ASPECTS OF TRADE WITH APPLES (2011 - 2013)

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Abstract

The apple tree is one of the species representative for Romania through the surfaces in operation and yields obtained (469,437 t for 2015, which represented 39.27% of total national production of fruit). Based on this, I considered interesting to track the Romanian apple trade in terms of quantity (55,099.7 t imports and 26,443.67 t exports - averaged over the period 2011-2013), especially in value. The paper places Romania in context of global, continental and regional situation – by specific indicators operating at global, continental and regional that reporting can be done, according to available statistics. It can be seen that the trade balance of Romania, related to apples, is strictly weak during the period analyzed.

*Keywords***:** *trade balance deficit, surplus, export, import, apples*

INTRODUCTION

By the specifics and peculiarities of apple species that is noted it's framed among fruit growing sector. In this context, overall, we estimate that the species develops importance to food, industrial, agricultural technology and technological, environmental, feed, export and source of profit [1].

The economic importance of apple, extending beyond the sphere of fruit growing and consumption, creating economic activities, jobs and financial resources in parallel industries related to the production of pesticides, fertilizers, packaging, food and transport [5].

The share that apple culture has in the global economy of fruit is due, primarily, role that fruits have in rational human nutrition then in prevention and control of diseases, in increasing national income, and improving the microclimate conditions of life [7].

Making international trade involves prospecting foreign market for import-export of agricultural products and / or food must undergo several stages (documentation and information, study the opportunities offered by foreign and analyze key economic indicators prospecting (studying) the actual

foreign market, the domestic market studied drawing conclusions, making decisions) [3].

International transactions with apples must be viewed in the context of the global market. World market represents all relationships established between individual producers from different countries and between national economies through trade transactions [4].

In trade with fruits and vegetables, the degree of perishable products requires great efficiency in directing and commodity circulation [2].

Although Romania has an important fruit growing area, low yields and lack of organization of producer groups, under the excessive parceling plantations and their high degree of aging in the individual causes lack a competitive market [9]. Also vegetables and fruits imported produce strong competition on the Romanian market due to appearance, packaging and appearance of the season [8].

MATERIALS AND METHODS

For the development work, it was used a database of international visibility [10].
The indicators used, refers to the period 2011-2013 and presented at the level of its continental (Africa, Americas, Asia, Europe and Oceania), regional (European Union),

national (Romania) and global (worldwide). Analysis of indicators went from annual or multi-building structure of imports, exports and trade balance (thousands $). It was used as the comparison method based on the use of mobile base index calculated by formula:

$$I_{bm} = \frac{Y_n}{Y_{n-1}} x100,$$ in which: Y_n - the level of

indicator for each component of the dynamic series; Y_{n-1} - the level of temporal sequence indicator considered as a basis for comparison or reference period [6].

RESULTS AND DISCUSSIONS

The total value of global imports and continental apple, their structure and how they have evolved over time are shown in Table 1. Worldwide, in 2011, total import value was 7,182,225 thousand $, which value is based on contributions continental: 12,384 thousand $ for Oceania, 398,316 thousand $ across the continent Africa, 980,623 thousand $ in Americas, 1,993,264 $ thousands from the Asian continent, 3,797,638 thousands $ for Europe. Following these values indicator structure is as follows: 0.17% Oceania, 5.55% Africa, 13.65% Americas, 27.75% Asia and 52.28% Europe.

If we analyze the specific situation of 2012, can be noted limits of variation of the indicator, from 15,578 thousand $ for Oceania (0.21%) to 3,775,009 thousands $ in Europe (50.30%). Taking into question and the other

values continental indicator - 2,048,322 thousand $ Asia (27.29%), 1,125,722 thousand $ Americas (15.0%), 540,218 thousand $ Africa (7.20%) - arrive at a total value of world imports of 7,504,849 thousand $.

For 2013, there is a total world imports of apples, which reaches 8,476,782 thousands $. Establishment of this value is based on contributions sequential continental: 17,459 thousand $ Oceania (0.20%), 517,135 thousand $ Africa (6.10%), 1,331,609 thousand $ Americas (15.71%), 2,295,259 thousand $ Asia (27.08%), 4,315,320 thousand $ Europe (50.9%).

Calculating the average period was reached a total value of world imports of 7,721,285 thousand $, value, which is based on the following structure: 51.32% Europe (3,962,655 thousand $), 27.36% Asia (2,112,282 thousands $), 14.84% Americas (1,145,985 thousand $), 6.28% Africa (485.223 thousand $), Oceania 0.20% (15,140 thousand $).

