

SOME ASPECTS RELATED TO BARLEY COMMERCIAL OPERATIONS WORLDWIDE (2011 - 2013)

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Abstract

Barley is one of the cereals grown in Romania, along with corn, wheat, rye. Barley is grown in a small area (701.5 thousand ha - average for the period 2009-2011), and it is characterized by a total production of 43,128.2 tons and an average production of 6,148 kg/ha. The presentation of food balance is considered interesting in terms of supply and demand components: production, imports, stocks, exports, respectively seed material, food, industrial raw materials, other uses, losses. Based on the volume of total supply and demand, it could determine the balance of that product nationally.

Key words: barley, export, import, surplus, trade balance deficit

INTRODUCTION

Barley is one of the most important crop plants that belongs to the group cereal, multi-use in human food, animal feed or brewing industry [3]. Currently, barley is used less in the feed people, and is grown especially for the many uses which it receives, animal feed and industry [6]. Barley and two row barley, have fodder importance, industrial and technological agrotechnics [2]. Influence factors of profitability and economic efficiency in barley are the average yield per hectare, administration and trading costs [5]. Consequence of this, commercial exchanges conducted on the international market may increase financial performance achieved by producers.

Conducting international commercial exchanges is accomplished at the reference markets, characterized by a series of specific phenomena. Therefore, the result of perfect competition is to establish the equilibrium price which ensures the balance of interests of producers and consumers. He acts as a kind of "magnet" economic in price formation [8]. Factors influencing the international prices are more numerous and complex than those of the internal environment. They can be grouped into three categories: internal factors of the company (the company's strategy, cost of

production, firm character, nature of the product); market specific factors (demand, competition) and environmental factors (customs tariffs, non-commercial barriers, government regulations, exchange rate fluctuation, free zones, dumping, transfer pricing, price quotations [7].

Barley falls into the grain market to distinguish from other subsystems of marketing, primarily through dynamic between supply and demand report [1].

MATERIALS AND METHODS

Carrying out the work involved documenting, through the use of statistical reporting data [10].

The system of indicators specific to international trade (recommended and used by FAO) include: imports, exports (including food aid) - issues presented both in natural units (thousand t, t) and the value units (thousands \$). Based on the expression value of imports and exports, trade balance is constructed as the difference between exports and imports.

The indicators are presented in the five continents - Africa, Americas (which includes South America, North America, Central America, Caribbean), Asia, Europe and Oceania (Australia, Micronesia, New Zealand,

Polynesia), but also at general global and European Union and Romania (2011-2013). It should be noted that, for the European Union common market organization extends to grain cereals (wheat, barley, rye, corn, oats, sorghum, etc.) and products resulting from the first processing (flour, pearl barley, semolina, starch, cereal-based products) [9].

The paper used indices analysis, comparison over time being highlighted through the mobile base index, calculated by formula:

$$I_{bm} = \frac{Y_n}{Y_{n-1}} \times 100, \text{ in which: } Y_n - \text{the level of}$$

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 [4]. Simultaneously paper used structural indices.

RESULTS AND DISCUSSIONS

Table 1 presents the evolution and structure of imports worldwide.

In case of 2011, it was found worldwide, a total imported quantity of 24,573,270 tons, whose continental contribution was the following one: 12,585,576 tons Asia (51.22%), 9,525,839 tons Europe (38.76%), 1,238,354 tons Africa (5.04%), 1,209,827 tons Americas (4.92%) and 13,674 tons Oceania (0.06%).

The European Union achieved 9,086,298 tons barley imports, representing 36.98% of the global indicator level. Romania has made imports of 186,770 t, which represented 0.76% from the world indicator.

For 2012, it is found in each continent, the existence of various amounts for imports of

barley: 12,837 tons Oceania, 1,375,281 tons Americas, 1,615,330 tons Africa, 8,142,209 tons Europe and 16,521,591 tons Asia, which led to a worldwide indicator of 27,667,248 tons. Following these amounts, the indicator structure was as follows: 0.05%, 4.97%, 5.83%, 29.43% and 59.72% for Oceania, Americas, Africa, Europe and Asia. Regarding the European Union anchoring worldwide it can be seen a share of 26.77%, while imported a quantity of 7,406,651 tons. Analyzing Romania's position in the global context, it has a share of 0.50%, with an imported quantity of 138,024 tons.

