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TENDENCIES REGARDING TRADE WITH OLEAGINOUS SEEDS OF ROMANIA

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Abstract

UE 28 became the number 1 world export with agricultural products and agro-foods in the year 2013. Romania's trade balance with this category of products became positive in the same year. Fruits and seeds from oleaginous plants is the second group of agro-food products, due to that we had competitive advantages and we managed to surplus for the commercial balance of agro-food products in 2013 and 2014. This paper proposes an analysis of foreign trade with oleaginous seeds in the period 2007-2014. By conducting different trade indicators, like the Grubel Lloyd indicator, the imports coverage degree by exports, but also the territorial concentration index, we could observe the commercial evolution of the oleaginous in the last few years. The high demands for oleaginous will lead to increasing production and trading.

Key words**:** *Balassa, evolution, Grubel Lloyd, oilseeds, Romania, trade*

INTRODUCTION

The analysis of the foreign trade activity is, like in the case of the other economical branches, of a major importance for establishing efficiency, identifying trades and the justification of specific decisions in this activity. [2] Oleaginous plants are those plants with a high content in fat within in seeds. The top oilseeds producers are USA, China, Brazil, India, Argentina and the European Union. E have to keep in mind that oilseeds are highly traded on the global market. [8] The highly increased demands on oilseeds occurs as a result of the processing them in vegetable oils, due to the augmentation of the population, but also of forage purposes or for processing into bio fuels. [9] In the year 2013 the value of the agricultural output for UE 28 was unchanged in the real terms. Higher production volumes were recorded, but for cereals and oleaginous, with about 6% each, the crop production prices have dropped substantially. [1] Romania has a higher capacity of production, and exports of agro-food products are based, mainly, on raw materials, lesser processed products. [7]

MATERIALS AND METHODS

The data processed in this article were obtained from the Ministry of Agriculture and Rural Development. To characterize the evolution of foreign trade in perspective of parallel evolution of two streams of goods it uses the imports coverage degree by exports.
Proportional development of the economy requires that between export and import has to be a balanced report, that results in the circulation of goods from outside the country, and vice versa, to present a surplus balance. The imports coverage degree by exports characterized such cases, being able to show an extent in which the balance is not achieved. The imports coverage degree by exports is an indicator of economic competitiveness and is calculated by the following formula: [3]

$$G_a = \frac{E}{M} x100$$

$G_a$represents the imports coverage degree by exports;
E – values of exports; M – values of imports.
Grubel – Lloyd indicator, which is denoted as "GL", expresses the intensity of trade in a branch. This indicator helps to determine the place that occupies a country's foreign trade in

the economic branch by highlighting exports and imports of a product category by total imports and exports of the country. [6]

This indicator is calculated using the following formula: [5]

$$GL=\frac{\sum_{i=1}^{n}|X_i+M_i|-\sum_{i=1}^{n}|X_i-M_i|}{\sum_{i=1}^{n}|X_i+M_i|}=1-\frac{\sum_{i=1}^{n}|X_i-M_i|}{\sum_{i=1}^{n}|X_i+M_i|}$$

where:

X_i = exports from *i* class products;

M_i = imports from *i* class products;

Grubel – Lloyd indicator can have any value between 1 and 0, and as the branch trade is closer to 1, it is considered more significant.

The Balassa Indicator, (IB), the branch trade flows is determined by the relationship:

$$IB=\frac{X_i-M_i}{X_i+M_i}$$

where: X_i indicates the *i* branch exports; M_i indicates the *i* branch imports.

The indicator can have values between -1, in which case the country performs only imports, and +1, when only exports are achieved, the maximum intensity of internal branch is performed when the indicator is zero. [4]

RESULTS AND DISCUSSIONS

The imports coverage degree by exports for the oleaginous seeds and fruits is represented in Fig.1. As it can be seen, the exports represent 175.52% out of the imports in the year 2007, slightly increase in 2008 and decreases in 2012, and in 2014 knows a value of 334.56%.

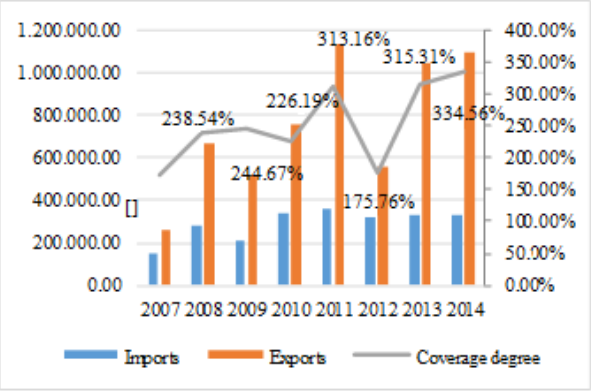

Fig. 1. The imports coverage degree by exports of the oleaginous seeds and fruits group in the period of 2007 – 2014