Within the European Union there was an average import value of 2,939,513 thousand $, which resulted in an average share in global imports at 38.07%.

For Romania, the value of imports of apples reached an average of 27,563.67 thousand $, which represented 0.36% of the world indicator.

Table 1. Apples - World Imports (2011–2013)

Specification	2011		2012			2013			Average 2011 – 2013		
	Th. $. *	Str. **%	Th. $. *	Str. **%	2012/ 2011**	Th. $. *	Str. **%	2013/ 2012**	Th. $. **	Str. **%	Average/ 2013**
Africa	398,316	5.55	540,218	7.20	135.63	517,135	6.10	95.73	485,223	6.28	93.83
Americas	980,623	13.65	1,125,722	15.00	114.80	1,331,609	15.71	118.29	1,145,985	14.84	86.06
Asia	1,993,264	27.75	2,048,322	27.29	102.76	2,295,259	27.08	112.06	2,112,282	27.36	92.03
Europa	3,797,638	52.88	3,775,009	50.30	99.40	4,315,320	50.91	114.31	3,962,655	51.32	91.83
Oceania	12,384	0.17	15,578	0.21	125.79	17,459	0.20	112.07	15,140	0.20	86.72
Total	7,182,225	100	7,504,849	100	104.49	8,476,782	100	112.95	7,721,285	100	91.09
European Union	2,844,231	39.60	2,731,927	36.40	96.05	3,242,381	38.25	118.68	2,939,513	38.07	90.66
Romania	25,516	0.36	27,025	0.36	105.91	30,150	0.36	111.56	27,563,67	0.36	91.42

* http://faostat3.fao.org/download/T/TP/E
** own calculation

The evolution over time of the indicator (conducted through mobile base indices) highlights a number of issues, such as Africa

shows an uneven trend indicator, the variable component indices. Overruns for reporting term were 1.35 times in 2012 and subunit

values recorded for 2013 and period average (decreases by 4.27 and 6.17% respectively beside the bases of reporting); at the American continent, there is the upward evolution of value of imports. Thus, in 2012 recorded growth of 14.80% compared to 2011, then 2013 are recorded demotions of 1.18 times - compared to 2012, while the average period is one subunit (-13.94%); if we analyze the situation for Asia, we see the upward evolution of the indicator. In these circumstances, are discussing of demotions, of the terms of reference, for 1.02 times for 2012 and 1.12 times for 2013, but decreased by 7.97% and the average of the period; Europe presents uneven developments in the value of imports. Such decreases were recorded to the term of reference as follows: 0.60% in 2012 and 8.17% to the average of the period and an increase at the level of 2013 by 14.31%; Oceania is characterized by an upward trend in the value of imports, specific increases in 2012 (+25.79%), followed by further increases in the year 2013 (+12.07%). For the average period reveals sub-unit value indices dynamics (-13.28%); global imports value show a positive trend. Overruns of comparator

were 1.04 times for 2012 and 1.12 times in 2013 and reached 8.92% decreases for the period average; the European Union is characterized by uneven developments in the value of imports. They show for 2012 a decrease of 3.95%, and an increase in the year 2013 (+18.68%) and again a decrease for average the period (-9.34%); Romania, shows an upward trend of value of imports. Thus exceeding the reference by 5.91% for 2012 and 11.56% in 2013, while the average of the period were decreased by 8.58% over the comparison base (2013).

Table 2 presents the imports.

In 2011, five continental units recorded values of exports of: 289,292 thousand $ Oceania, 292,204 thousand $ Africa, 1,381,218 thousand $ Asia, 1,890,937 thousands $ Americas and 3,295,949 thousands $ Europe. These values have led to a general global level, of the indicator of 7,149,600 thousands $, which has contributions percentage (in the structure) of: 46.10% Europe, 26.45% Americas, 19.32% Asia, 4.09% Africa and 4.04% Oceania. In these circumstances, global level of the indicator reached 7,149,600 thousand $.