At the level of 2013, there were total imports of 30,168,167 tons, to which each continent had a variable contribution as follows: Asia – 60.17% (18,151,656 tons), Europe – 26.76% (8,074,093 tons), Africa – 7.72% (2,328,194 tons), Americas – 5.30% (1,599,617 tons), Oceania – 0.05% (14,607 tons).

The imports of the European Union reached 7,753,432 tons, representing 25.70% of the world indicator. For temporal sequence respective Romania imported 222,758 tons, which represented worldwide a share of 0.74%.

Based on the annual levels presented above, the average level for the whole analyzed period was: 27,469,562 tons at world level, with a different percentage from a continent to another: 0.05% Oceania (13,706 tons); 5.08% Americas (1,394,908 tons); 6.29% Africa (1,727,293 tons); 31.24% Europe (8,580,714 tons); 57.34% Asia (15,752,941 tons).

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

Specif.	2011		2012			2013			Average 2011 – 2013		
	Tons *	Str. ** %	Tons *	Str. ** %	2012/2011**	Tons *	Str. ** %	2013/2012**	Tons **	Str. ** %	Average/2013**
Africa	1,238,354	5.04	1,615,330	5.83	130.44	2,328,194	7.72	144.13	1,727,293	6.29	74.19
Americas	1,209,827	4.92	1,375,281	4.97	113.68	1,599,617	5.30	116.31	1,394,908	5.08	87.20
Asia	12,585,576	51.22	16,521,591	59.72	131.27	18,151,656	60.17	109.87	15,752,941	57.34	86.79
Europe	9,525,839	38.76	8,142,209	29.43	85.47	8,074,093	26.76	99.16	8,580,714	31.24	106.27
Oceania	13,674	0.06	12,837	0.05	93.88	14,607	0.05	113.79	13,706	0.05	93.83
Total	24,573,270	100	27,667,248	100	112.59	30,168,167	100	109.04	27,469,562	100	91.05
EU	9,086,298	36.98	7,406,651	26.77	81.51	7,753,432	25.70	104.68	8,082,127	29.42	104.24
Romania	186,770	0.76	138,024	0.50	73.90	222,758	0.74	161.39	182,517.3	0.66	81.94

* <http://faostat3.fao.org/download/T/TP/F> (02.04.2016)

** own calculation

The dynamics of the indicator highlights some aspects such as: the indicator level for Africa performed strictly upward, the increases in specific years (dynamic components of the series) besides the term of reference are by 30.44% in 2012 and 44.13% for 2013. The average in the period was below 74.19%. The Americas had a similar dynamics to that shown above, the increase in 2012 was by 13.68%, and by +16.31% in 2013. The period average decreased by -12.80%. For Asia the indicator exceeds the comparison term in 2012 (+31.27%), overtaking also for 2013 (+9.87%), while the period average is characterized by reductions compared to the term of reference (-13.21%). Europe is characterized by a downward trend of this indicator, so the reference basis was not reached in 2012 (-14.53%), 2013 (-0.84%) and the average exceeded the term of comparison by 6.27%. The indicator development is uneven for Oceania (-6.12% in 2012, +13.79% for 2013, -6.17% as the average of the period - all these variations recorded to the terms of reference). At world level, the indicator has increased, bringing forward the reporting basis of 1.12 and 1.09

for the years 2012 and 2013, the average registering a fall of 8.95% compared to the previous term of the dynamic series. For the European Union, there is an uneven trend of this indicator as its level decreased in 2012 (-18.49%), it has grown in the year 2013 and the period average (+4.68 and +4.24% respectively). For Romania, imports have registered a fluctuating quantitative trend. So, for 2012 it appear decreases compared to 2011 (-26.10%), in 2011 there were increases compared to basis of reporting (+61.93%) and the average was by 18.06% lower compared to the previous term of the dynamic series. In 2011, at world level, it was recorded 25,356,209 tons barley exports, to which the contribution by continent was: 20,715 tons Africa (0.08%), 598,374 tons Asia (2.36%), 4,485,358 tons Oceania (17.69%), 3,364,815 tons the Americas (13.27 %) and 16,886,947 tons Europe (66.60%). The European Union carried out 12,602,028 tons exports, representing 49.70% of the overall global indicator. Romania exported 763,541 tons of barley, which meant 3.01% of the global level of the indicator.

