

RESEARCHES ON OILSEEDS MARKET IN ROMANIA

Elena SOARE, Livia DAVID, Aurelia-Vasilica BĂLAN

¹University of Agricultural Sciences and Veterinary Medicine Bucharest, 59 Marasti, District 1, Zip Code 11464, Bucharest, Romania, Phone/Fax: 00 40 744 6474 10, Email: elena_soare@hotmail.com, Email: livia_david@hotmail.com, Email: aurelia_florescu2004@yahoo.com

Corresponding author: elena_soare@hotmail.com

Abstract

This scientific paper presents the evolution of oilseeds market in Romania, during the period 2008-2013. In order to show as concise as possible the reality of the oilseeds sector, the research pictures, on the one hand, an evolution of oilseeds specific indicators and on the other hand, an evolution of external trade. Romania disposes of tradition and favourable pedo-climatic conditions for cultivating the oilseeds plants. This is demonstrated by the favourable results obtained in the last years, especially concerning the sunflower crop. In 2013, Romania registered a record for sunflower, occupying the first position in the European Union for cultivated area and production. A negative aspect is represented by the fact that our country has the best conditions in Europe for soybean crop, but it is still dependent on import. Romania imports a huge quantity of soybean oilcakes for animal feeding. Nowadays, Romania is an important actor in the sunflower world market, covering almost 19% of the global demand. In perspective, one could expect significant oilseeds productions with a positive influence on the agro-food trade balance in our country.

Key words: export, import, oilseeds, production, price

INTRODUCTION

Oilseeds plants are those species that have seeds with significant quantities of fat of liquid form, called oils. These oils could be extracted relatively easily by industrial processes. Nowadays, worldwide we assist at a growth of global oilseeds production. This increase of production is based on the one hand on an a growth of areas cultivated with oilseeds plants, and on the one hand, on an accession of the yield per hectare due to the use of some quality hybrids. Worldwide, the most representative oilseeds producers are: the USA, China, Brazil, India, Argentina and the European Union. It is good to take into account the fact that seeds of oilseeds plants are being very good traded on the global market [10]. An important indicator that influences the world demand and supply is represented by the price over the international market. It has a strong informational consignment, being the basis of economic agents decisions [1,2,6]. Romania is an important actor over oilseeds market because it produces a significant quantity of sunflower

for export. An evaluation should be made in this context, as follows: when the domestic demand of raw materials for processing increases, exports will be reduced [10]. In this situation, one could impose an increase of yield per hectare and cultivating surfaces which are not currently being used.

MATERIALS AND METHODS

In order to realize this research, there were used statistical data referring to land surfaces cultivated with oilseeds plants, their seeds productions, the average yield per hectare of oilseeds, sunflower production per capita, prices of oilseeds, import and export of oilseeds. These data were given by FOASTAT and the National Institute of Statistic. There were also consulted a series of books, magazines and speciality studies in order to show as concise as possible the evolution of domestic market of oilseeds.

RESULTS AND DISCUSSIONS

In Romania, oilseeds crops register a high weight of the total cultivated area. In table

no.1 is presented the evolution of oilseeds surface in Romania, during 2008-2013. There are being analyzed three oilseeds crops, such as: sunflower; rape and soybeans. The evolution of surfaces for cultivation is surprised on three phases, as following: total; in private sector and through individual agricultural exploitations. The most widespread oilseeds surface is the sunflower one. For Romania, this crop is a traditional one and it has an important place within the European countries that cultivate sunflower. It is due, mainly, to autochthon farmers that appreciate this crop because it has a simple cultivating technology. In terms of which the market is continuous subjected to a competitive pressure, this crop corresponds to farmers' aim, as follows: cultivating certain plants with reduced costs that allow an increase of profitability [9]. One must specify that after 1989, the area cultivated with sunflower recorded a constant growth [9]. During 2008-2013, the area cultivated with sunflower varied between 766.0-1,074.5 thousands ha. The largest surface cultivated with sunflower was of 1,074.5 thousands ha, in 2013. During this year, the area cultivated with sunflower had increased with 32% than in 2008. In accordance with data given by the National Institute of Statistics, in 2013, Romania occupied the first place in European Union, concerning the surface cultivated with sunflower [20]. Romania's most favourable areas for sunflower crops are the ones in Romanian Plain, south of Dobrogea and Oltenia Plain. Within these areas, the soil is chernozem type, with high content in nutrients. Analyzing the less favourable areas, one must take into account the following: Jijiei Plain, Barladului Plateau and Transylvania Plain. Here, the soils present a reduced fertility, erosion phenomena from moderate to excessive, as well as a temporary excess or deficit of water [18].