Source: MADR and own calculations

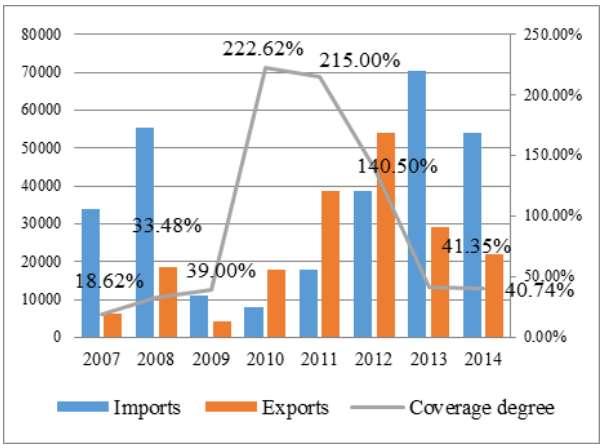

Fig. 2. The imports coverage degree by exports for soya beans, whether or not crushed in the period of 2007 – 2014

Source: MADR and own calculations

Figure 2 presents the imports coverage degree by exports for soya beans. It can be seen that the value of exports is only 0.42% in 2007, 0.87% in 2008, 0.44% in 2009, 2.29% in 2010, 0.29% in 2011 and 0.64% in 2012, increasing in the last two years at 19.48% and 13.16%.

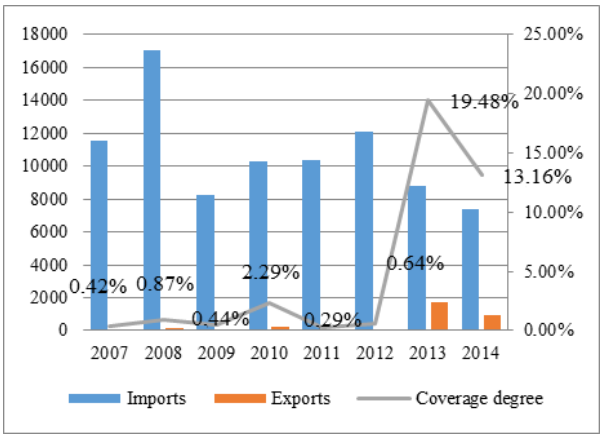

Fig. 3. The imports coverage degree by exports for ground nuts, not roasted or otherwise cooked, whether or not shelled or crushed in the period of 2007 – 2014

Source: MADR and own calculations

Figure 3 shows the indicator calculated for ground nuts. It can be observed that only in a few years there is a surplus in the period of 2007 - 2014. Exports represents 18.62% out of the imports value in 2007, fluctuating over the years and reaching 222.62% in 2010, declining after and becoming 40.74% in 2014.

As shown in Fig. 4, copra is marketed only in a few years in the period of study. The highest imports coverage degree by exports is found in the year 2009, when it's 35.57%.

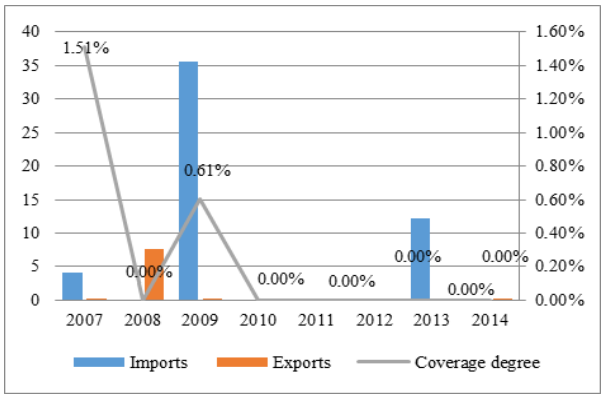

Fig. 4. The imports coverage degree by exports for copra in the period of 2007 – 2014
Source: MADR and own calculations

When discussing linseed, we notice in Figure 5 that trade increased strongly compared to the first two years, when the balance is lacking. The imports coverage degree by exports is maintained since 2009 at 190%.

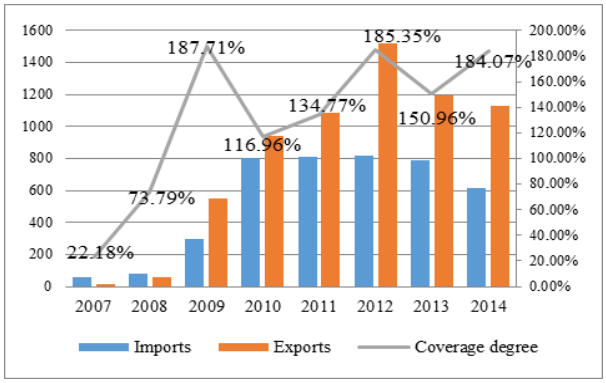

Fig. 5. The imports coverage degree by exports for linseeds, whether or not crushed in the period of 2007 – 2014
Source: MADR and own calculations