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

Specif.	2011		2012			2013			Average 2011 – 2013		
	Tons *	Str. ** %	Tons *	Str. ** %	2012/2011 **	Tons *	Str. ** %	2013/2012 **	Tons **	Str. ** %	Aver./2013 **
Africa	20,715	0.08	14,169	0.05	68.40	15,704	0.05	110.83	16,862.7	0.06	107.38
Americas	3,364,815	13.27	5,222,717	18.35	155.22	4,919,684	15.85	94.20	4,502,405.0	15.91	91.52
Asia	598,374	2.36	599,827	2.11	100.24	824,865	2.65	137.52	674,355.3	2.38	81.75
Europe	16,886,947	66.60	17,512,101	61.53	103.70	20,221,400	65.02	115.47	18,206,816.0	64.32	90.04
Oceania	4,485,358	17.69	5,111,238	17.96	113.95	5,120,279	16.46	100.18	4,905,625.0	17.33	95.81
Total	25,356,209	100	28,460,052	100	112.24	31,101,932	100	109.28	28,306,064.0	100	91.01
EU	12,602,028	49.70	11,457,926	40.26	90.92	15,397,299	49.51	134.38	13,152,418.0	46.47	85.42
Romania	763,541	3.01	688,075	2.42	90.12	1,132,938	3.64	164.65	861,518.0	3.04	76.04

* <http://faostat3.fao.org/download/T/TP/F> (02.04.2016)

** own calculation

In case of 2012, the continents have registered levels of exports from 14,169 tons in case of Africa, up to 17,512,101 tons for the European continent, so that the world level of the indicator was 28,460,052 tons. In 2012, the continents contributions percentage was 0.05% for Africa (14,169 tons), Asia 2.11% (599,827 t), 17.96% Oceania (5,111,238 tons), 18.35% Americas (5,222,717 tons), 61.53% (17,512,101 tons) Europe. Worldwide, the

European Union and Romania held 40.26% and 2.42% of the overall level of exports (11,457,926 tons and 688,075 tons respectively).

If we analyze the specific situation of 2013, it can be seen that the main exporters were Europe, Oceania and Americas: 20,221,400 tons, 5,120,279 tons, respectively 4,919,684 tons (65.02%, 16.46% and 15.85%), while Asia and Africa registered 824,865 tons and

15,704 tons (2.65% and 0.05%, respectively). As a result, the total global exports reached an amount of 31,101,932 t. In this context, it may be seen a substantial contribution of the European Union: 49.51% (15,397,299 tons) and a modest contribution of Romania - 3.64% (1,132,938 tons). The period average was 28,306,064 tons at global level, whose structure can be found in the continental contributions: 0.06% Africa (16,862.7 tons); 2.38% Asia (674,355.3 tons); 15.91% Americas (4,502,405 tons); 17.33% Oceania (4,905,625 tons); 64.32% Europe (18,206,816 tons).

In Romania, the average share in the world quantitative exports of barley was 3.04% - with variations from 2.42% to 3.64% for the years 2012 and 2013.

The quantities of barley exported at continental and global level highlighted a number of issues such as: the African continent indicator showed uneven developments, sub-unitary and over-unitary values of the indices of the dynamics. Thereby there were occurred decreases by 31.60% in 2012 compared to 2011, then in 2013 it is surpassed 1.10 times the comparison basis, while the average for the period recorded an increase by 7.38% compared to previous period of the dynamic series. The Americas are characterized by a oscillating dynamics, increases being recorded only in 2012 (+35.22% compared to the first term of the dynamic series), otherwise, being decreases (-5.80% and -8.48% respectively for 2013 and period average). On the Asian continent, it was noticed only an upward trend of the indicator, so the dynamics is dominated by levels of the sub-unitary component indices. The increases recorded in 2012 (+0.24%) were followed by further increases in the volume of the indicator for 2013 (+37.52% compared to the previous term of the dynamic series). The average period is with by 18.25% lower than the baseline (2013).

Europe presents an increasing trend of the indicator, the growth in 2012 being (+3.70%), and in 2013 (+15.47%) and the decreases for the period average have been -9.96%.

The exports of Oceania have developed

somewhat similarly to the European ones. The exceedances of the terms of reference were 13.95% in 2012 and 0.18% for 2013 and negative differences towards them ranged at 4.19% for the period average.