Table 2. Apple - World Exports (2011-2013)

Specification	2011		2012			2013			Average 2011 – 2013		
	Th. $. *	Str. ** %	Th. $. *	Str. ** %	2012/ 2011**	Th.$. *	Str. ** %	2013/ 2012**	Th.$. **	Str. ** %	Average/ 2013**
Africa	292,204	4.09	317,653	4.42	108.71	446,115	5.56	140.44	351,990.7	4.72	78,90
Americas	1,890,937	26.45	2,016,528	28.08	106.64	2,213,400	27.57	109.76	2,040,288.0	27.38	92.18
Asia	1,381,218	19.32	1,321,256	18.40	95.66	1,455,209	18.13	110.14	1,385,894.0	18.59	95.24
Europa	3,295,949	46.10	3,223,875	44.89	97.81	3,501,216	43.61	108.60	3,340,347.0	44.82	95.41
Oceania	289,292	4.04	302,711	4.21	104.64	412,212	5.13	136.17	334,738.3	4.49	81.21
Total	7,149,600	100	7,182,023	100	100.45	8,028,152	100	111.78	7,453,258.0	100	92.84
European Union	3,105,077	43.43	3,070,259	42.75	98.88	3,322,010	41.38	108.20	3,165,782	42.48	95.30
Romania	12,790	0.18	3,759	0.05	29.39	5,655	0.07	150.44	7,401.33	0.10	130.88

* http://faostat3.fao.org/download/T/TP/E
** own calculation

In the case of 2012, the total value of exports was 7,182,023 thousand $ at which the five continental units contributed variable, as follows: 4.21% Oceania, 4.42% Africa, 18.40% Asia, 28.08% Americas, 44.89% Europe. Corresponding to these weights, actual values of the indicator continental were 302,711 thousand $ for Oceania, 317,653 thousand $ in case of Africa, 1,321,256 thousand $ Asia, 2,016,528 thousands $ in

Americas and 3,223,875 thousands $ Europe. If we analyze the situation, specifies of 2013 reveals variations in the indicator from 412,212 thousand $ for Oceania, to 3,501,216 thousand $ on the European continent, while the global level of the indicator reached a value of 8,028,152 thousand $. The structure of indicator is as follows: 5.13% Oceania, 5.56% Africa - 446,115 thousand $, 18.13% Asia - 1,455,209 thousand $, 27.57%

Americas - 2,213,400 thousands $ and 43.61% Europe.

Average period is characterized by a total, global exports of 7,453,258 thousand $ in the structure of which is recorded continental percentages: 44.82% Europe (3,340,347 thousand $), 27.38% Americas (2,040,288 thousand $), 18.59% Asia (1,385,894 thousands $), 4.72% Africa (351,990.7 thousand $), 4.49% Oceania (334,738.3 thousand $).

In terms of positioning the European Union in the global context value of export, there is sequential annual weights as follows: 43.43% in 2011 to 3,105,077 thousand $, 42.75% for the year 2012 to 3,070,259 thousands $, 41.38% in 2013 - 3,322,010 thousand $ and 42.48% to the average period - 3,165,782 thousand $.

Referring to Romania's situation can be observed the following: the values of Romanian exports of apples ranged from 3,759 thousand $ in 2012 to 12,790 thousand $ in 2011, and the median was 7,401.33 thousand $; Romania held global variable share in total export structure: 0.05% in 2012, 0.07% for 2013, 0.10% for the period average and 0.18% for 2011.

The dynamics of indicator, built through mobile base indices, highlights the following issues: Africa evolution is an ascending one dynamics is characterized by the existence indices below par and above unit. Overtaking the reporting term were 1.08 and 1.40 times respectively in 2012 and 2013 while reductions – beside this - recorded levels of 21.10% for the period average; American trend indicator is ascending dynamics is composed of strictly indexes above unit. In those circumstances, the terms of comparison were exceed as follows: 1.06 and 1.09 times in the year 2012 and 2013 period average was lower by 7.82% over the previous term dynamic of the series; in the Asian continent, discussing a fluctuating indicator trend, underlined by the overruns of the reporting base (1.10 times for 2013), but also decreases by 4.34 and 4.76% for the year 2012 and the average period; in Europe there is uneven developments in export value. So in 2012 are recorded decreases by 2.19% compared to the first term of the dynamic series, then in 2013

appearing increase with 8.60% compared to the previous term dynamic of the series. Following this situation, the average period was lower by 4.59% compared to the specific level of 2013; Oceania indicator shows an ascendant evolution. So the terms are exceeded by 1.04 and 1.36 times compared to 2012 and 2013 respectively. For the average period reveals that it was lower by 18.79 to comparison basis; overall global export value falls on an upward trend due to the dynamic levels of the indices above par. Exceedances of comparator was 0.45% in 2012 and 11.78% for 2013. Accordingly, average of the period was lower term the reporting with 7.16%; the European Union is characterized by a dynamic uneven. So, the indicator decreased by 1.12% in 2012 compared to 2011, after which the in 2013 appears an excess of 8.20% compared to 2012. Finally, the average period is lower by 4.70% compared to the level of the reporting (2013); in the case of Romania indicator dynamics is one uneven. Drastic decreases from 2012 (-70.61 compared with the first period analyzed - 2011), followed by increases in the year 2013 (+50.44% over the previous term dynamic of the series). In these circumstances, the average of the period it exceeded by 1.30 times the reporting base (2013).