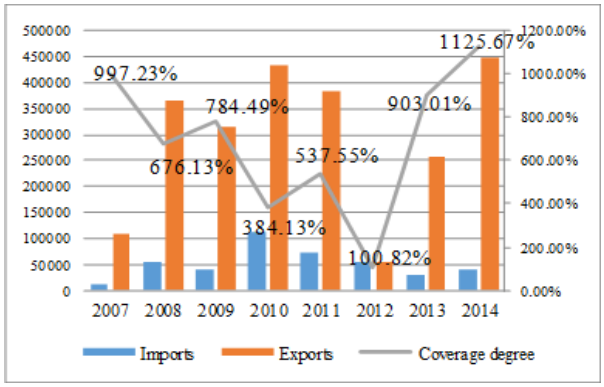

Fig. 6. The imports coverage degree by exports for colza seeds, whether or not crushed in the period of 2007 – 2014
Source: MADR and own calculations

Figure 6 illustrates the imports coverage degree by exports for colza seeds. Except for the year 2012, when trade is highly low compared to the rest of the analyzed period, the coverage is 100.82%, the exports value covering in the year 2014 is 1,125.67% out of imports value.

The indicator for sunflower seeds is shown in Figure 7. The product is the main in the oleaginous seeds and fruits category in which we surplus. The imports coverage degree by exports varies from 332.49% in 2007 to 189.28% in 2009 to 545.63% in 2013 and 439% in 2014.

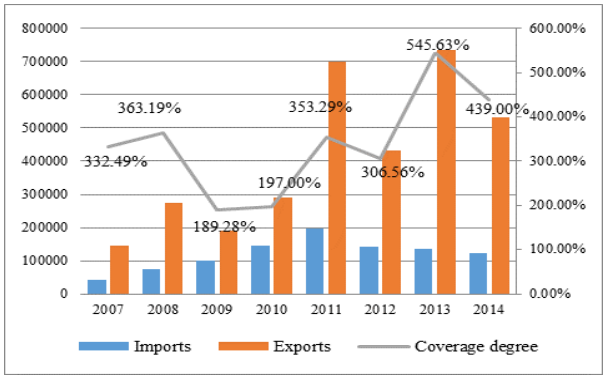

Fig. 7. The imports coverage degree by exports for sunflower seeds, whether or not crushed in the period of 2007 – 2014
Source: MADR and own calculations

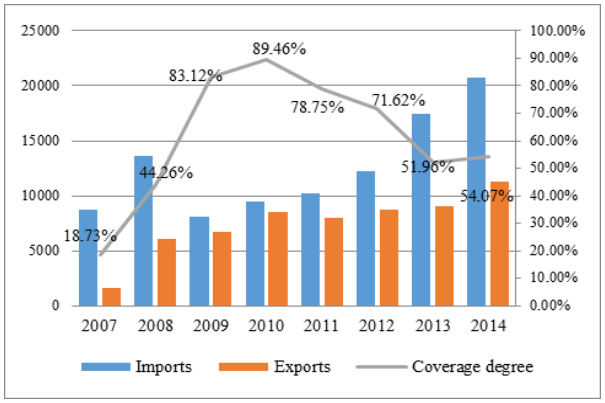

Fig. 8. The imports coverage degree by exports for other oleaginous fruits and seeds, whether or not crushed in the period of 2007 – 2014
Source: MADR and own calculations

The trade for other oleaginous seeds and fruits remain at approximately the same level, as can be seen in the figure below. The exports represent only 18.73% out of the imports in the year 2007, the coverage degree increases until the year 2010, when it's 89.46%, and then again suffers a decrease until it reaches an equal to 54.07% in the tear 2014.

The indicator for flour and semolina from oleaginous seeds and fruits is represented in

figure 9. As can be seen the value of imports is higher than that of the exports, the imports coverage degree by exports being 6.98% in 2007, 7.18% in 2008, 16.34% in 2009 and becoming 88.89% in 2010. In 2012 the value of exports covers 16.67% out of the imports value, and in 2014, 11.60%.

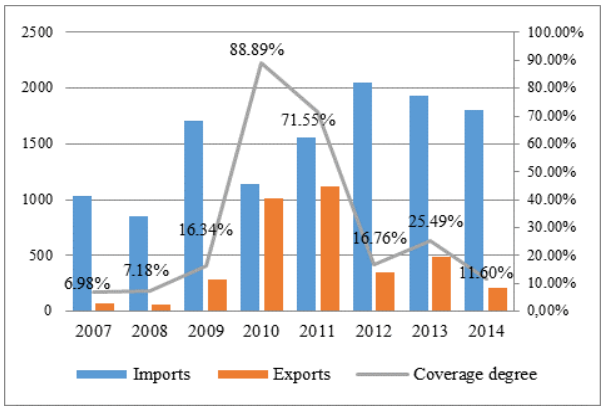

Fig. 9. The imports coverage degree by exports for flour and semolina from oleaginous fruits and seeds in the period of 2007 – 2014
Source: MADR and own calculations

Figure 10 shows us the imports coverage degree by exports for seeds, fruits and spores, of a kind, used for sowing, where it can be seen very low valued of the exported products. The indicator fluctuates between 2007 and 2014 from 3.02% to 11.90%.