At global level, the indicator has presented a growing trend, the surplus being by 12.24% for 2012, by 9.28% for 2013, while the period average was lower compared to the previous term of the dynamic series (-8.99%).

In case of the European Union, there is an uneven dynamics of exports. They decreased by 9.08% in 2012 compared to the specific situation of 2011, then in 2013 increased by 34.38% over the previous period of dynamic series. The period average was lower than the reporting term (2013) by 14.58%.

Romania has experienced a fluctuating trend in exports of barley, demotions manifested in 2013 (1.64 times compared to 2012). For 2012 and the period average there were found decreases by 9.88% and 23.96% respectively compared to the baseline.

Table 3 shows the trade balance of world barley trade.

The world trade balance for barley was weak in 2011 (USD -277,933 thousands), due to the surpluses recorded in Americas, Europe and Oceania: USD +534,594 thousands, USD +2,139,004 thousands and USD +1,262,187 thousands, and also due to the specific deficits registered especially by Africa and Asia: - USD 402,012 thousands, and respectively USD 3,811,706 thousands.

Table 3. Barley - The commercial balance of global trade - USD thousand (2011-2013)*

Specif.	2011	2012	2013	Average
	export - import ±	export - import ±	export - import ±	2011 - 2013 export - import ±
Africa	-402,012	-474,607	-679,423	-518,680.3
Americas	+534,594	+943,638	+823,211	+767,148.0
Asia	-3,811,706	-4,891,158	-5,523,424	-4,742,095.7
Europe	+2,139,004	+2,519,862	+3,151,573	+2,603,479.0
Oceania	+1,262,187	+1,360,387	+1,478,797	+1,367,124.0
Total	-277,933	-541,878	-749,266	-523,025.0
EU	+1,261,958	+1,175,963	+2,094,461	+1,510,794.0
Romania	+154,253	+156,573	+237,915	+182,913.7

* own calculation

In case of 2012, the trade balance keeps its deficient character (USD -541,878 thousands) as in the previous year, resulting mainly from the African and Asian deficits (USD -474,406

thousands and USD -4,891,158 thousands), which could not be offset by surpluses of other continents: USD +943,638 thousands, USD +2,519,862 thousands and USD +1,360,387 thousands, the specific values for Americas, Europe and Oceania respectively. When referring to the situation in 2013, it can be seen a deficit of the trade balance in Africa and Asia (USD -679,423 thousands, respectively USD -5,523,424 thousands), while the surplus was recorded in the Americas, Europe and Oceania USD +823,211 thousands, USD +3,151,573 thousands and USD +1,478,797 thousands. Therefore it was noticed a global trade balance deficit (USD -749,266 thousands).

The average of the period (Fig. 1) reflects a commercial balance deficit (USD -523,025,000), due to the situation at the continental levels: USD 2,603,479 thousands in Europe; USD +1,367,124 thousands in Oceania; Americas USD +767,148 thousands; USD -518,680.3 thousands in Africa; USD -4,742,095.700 thousands in Asia.

The European Union is characterized by a surplus in the commercial balance for barley, averaging USD +1,510,794 thousands, while the values by year have been: USD +1,261,958 thousands in 2011, USD +1,175,963 thousands in 2012 and USD +209,4461 thousands in 2013 (Fig. 2).