This thing is also demonstrated by the data given by Eurostat for 2013, as following: Romania (1068.0 thousands ha); France (770.6 thousands ha); Bulgaria (751.0 thousands ha); Croatia (40.0 thousands ha); Germany (21.9 thousands ha); Austria (21.8

thousands ha); Czech Republic (21.3 thousands ha) [11]. According to statistical data for 2014, the area cultivated with sunflower has one million hectares, representing a similar level with 2013 [15]. Concerning the area cultivated with rape, it has an oscillatory evolution during the analyzed period of time. The largest surface was of 537.3 thousand ha (2010), while the smallest one was of 105.2 thousands ha (in 2012). In 2013 it had decreased over the total with 24.3% than in 2008. According to the data given by Eurostat, in 2013, the total surface cultivated with rape was of 6,732.8 thousands ha, within the European Union. Germany and France had the largest surfaces cultivated with rape [19]. There is a strong connection between the surfaces cultivated with oilseeds and the oilseeds realized production. In table 2 one could observe the evolution of oilseeds production in Romania, during 2008-2013.

In 2013, sunflower production recorded an increase with 83% than in 2008. One must present the sunflower production's evolution realized by Romania starting with 2007 when our country joined the European Union. That year, our country was on the fifth place in the top of the countries that produced sunflower, showing the tradition of sunflower crop and Romania's productive potential. In 2012, Romania had the second place after France, because it recorded a yield reduced with 18.1% than the medium one within the European Union [16]. Concerning the sunflower realized production in 2013, in accordance with the data given by Eurostat, Romania had the biggest production of the Member States. According with the data given by Eurostat, the productions realized for this year registered the following values: Romania (2,035.0 thousand tons); Bulgaria (1,802.0 thousand tons); France (1,580.1 thousand tons); Croatia (96.0 thousand tons); Austria (53.0 thousand tons); Czech Republic (49.8 thousand tons); Germany (49.4 thousand tons) [11]. The sunflower production registered in 2013 was the highest of the last three decades [15]. Sunflower supply in Romania is big, especially due to a considerable demand over

the export markets [7]. Experts draw attention on the efficiency of sunflower production in Romania: a pretty high degree it depends on the irrigation system. One could easily observe that the sunflower crop in irrigated system is more efficient than the one realized in an un-irrigated system [8]. In this case, are being advantaged the associations of agricultural producers who could support the irrigation expenditures. Small individual exploitations do not have enough money to realize some investments for the irrigation system, soil fertilization and for the application of modern technologies [4]. Rape production registered a slight decrease over fuel market.

the total, in 2013 (1.2%) in comparison with 2008. This year (2014), colza production has a value of 1.089 millions of tons, being the best harvest from 1970 to present [13]. An important aspect is represented by the fact that the colza production has an outlet market ensured, which constantly contributes to obtain positive economic-financial results among the farmers. Nowadays, worldwide, colza, corn and soybeans production surplus is used for biodiesel production, used at tractors, propelled agricultural machineries and cars. According to the 2003/30/CE EU Directive for promoting renewable fuel, until 2020 bio-fuels should cover 20% of the

Table 1. Surface evolution for the main oilseeds in Romania, during 2008-2013 (thousands ha)

Specification	2008	2009	2010	2011	2012	2013	2013/2008(%)
Sunflower	TOTAL						
	813.8	766.0	790.8	994.9	1,067.0	1,074.5	132.0
	Private sector						
	809.1	760.8	782.5	988.1	1,053.9	1,069.5	132.1
Rape	of which: Individual agricultural exploitations						
	436.3	407.3	365.6	479.3	455.1	463.6	106.2
	TOTAL						
	364.9	419.9	537.3	392.6	105.2	276.5	75.7
Soybean	Private sector						
	360.5	415.3	528.9	388.4	103.2	274.5	76.1
	of which: Individual agricultural exploitations						
	65.5	87.8	83.1	68.1	13.6	45.9	70.0
Soybean	TOTAL						
	49.8	48.8	63.9	72.0	79.7	67.6	135.7
	Private sector						
	49.4	48.1	63.0	70.6	78.3	66.7	135.0
Soybean	of which: Individual agricultural exploitations						
	10.9	13.4	14.5	14.4	32.5	28.7	263.3