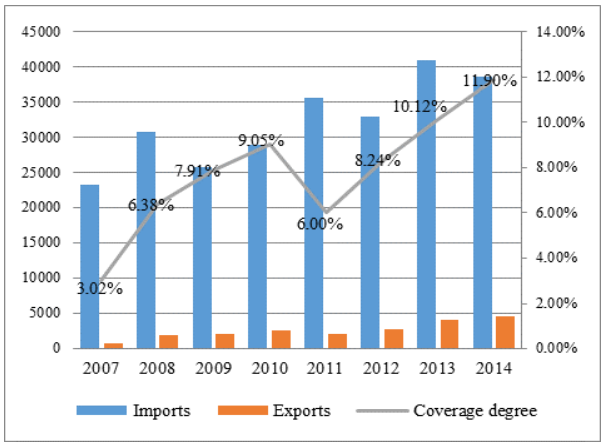

Fig. 10. The imports coverage degree by exports for seeds, fruits and spores, of a kind, used for sowing in the period of 2007 – 2014
Source: MADR and own calculations

Hop cones, fresh or dries, have the indicator calculated, illustrated in figure 11. As we can see the highest value is the coverage in 2007, is 2.59% in 2009, 2013, 2014 Romania did not realize hop exports.

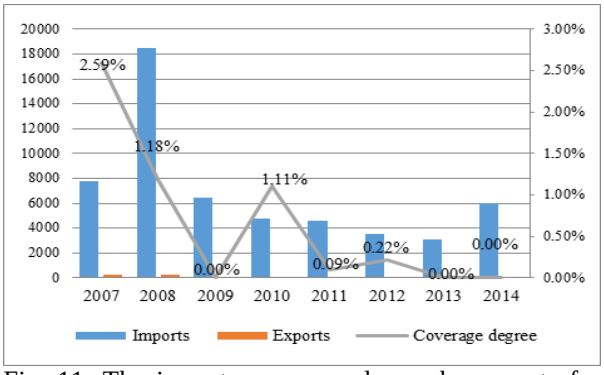

Fig. 11. The imports coverage degree by exports for hop cones, fresh or dries, whether or not ground, powdered or in the form of pallets, poppies in the period of 2007 – 2014
Source: MADR and own calculations

The group of plants and parts of plants has the imports coverage degree by exports represented in Fig. 12. It can be noted that trade deficits throughout the period, with the lowest coverage in 2010 of 36.48% and the highest in 2014, of 76.53%.

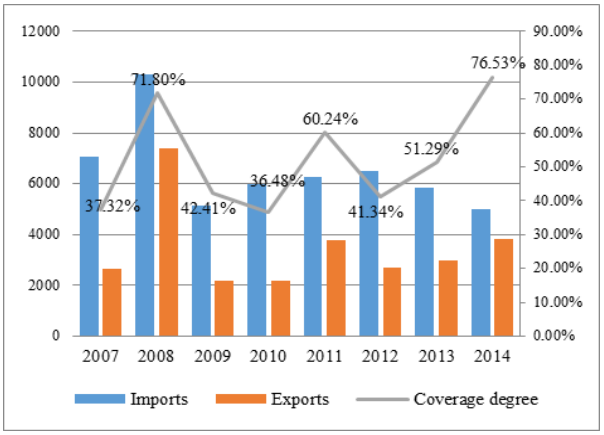

Fig. 12. The imports coverage degree by exports for plants and parts of plants in the period of 2007 – 2014
Source: MADR and own calculations

Figure 13 represents the imports coverage degree by exports for locust beans, seaweeds, sugar beet and sugar cane, a group of products inserted in the year 2013. It is noted that the indicator acknowledges a descendent trend from 9.11% in 2013 to 5.90% in 2014.
The only year in which the group of thatch and chaff of gross grains is surplus is 2011, when the value of exports covers 221.35% of the value of imports.

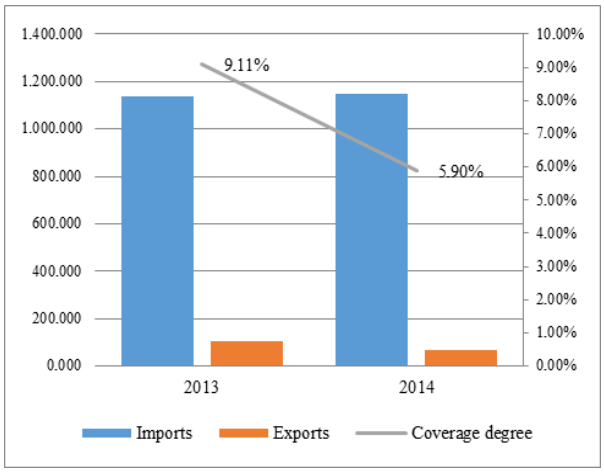

Fig. 13. The imports coverage degree by exports for locust beans, seaweeds, sugar beet and sugar cane, fresh in the period of 2007 – 2014
Source: MADR and own calculations