The data included in table 3, shows the trade balance situation.

Table 3. Apples - The commercial balance of global trade - thousand $ (2011-2013)[*]

Specif.	2011	2012	2013	Average 2011 – 2013
	export - import ±	export - import ±	export - import ±	export - import ±
Africa	-106,112	-222,565	-71,020	-133,232.3
Americas	+910,314	+890,806	+881,791	+894,303
Asia	-612,046	-727,066	-840,050	-726,388
Europe	-501,689	-551,134	-814,104	-622,309
Oceania	+276,908	+287,133	+394,753	+319,597.97
Total	-32,625	-322,826	-448,630	-268.027
European Union	+260,846	+338,332	+79,629	+226,269
Romania	-12,726	-23,266	-24,495	-20,162.34

[*] own calculation

In 2011 the global trade balance was deficient -32,635 thousand $, aspect which is based of trade deficits: -612,046 thousand $ Asia, -501,689 thousand $ Europe and -106,112 thousands $ Africa. But there are surpluses to

Americas and Oceania: 910,314 and 276,908 thousand $.

In 2012, the global trade balance remains weak -322,826 thousand $, character determined by specific deficits in Asia, Europe and Africa (-727,066, -551,134 and -222,565 thousands $). Surpluses appear that reduce the overall deficit, for the same continents as in 2011 (Oceania and Americas: 287,133 and respectively 890,806 thousands $).

If we analyze the specific situation of 2013, we note that it is still deficient (-448,630 thousand $) worldwide, which is determined by specific negative state of affairs of Asia, Europe and the African continent (-840,050, -814,104 and respectively -71,020 thousand $). For Americas and Oceania are recorded surplus balances: +881,791 and respectively +394,753 thousand $.

Determining the average period it can be seen (Fig. 1) the deficit of the trade balance (-268,027 thousand $) situation determined by the following state of affairs: -726,388 thousand $ Asia, -622,309 thousand $ Europe, - 133,232.3 thousand $ Africa, + 319,597.97 thousands $ Oceania, +894,303 thousand $ America.
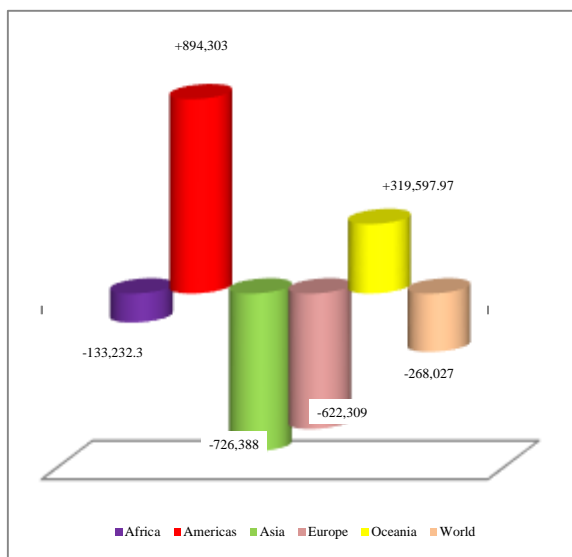

Fig. 1. Apples. Global trade balance, period average (thousands $)

At EU level, the trade balance of apples is strictly surplus as follows (fig. 2): +260,846 thousand $ in 2011, +338.332 thousand $ for 2012, +79,629 thousand $ in the case of 2013, +226,269 thousand $ in the period average.
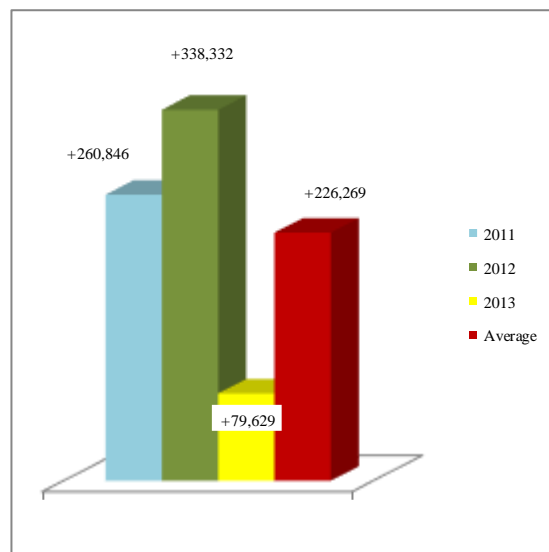

