts shelled exports was to Austria, from 120 to in 2018 to 1,425 to in 2022, which corresponded with an annual growth rate of over 85%. From the top 5 export destinations countries, only Netherlands recorded a negative annual growth rate during the analysed period (Table 5).

Table 5. Top importers of fresh or dried walnuts shelled from Romania (to)

Crt. no.	Importers	2018	2019	2020	2021	2022	Average	St. Dev	Coef. of variation (%)	Annual growth rate (%)	Evolution 2022/2018 (%)
	World	4,376	4,724	5,252	7,148	6,687	5,637	1,092	0.19	11.18	152.81
1	Germany	673	384	839	1,578	1,739	1,043	526	0.50	26.79	258.40
2	Austria	120	171	395	1,138	1,425	650	532	0.82	85.63	1,187.50
3	France	765	531	1,063	1,193	871	885	231	0.26	3.30	113.86
4	Netherlands	758	1,053	922	798	681	842	131	0.16	-2.64	89.84
5	Italy	337	447	252	735	344	423	168	0.40	0.52	102.08

Source: own calculation based on INTRACEN data base [5].

The quantities of walnuts in shell exported by Romania are very low. Some exports are destined to Türkiye, which is high consumer of walnuts, due to its national food specialties (Table 6).

Romania exported raw or dehydrated walnuts shelled which worth in average 28,597 thousand Euro for the period 2018-2022. The highest value was recorded, in 2022, of

35,505 thousand Euro. Germany is the main destination of Romanian exports of raw or dehydrated walnuts shelled. In 2022, exported in Germany walnuts shelled worth 9,489 thousand Euro. The highest annual growth rate of the value of raw or dehydrated walnuts shelled exported was recorded to Austria, of 81% (Table 7).

Table 6. Top importers of raw or dehydrated walnuts in shell from Romania (to)

Crt. no.	Importers	2018	2019	2020	2021	2022	Average	St. Dev	Coef. of variation (%)	Annual growth rate	Evolution 2022/2018 (%)
	World	192	196	79	57	78	120	61	0.50	-20.16	40.63
1	Türkiye	91	107	66	42	54	72	24	0.33	-12.23	59.34
2	Georgia	-	-	-	-	21	21	-	-	-	-
3	Germany	-	-	11	12	3	9	4	0.46	-	-
4	Belgium	-	-	-	1	1	1	-	-	-	-
5	France	-	81	-	-	-	81	-	-	-	-

Source: own calculation based on INTRACEN data base [5].

Table 7. Top importers of fresh or dried walnuts shelled from Romania (thousand Euro)

Crt. no.	Importers	2018	2019	2020	2021	2022	Average	St. Dev	Coef. of variation (%)	Annual growth rate (%)	Evolution 2022/2018 (%)
	World	24,893	22,837	25,088	34,665	35,505	28,598	5,362	0.19	9.28	142.63
1	Germany	4,077	1,691	4,038	7,447	9,489	5,348	2,766	0.52	23.52	232.74
2	Austria	737	753	1,941	5,781	7,917	3,426	2,908	0.85	81.04	1,074.22
3	France	4,248	2,436	5,008	5,555	4,592	4,368	1,060	0.24	1.97	108.10
4	Netherlands	4,630	5,318	4,220	3,844	3,626	4,328	602	0.14	-5.93	78.32
5	Slovenia	1,803	1,218	1,356	997	1,694	1,414	298	0.21	-1.55	93.95

Source: own calculation based on INTRACEN data base [5].

Table 8. Top importers of raw or dehydrated walnuts in shell from Romania (Euro)

Crt. no.	Importers	2018	2019	2020	2021	2022	Average	St. Dev	Coef. of variation (%)	Annual growth rate	Evolution 2022/2018 (%)
	World	288	163	92	138	169	170	65	0.38	-12.48	58.68
1	Türkiye	75	101	75	109	119	96	18	0.19	12.23	158.67
2	Georgia	-	-	-	-	43	43	-	-	-	-
3	Germany	-	-	13	23	5	14	7	0.54	-	-
4	Belgium	-	-	-	1	2	2	1	0.33	-	-
5	France	1	42	3	2	-	12	17	1.44	-	-

Source: own calculation based on INTRACEN data base [5].



Fig. 3. Evolution of the Romanian trade balance for walnuts in shell in the period 2018-2022
 Source: INTRACEN data base [5].

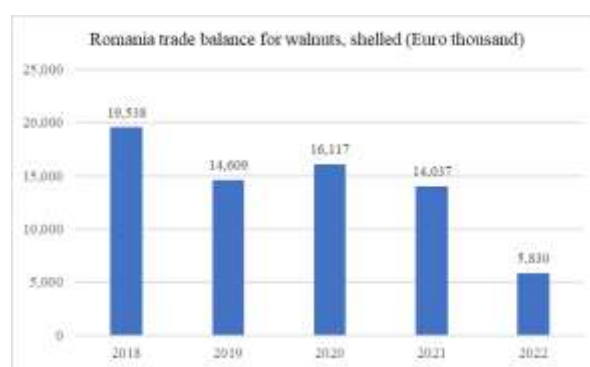


Fig. 4. Evolution of the Romanian trade balance for walnuts in shelled in the period 2018-2022
 Source: INTRACEN data base [5].

The value of the exports of raw or dehydrated walnuts from Romania is very low. Most parts of the value exported by Romania is destined to countries that are not part of EU, as Türkiye and Georgia (Table 8).

The analyse of the Romanian trade balance for walnuts indicated opposite situation for the two types of exports: shell and shelled walnuts.

While the trade balance for walnuts in shell was negative for the entire period 2018 – 2022, the trade balance for walnuts shelled was positive, also for the entire analysed period (Fig. 3 and Fig. 4).

The highest deficit of the Romanian trade balance for the walnuts in shell was recorded in 2022, of over 5.1 million Euro, while the highest surplus was recorded at the beginning of the analysed period, in 2018, of 19.5 million Euro.

CONCLUSIONS

Romania is performing well in the trade with shelled walnuts, were recorded a positive balance in the entire analysed period. Is not the case of the trade with walnuts in shell, where the trade balance was consistently negative. Most part of the Romanian trade with walnuts is either with EU countries or with neighbours which are not yet part of the EU. Correlating the increase of the walnut's surfaces and production in Romania with the decrease of exports for this product, we can conclude that the intern consumption had increased during the analysed period, which a positive sign, in relation with the benefits which this product, as we mentioned in introduction, it brings to the human health insurance.

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