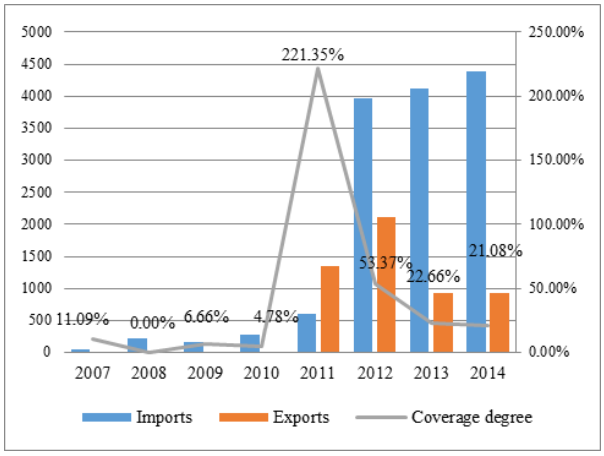

Fig. 14. The imports coverage degree by exports for thatch and chaff of gross grains, whether or not chopped, ground in the period of 2007 – 2014
Source: MADR and own calculations

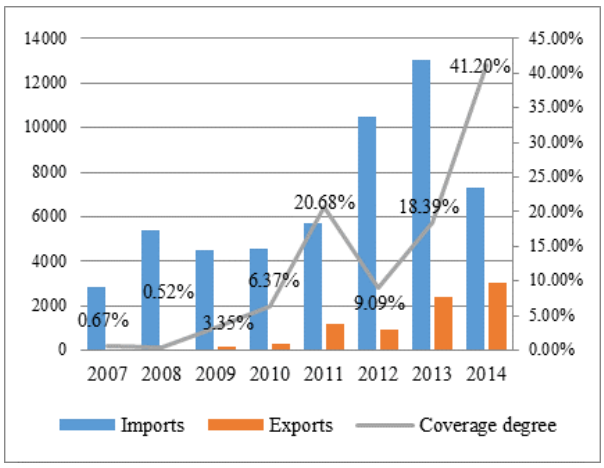

Fig. 15. The imports coverage degree by exports for foddered kohlrabi, foddered beet, foddered roots, hay, alfalfa in the period of 2007 – 2014
Source: MADR and own calculations

We note that in 2008 we did not export at all, and the indicator is low for the period of 2007-2010, the coverage degree being 53.37% in 2012 and around the value of 20% in 2013 and 2014.

The imports coverage degree by exports for foddered kohlrabi, foddered beet, foddered roots, hay and alfalfa is illustrated in figure 15. It can be noted that the export is almost nonexistent in 2007 and 2008, and the export value covers most of the import value in 2014, 41.20%.

In table 1, the Grubel – Lloyd indicator for oleaginous seeds and fruits is calculated. It can be observed that trade with fruits and oilseeds are significant, with values of over 0.46. We can see a significant trade of colza in 2008, when the indicator is 1, and also, the indicator is significant for linseed, other oleaginous seeds and fruits. Very low values, significantly in a less specific trade, insignificant even, we can observe in the case of hop cones, also for seeds, fruits and spores, of a kind, used for sowing and ground nuts, not roasted or otherwise cooked.

Balassa Indicator for the oleaginous fruits and seeds, where we can see that it is negative for most products, which shows that most products from the oleaginous group are imported and we surplus thanks to linseed, rapeseed, sunflower, which are sold in large quantities. Ground nuts are a category of products that we basically import only, along colza, seeds, fruits and spores, of a kind, used for sowing. (Table 2).

Romania's main trading partners for exports with soybeans are Germany, with almost 40%, Italy with 21.27%, Austria, Hungary, Greece, Serbia, the Netherlands, but also other countries with which trade are not as significant, including Portugal, Bulgaria, Switzerland, Slovenia, Moldova, United Kingdom, France, and Spain. In exchange, as can be seen in Figure 17 we import from Argentina, Ukraine, Moldova, Brazil, Canada, Bulgaria and other countries.