Fig. 2. Apples. EU trade balance (Thousands $)

In Romania's case (fig. 3) we notice that the commercial balance of foreign trade, with apples, is strictly poor: -12,726 thousand $ for 2011, -23,266 thousand $ in 2012, -24,495 thousand $ in 2009, -20,162.34 thousand $ in the case of the period average.
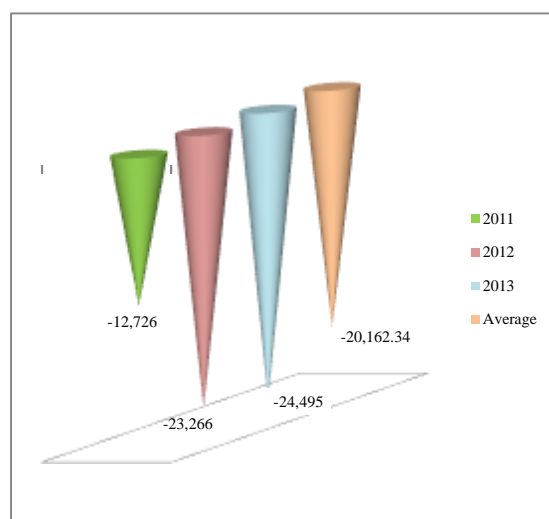

Fig. 3. Apples. National trade balance, (thousand $)

CONCLUSIONS

The study led to the following conclusions:
- the dynamic value of imports of apples has been increasing throughout the world, situation similar to that in Oceania, Asia, Americas and Africa. For Europe, the indicator has varied oscillating;
- the European Union is an important actor on worldwide, on imports of apples, holding

35.37% of the tonnage of imports and 38.07% of their value. The situation is even more pronounced if we consider the European level - about 75-80% of the volume and value of imports. The development was uneven;

- Romania is not a major player, in terms of imports, on the world market, owning shares of respectively 0.66 and 0.36% respectively of the quantities imported values - less beneficial aspect. Variation of indicators has been one uneven - both quantitative and value level - during the period analyzed;

- the evolution, over time, of export fluctuating the trend being given by Europe and Asia (for the rest of the world discussing the upward trends);

- when referring to the situation the European Union is worth noting that this position changes compared to the situation specific imports - increased share of global exports. The organization remains the main actor in the European market (over 85% in the quantities exported to Europe and 90% in terms of value of European exports). Uneven development is remarkable for both quantities exported and by the value of exports;

- as in the case of imports and exports Romania is not a major player in the global market. There is a negative aspect, the average weight loss at 0.32 and 0.10% namely for quantities and values exported - unfavorable situation;

- the weak global balance is a prominent phenomenon (268,027 thousand $);

- the EU does not fall in the overall situation European trade balance is strictly surplus with fluctuated (260,846, 338,332, 79,629 and namely 226,269 thousand $ for the four sequences of the series dynamic - 2011, 2012, 2013 and period average);

- Romanian commercial exchanges balance is strictly deficient, a phenomenon which highlights our country's inability to secure necessary consumption from own production (-20,162.34 thousand $).

REFERENCES

[1]Barbu C., Pânzaru R. L., 2000, Agricultural economics, Publishing Hyperion, Craiova, Chapter 5, Part II, p. 290-310

[2]Constantin, M. et al., 1999, Agro-marketing, Publisher Didactic and Pedagogical Bucharest, Chapter 14, p. 358-387

[3]Constantin, M. et al., 2009, Marketing of food production, Agro Technical Publisher, Bucharest, Part I, Chapter 3, p. 37-72

[4]Dumitriu Camelia, 2000, International management and international economic relations, Publisher Polirom, Iaşi, Chapter 5, p. 118-165

[5]Ion Ligia, 2007, Pomiculture, Publishing Ceres, Bucharest, Chapter 9, p. 84-106

[6]Pânzaru R.L., Medelete D.M., 2005, Agrarian economy, Publishing Universitaria, Craiova, Chapter 2, p. 11-18

[7]Popescu, M., Miliţiu, I. et al., 1992, Arboriculture, Publisher Didactic and Pedagogic R. A., Bucharest, Chapter 15, p. 232-269

[8]Ştefan G., Bodescu D., Toma A. D., Pânzaru R. L., 2007, Economy and food production chain, Publisher Alfa, Iasi,Chapter 11, p. 447-501

[9]Zahiu Letiția et al, 2010, Agriculture in the Romanian economy, Publishing Ceres, Bucharest, Chapter 3, p. 58-96

[10] http://fao.org