Source: [21]; own calculations

In the field of rape crops, one should observe that it is a crop with important economic and ecological benefits [23]. The increase of oilseeds productions was also possible on the strength of supporting these crops. The main forms of support are being presented in table 3. In table 4 there is presented an evolution of medium production of oilseeds per hectare. Medium production of sunflower seeds per hectare varied between 1310-1993 kg/ha. In 2013 medium production of sunflower seeds increased over the total with 38.6% in comparison with 2008. Within the individual agricultural exploitations, the medium production of sunflower increased with 33.6% in 2013 than in 2008. In 2013, according to

the data given by Eurostat, it was obtained an yield of 1,999 kg/ha in comparison with other states in European Union that produce sunflower, such as: Austria (2,431 kg/ha); Croatia (2,400 kg/ha); Bulgaria (2,399 kg/ha); Czech Republic (2,388 kg/ha); Germany (2,256 kg/ha); France (2,050 kg/ha) [11]. Rape medium production varied between 1,357 and 2,408 kg/ha. In 2013 it recorded an increase of 30.5% than in 2013. Within the individual agricultural exploitations, medium production increased with 1.6% in 2013 in comparison with 2008. Soybean medium production varied between 1,308 and 2,345 kg/ha. The biggest production was in 2010, and the smallest, in 2012. In 2013, soybean

medium production increased with 21.9% than in 2008. Within individual agricultural exploitations, in 2013, it decreased with 16.8% than in 2008. We should remember

that Romania is the only European country that could obtain very good results for soybean crops because it has the best conditions for this plant's development [12].

Table 2. The evolution of oilseeds production in Romania, 2008-2013 (thousand tons)

Specification	2008	2009	2010	2011	2012	2013	2013/2008 (%)
Sunflower	TOTAL						
	1,169.9	1,098.0	1,262.9	1,789.3	1,398.2	2,142.0	183.0
	Private sector						
	1,163.2	1,090.0	1,248.2	1,778.0	1,379.8	2,132.0	183.2
Rape	of which: Individual agricultural exploitations						
	591.9	529.9	558.2	843.2	482.3	840.6	142.0
	TOTAL						
	673.0	569.6	943.0	738.9	157.5	666.0	98.8
Soybean	Private sector						
	663.5	563.1	925.8	730.8	153.9	661.0	99.6
	of which: Individual agricultural exploitations						
	136.8	106.5	139.3	115.6	17.8	97.5	71.2
Soybean	TOTAL						
	90.5	84.2	149.9	142.6	104.3	149.9	165.6
	Private sector						
	89.8	83.4	147.9	140.0	102.4	148.2	165.0
Soybean	of which: Individual agricultural exploitations						
	26.6	18.3	28.3	23.9	26.8	58.2	218.7

Source: [21]; own calculations

Table 3. Forms of support for oilseeds crops in Romania

Crop	Forms of support
Sunflower	-single area payment scheme (SAPS); - complementary national direct payments (CNDP); - insurance premium subsidy.
Rape	- single area payment scheme (SAPS);- complementary national direct payments (CNDP); - insurance premium subsidy.
Soybean	- single area payment scheme (SAPS); - complementary national direct payments (CNDP); - insurance premium subsidy.

Source: [22]

Table 4. The evolution of oilseeds medium production per hectare in Romania, during 2008-2013 (kg)

Specification	2008	2009	2010	2011	2012	2013	2013/2008 (%)
Sunflower	TOTAL						
	1,437	1,433	1,597	1,798	1,310	1,993	138.6
	Private sector						
	1,438	1,433	1,595	1,799	1,309	1,993	138.5
Rape	of which: Individual agricultural exploitations						
	1,357	1,301	1,527	1,759	1,060	1,813	133.6
	TOTAL						
	1,844	1,357	1,755	1,882	1,496	2,408	130.5
Soybean	Private sector						
	1,840	1,356	1,750	1,881	1,492	2,408	130.8
	of which: Individual agricultural exploitations						
	2,089	1,213	1,676	1,697	1,310	2,124	101.6
Soybean	TOTAL						
	1,817	1,726	2,345	1,980	1,308	2,216	121.9
	Private sector						
	1,817	1,733	2,349	1,983	1,308	2,220	122.1
Soybean	of which: Individual agricultural exploitations						
	2,434	1,364	1,943	1,656	822	2,027	83.2

Source: [21]; own calculations

In table 5 there is presented the evolution of sunflower seeds production per capita, in Romania. This production varied between 53.9 and 107.2 kg. The lowest production per capita was of 53.9 kg in 2009, and the highest one was of 107.2 kg, recorded in 2013.