Table 1. Grubel – Lloyd indicator for oleaginous seeds and fruits

	2007	2008	2009	2010	2011	2012	2013	2014
Oleaginous fruits and seeds	0.73	0.59	0.58	0.61	0.48	0.73	0.48	0.46
Soya beans, whether or not crushed	0.31	0.50	0.56	0.62	0.63	0.83	0.59	0.58
Ground nuts, not roasted or otherwise cooked	0.01	0.02	0.01	0.04	0.01	0.01	0.33	0.23
Copra	0.03	0.00	0.01	-	-	-	0.00	0.00
Linseeds, whether or not crushed	0.36	0.85	0.70	0.92	0.85	0.70	0.80	0.70
Colza seeds, whether or not crushed	0.18	0.26	0.23	0.41	0.31	1.00	0.20	0.16
Sunflower seeds, whether or not crushed	0.46	0.43	0.69	0.67	0.44	0.49	0.31	0.37
Other oleaginous fruits and seeds, whether or not crushed	0.32	0.61	0.91	0.94	0.88	0.83	0.68	0.70
Flour and semolina from oleaginous fruits and seeds	0.13	0.13	0.28	0.94	0.83	0.29	0.41	0.21
Seeds, fruits and spores, of a kind, used for sowing	0.06	0.12	0.15	0.17	0.11	0.15	0.18	0.21
Hop cones, fresh or dries, whether or not ground, powdered or in the form of pallets, poppies	0.05	0.02	0.00	0.02	0.00	0.00	0.00	0.00
Plants and parts of plants	0.54	0.84	0.60	0.53	0.75	0.59	0.68	0.87
Locust beans, seaweeds, sugar beet and sugar cane, fresh	-	-	-	-	-	-	0.17	0.11
Thatch and chaff of gross grains, whether or not chopped, ground	0.20	0.00	0.12	0.09	0.62	0.70	0.37	0.35
Foddered kohlrabi, foddered beet, foddered roots, hay, alfalfa	0.01	0.01	0.06	0.12	0.34	0.17	0.31	0.58

Table 2. Balassa Indicator for the oleaginous fruits and seeds

	2007	2008	2009	2010	2011	2012	2013	2014
Oleaginous fruits and seeds	0.266	0.409	0.420	0.387	0.516	0.275	0.518	0.540
Soya beans, whether or not crushed	-0.686	-0.498	-0.439	0.380	0.365	0.168	-0.415	-0.421
Ground nuts, not roasted or otherwise cooked	-0.992	-0.983	-0.991	-0.955	-0.994	-0.987	-0.674	-0.767
Copra	-0.970	1.000	-0.988	-	-	-	-1.000	1.000
Linseeds, whether or not crushed	-0.637	-0.151	0.305	0.078	0.148	0.299	0.203	0.296
Colza seeds, whether or not crushed	0.818	0.742	0.774	0.587	0.686	0.004	0.801	0.837
Sunflower seeds, whether or not crushed	0.538	0.568	0.309	0.327	0.559	0.508	0.690	0.629
Other oleaginous fruits and seeds, whether or not crushed	-0.684	-0.386	-0.092	-0.056	-0.119	-0.165	-0.316	-0.298
Flour and semolina from oleaginous fruits and seeds	-0.869	-0.866	-0.719	-0.059	-0.166	-0.713	-0.594	-0.792
Seeds, fruits and spores, of a kind, used for sowing	-0.941	-0.880	-0.853	-0.834	-0.887	-0.848	-0.816	-0.787
Hop cones, fresh or dries, whether or not ground, powdered or in the form of pallets, poppies	-0.950	-0.977	-1.000	-0.978	-0.998	-0.996	-1.000	-1.000
Plants and parts of plants	-0.456	-0.164	-0.404	-0.465	-0.248	-0.415	-0.322	-0.133
Locust beans, seaweeds, sugar beet and sugar cane, fresh	-	-	-	-	-	-	-0.833	-0.889
Thatch and chaff of gross grains, whether or not chopped, ground	-0.800	-1.000	-0.875	-0.909	0.378	-0.304	-0.630	-0.652
Foddered kohlrabi, foddered beet, foddered roots, hay, alfalfa	-0.987	-0.990	-0.935	-0.880	-0.657	-0.833	-0.689	-0.416