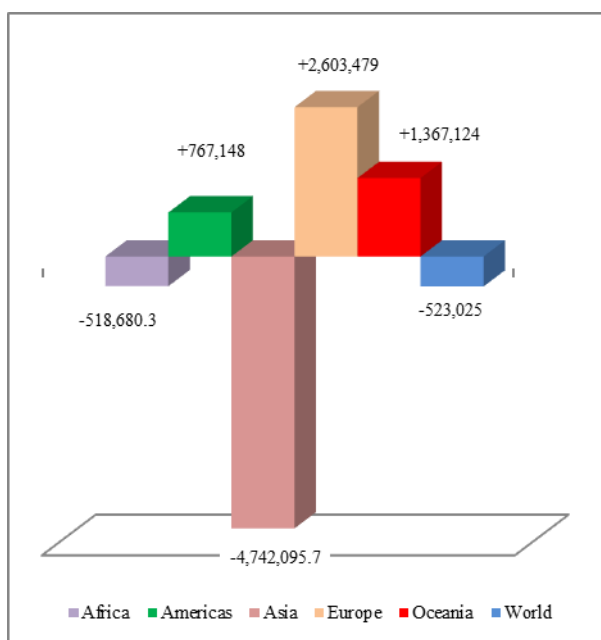


Fig. 1. Barley. Global trade balance, the period average

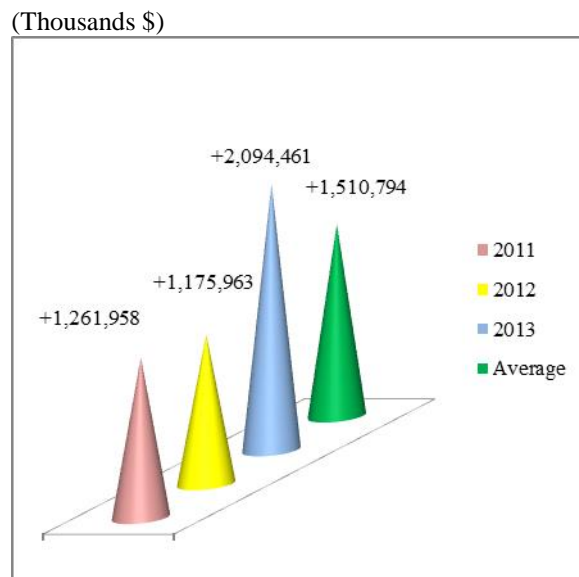


Fig. 2. Barley. The EU trade balance (Thousands \$)

Romania registered a positive trade balance for barley in the whole period (Fig. 3): USD +154,253 thousands in 2011, USD +156,573 thousands in 2012, USD +237,915 thousands in the year 2013, and USD +182,913.7 thousands for the period average.

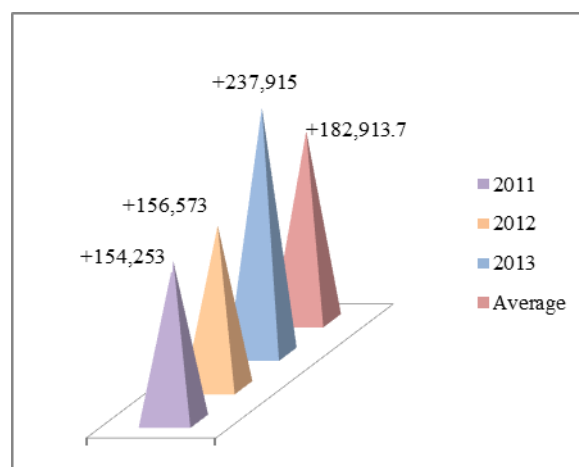


Fig. 3. Barley. Romania's trade balance, (thousand \$)

CONCLUSIONS

The study led to the following main conclusions:

- the predominance of Asia at the imported quantities (57.34%), followed by Europe with 31.24% and weights quite low for Africa, Americas and Oceania: 6.29%, 5.08% and 0.05%;
- in terms of value, imports were dominated by Asia (58.32%), followed by Europe (29.82%), the lowest weights being recorded

by Africa, Americas and Oceania (6.28%, 5.53% and 0.05% respectively);

- in terms of quantitative exports, Europe is the main market operator (64.32%), while Americas and Oceania weights tend towards 20% (15.91% and 17.33%), Asia and Africa accounting for reduced weights (2.38% and, respectively, 0.06 %);

- regarding the value of exports, Europe remains the main global player, followed at a considerable distance by Oceania and Americas: 64.76%, 17.36% and 15.60% respectively (increases for the first two units compared to the continental quantitative of the indicator decreases for Americas). Rest of the world recorded either increases or decreases in the global weights compared to the situation of the exported quantities: Africa from 0.06% to 0.12%, Asia from 2.38% to 2.16%. Romania has a share of 2.94% (-0.10% compared to the quantitative level of the indicator) and the European Union registered an increase of 2.19% (from 46.47% to 48.66%);

- the global balance is severely deficient, both in average and sequentially. This situation is caused by the deficit recorded by Asia, which is a decisive actor on the global market barley, and by Africa, the rest of the world recording surplus balances;

- The European Union is characterized by a surplus balance, and we can say that it decisively influenced European situation;

- Romania has a favorable situation, the surplus character of the balance was constantly noticed along the analyzed period.

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