One could observe an increase of production per capita in 2013, with 87.7% than in 2008. In table 6 there are presented the prices for the main oilseeds in Romania, during 2008-2012. The price is an important variable in forming and influencing the consumption demand, in order to establish the volume and value of sales related to agricultural producers. Within the market economy, the price could influence the qualitative nature of the market, as well as its quantitative specific dimensions [3]. Rape's price oscillated between RON 970 and 1,830/tonne. The lowest price was being recorded in 2009, and the highest one, in 2012. In 2012, the price rose by 52.5% in comparison with 2008. The price for sunflower was situated between RON 880 and 1,880 per tonne. In 2012, the price was by 57.9% higher than in 2008. The price for soybean varied between RON 960 and 1,710 per tonne. The price for soybean rose in 2012 by 76.2 % compared to 2008.

In table 7, one could observe an evolution of Romanian oilseeds export, during 2008-2012. The exported quantity of sunflower seeds varied between 471.3 and 1,182.8 thousand tons.

In terms of value, the year 2011 registered the highest income from sunflower seeds export (USD thousands 707,058). The lowest income from sunflower seeds export was recorded in 2009 (USD thousands 203,316). According to the data given by the Romanian Centre for Trade and Foreign Investment Promotion, in 2011 the value of sunflower export on the world market was Euro billion 2.7.

An important aspect is that over Euro Billion 500 represented Romania's contribution. We must specify that Romania contributed by 18.8% to the sunflower global exports. Almost 50.0% of the export global sunflower supply is assured by Romania, Bulgaria and France.

In 2011, the main outlets of Romania's sunflower production were: Holland (Euro

thousand 90,854); Turkey (Euro thousand 87,132); Pakistan (Euro thousand 74,038); France (Euro thousand 71,416); Hungary (Euro thousand 47,833); Italy (Euro thousand 28,141); Spain (Euro thousand 22,281) [14].

Rape quantitative export varied between 564.0 and 1,052.3 thousand tons. Rape value export had values situated between USD thousand 311,561- 443,233. In 2011, Romania exported rape in many countries, the most representative being: Belgium (Euro thousand 106,278); Holland (Euro thousand 56,486); Hungary (Euro thousand 35,245); Germany (Euro thousand 32,070); France (Euro thousand 23,223); Israel (Euro thousand 7,207); Slovakia (Euro thousand 4,487) [14]. Soybean quantitative export varied between 10.4 and 72.7 thousand tons.

The most significant soybean exported quantity was registered in 2011. Soybean value export had values between USD thousand 4,233- 39,524.

In 2011, global soybean exports were of almost Euro billion 33. Also, this year, the weight of Romania's soybean exports was insignificant, only 0.08%. In 2011, Romania exported soybean in many countries, such as: Syria (Euro thousand 8,586); Italy (Euro thousand 6,256); Hungary (Euro thousand 4,344); Germany (Euro thousand 3,985); Bulgaria (Euro thousand 1,988); Turkey (Euro thousand 1,050); Austria (Euro thousand 449).

One should observe that there are market that recorded important growths concerning the import demand, but Romania from various reasons, was not one of the providers. Representative markets with growths of 100% for the import demand, in 2011, were: Tunisia; Slovenia; Saudi Arabia; Belarus; Israel [14]. In table 8 it is presented the evolution of Romania's oilseeds imports, during 2008-2011. The quantitative import of sunflower varied between 89.5 and 237.3 thousand tons, and the value one oscillated between USD thousand 76,617 and 198,374. The sunflower import was smaller in comparison with the export. Rape quantitative import varied between 70.4- 241.0 thousand tons, and the value one was between USD thousand 39,205 and 116,896.

Table 5. The evolution of sunflower seeds production per capita in Romania, during 2008-2013

Specification	2008	2009	2010	2011	2012	2013	2013/2008 (%)
Sunflower	Production per capita (kg)						
	57	53,9	62,4	88.8	69.7	107.2	187.7

Source:[21]; own calculations

Table 6.Prices evolution at producer level for oilseeds in Romania, during 2008-2012 (RON/tonne)

Specification	2008	2009	2010	2011	2012	2012/2008 (%)
Rape	1,200	970	1,250	1,620	1,830	152.5
Sunflower	1,190	880	1,220	1,640	1,880	157.9
Soybean	970	960	1,230	1,310	1,710	176.6