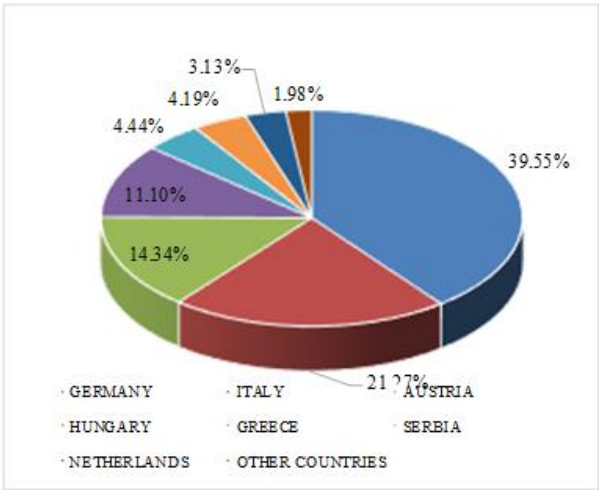

Fig. 16. Soya beans exports
Source: Own calculations based on MADR data

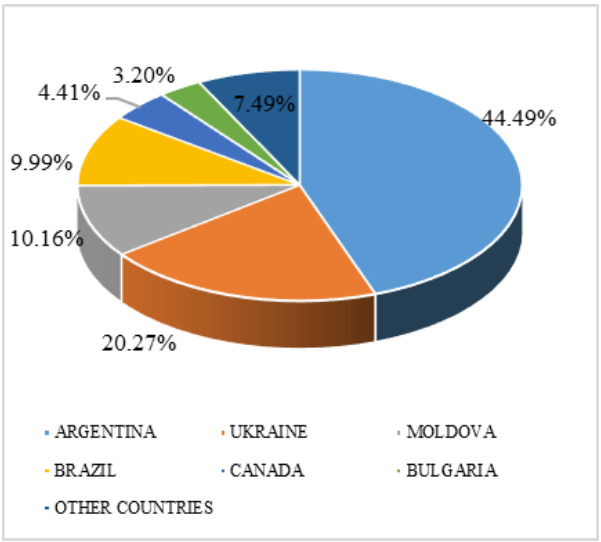

Fig. 17. Imports with soya beans
Source: Own calculations based on MADR data

Linseeds are exported in proportion of 41.37% in Italy and 40.04% in Germany, but also in smaller proportions in Austria, the Netherlands, and also in Hungary and the United Kingdom.

Imports take place in many countries of the world, among which Ukraine, Poland, Germany, Hungary and other countries.

Trading partners for the export with rapeseed are more numerous, among the most important listing: Belgium, the Netherlands, Pakistan, Turkey, United Arab Emirates, and also other countries, as it can be seen in Fig. 20.

Instead we import rapeseed from only a few countries, among which France in proportion of 32.23%, Bulgaria 29.80%, Germany 22.07% and other courtiers.

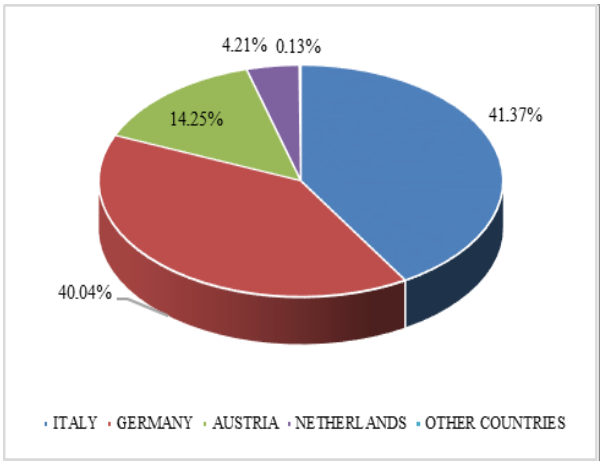

Fig. 18. Exports with linseeds
Source: Own calculations based on MADR data

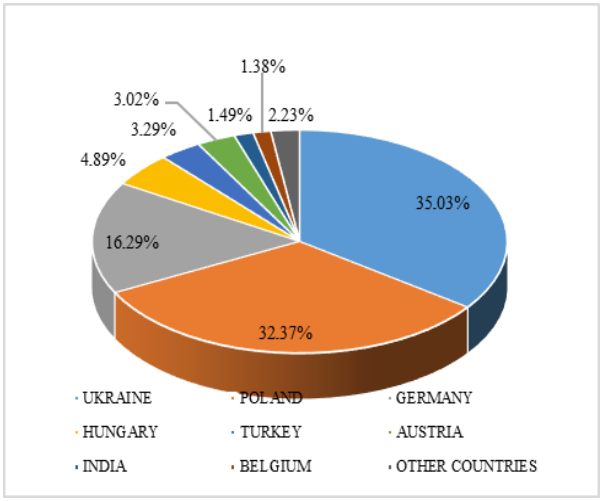

Fig. 19. Imports with linseeds
Source: Own calculations based on MADR data

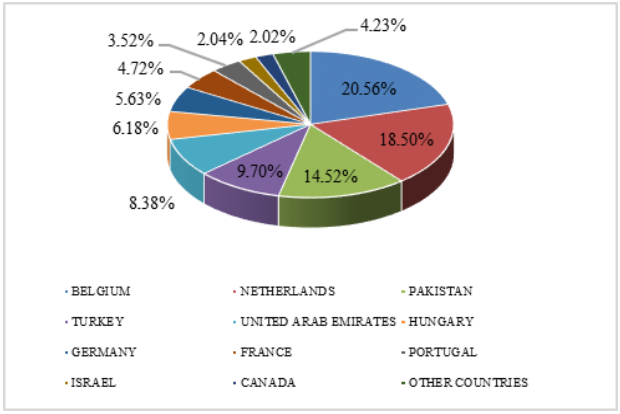

Fig. 20. Exports with rapeseeds
Source: Own calculations based on MADR data

The year 2013 was characterized by an increase in production by 83% from 2008. [8]

It can be observed that the trade with sunflower seeds in 2014 is achieved by a variety of partners both EU member states, and external countries.

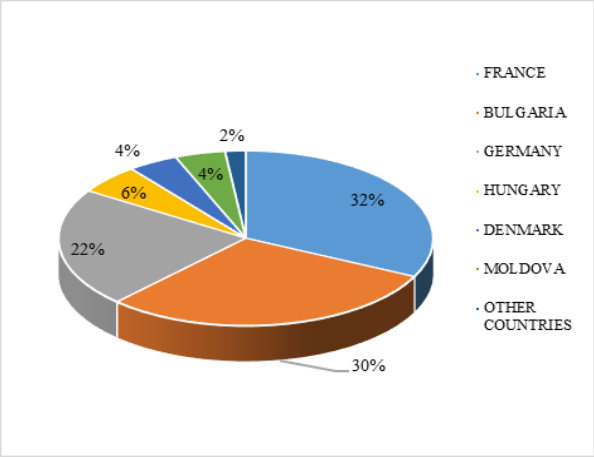

Fig. 21. Imports with rapeseeds
Source: Own calculations based on MADR data

Among the most important, as can be seen in Figure 22, are France, Turkey, Pakistan, the Netherlands, Hungary, Spain, Italy, Portugal, South Africa, Bulgaria, and other countries.

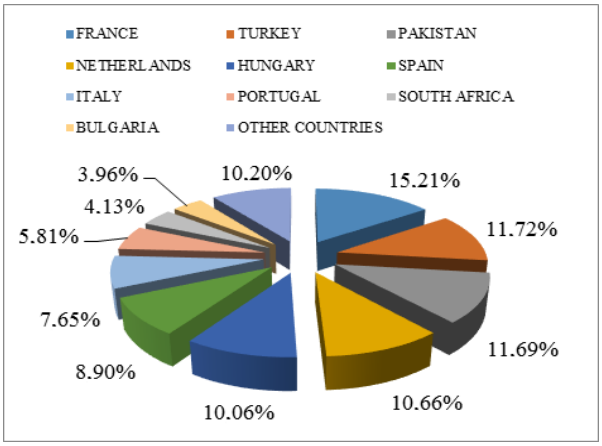

Fig. 22. Exports with sunflower seeds
Source: Own calculations based on MADR data

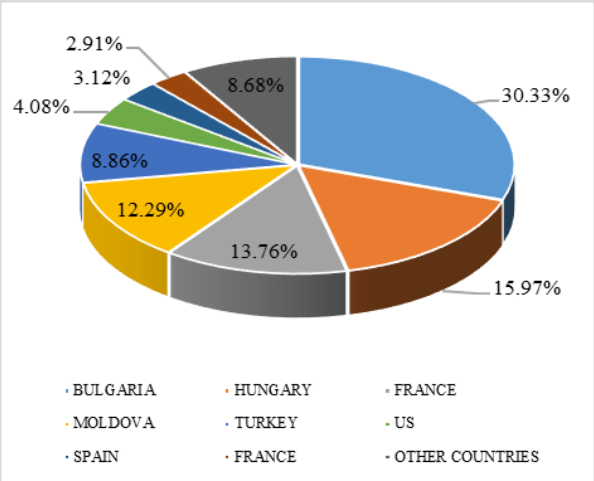

Fig. 23. Imports with sunflower seeds
Source: Own calculations based on MADR data

Romania imports sunflower seeds mainly from Bulgaria, Hungary, France, Moldova, Turkey, and other countries, as shown in Fig. 23.

CONCLUSIONS

Romania's trade with agro-food products has exceeded in the last two years. The oleaginous fruits and seeds group is one of the main reasons we register surplus.

By using the commercial indicators Grubel – Lloyd, Balassa, the imports coverage degree by exports, we could observe the evolution of the trade with oleaginous in Romania. The value of exports exceeds that of the imports during the analysis period, knowing the peak of the imports coverage degree by exports in 2014, of 334.56%. The soya beans are usually imported, and the exports cover only a little amount or even a non-existent value of them.

Ground nuts known a fluctuating dynamic, only in the years of 2010, 2011, 2012 were characterized by a positive balance.

Copra is marketed only in a few years in Romania during the analyzed period and is usually imported.

Linseeds know a deficiency only in 2007, the value of exports covering the imports in the rest of the years with a minimum of 16.96% and a maximum of 87.71%.

If we study the imports coverage degree by exports for colza seeds, we can see a very low value in 2012 and in 2014 a maximum of 1125.67%.

Sunflower is also a product from the oleaginous group that we trade strongly.

From the oleaginous group, a surplus is in the case of thatch and chaff of gross grains in the year 2011, the rest of the agricultural products registers a negative trend.

Romania's main trading partners in trade with oilseeds are the EU States members, but also we can observe that we import soya beans from Argentina, Brazil and Canada, linseeds from Turkey, India and we export sunflower in South Africa and Pakistan.

Due to the increased demands for oilseeds we can see a boost of the trade with them in the last years.

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