Source: [21]; own calculations

Table 7. Evolution of Romania's oilseeds exports, during 2008-2011

Specification	2008		2009		2010		2011	
	Quantity (thousands tons)	Value (thousands USD)	Quantity (thousands tons)	Value (thousands USD)	Quantity (thousands tons)	Value (thousands USD)	Quantity (thousands tons)	Value (thousands USD)
Sunflower	471.3	281,801	564.2	203,316	557.4	284,790	1182.8	707,058
Rape	564.0	362,014	782.1	311,561	1052.3	443,233	577.2	380,140
Soybeans	38.9	19,858	10.4	4,233	36.9	17,554	72.7	39,524

Source: [17]; own calculations

Table 8. Evolution of Romania's oilseeds imports, during 2008-2011

Specification	2008		2009		2010		2011	
	Quantity (thousands tons)	Value (thousands USD)	Quantity (thousands tons)	Value (thousands USD)	Quantity (thousands tons)	Value (thousands USD)	Quantity (thousands tons)	Value (thousands USD)
Sunflower	89.5	76,617	141.0	101,330	208.2	145,553	237.3	198,374
Rape	76.3	52,701	70.4	39,205	241.0	116,896	70.6	69,842
Soybeans	94.3	55,699	20.7	10,997	15.6	7,947	34.3	18,020

Source: [17]; own calculations

The quantitative import of soybean oscillated between 15.6 and 94.3 thousand tons, and the value one was between USD thousand 7,947 and 55,699. Romania imports soybean from Brazil, Argentina and USA. We import: soybean; almost 500 thousand tons of soybean oilcakes for animal feeding; 4 thousand tons of soybean oil. In terms of value, soybean and soybean products imports have a value of over 150 million euro, as opposed to 36 million from exports [12]. A negative aspect is represented by the fact that Romania exports soybean as raw material, which leads to cashing some small amounts of money. In order to increase the competitiveness of oilseeds sector in Romania, are required the following [6]:

- The increase of yield per hectare;
- The increase oilseeds quality;

- The increase of mechanization degree for agricultural works and the increase of labour productivity;
- The increase of oilseeds processing degree;
- The increase, at national level, of oilseeds storage capacity;
- Procedure's modernization regarding oilseeds processing;
- Attracting foreign investments;
- Granting loans to producers, in favourable conditions;
- Reducing the costs for oilseeds production and processing and so on.

CONCLUSIONS

Oilseeds market in Romania is characterized by the following tendencies:

-The increase of surfaces cultivated with sunflower on the strength of favourable pedo-climatic conditions and of global demand ones;

-The area cultivated with colza, during the analyzed period of time, had an oscillatory evolution, with a decrease of 24.3 % in 2013 than in 2008;

-The increase of surfaces cultivated with soybean, in 2013, with 35.7% than in 2008;

-Oilseeds productions registered in 2013, opposite to 2008, different evolutions, such as: sunflower (+83.0%); rape (-1.2%) and soybeans (+65.6%);

-Medium productions per hectare increased, in 2013 in comparison with 2008, for the analyzed oilseeds categories within this study;

-Prices established by producers increased for oilseeds, in 2013 than in 2008, as following: rape (+52.5%); sunflower (+57.9%); soybeans (+76.2%);

-The oilseeds export increased both from quantitative point of view and in terms of value in 2011 than in 2008;

-During the analyzed period of time, there were imported oilseeds and oilseeds products, even if our country has favourable conditions for oilseeds development.

REFERENCES

- [1]Angelescu, C., Ciucur, D., Dobrotă, N., Gavrilă, I., Ghiță, P.T., Popescu, C., Târhoacă C., 2000, Economy, The 5th edition, Academy of Economic Studies, Economic Publishing House, Bucharest, pp.132
- [2]Bordean, I., Filip, A. C., Curteanu, V., Pădure, G., 2010, The importance of rural environment and agriculture in the economical-social context of Romania, Scientific Papers Series Management, Economic Engineering in Agriculture and rural development, Vol. 10 (3): 59-64
- [3]Chiran, A., (editor), Gîndu, E., Banu, A, Ciobotaru, E. A., 2002, Agri-food marketing- practice and theory, Orizonturi Publishing House, Bucharest, pp.148
- [4]Dona, I., (editor), Florian, V., (editor), 2010 Equilibriums and malfunctioning of rural communities-Strategies for sustainable socio-economical development, Ceres Publishing House, Bucharest, 16-17
- [5]Turek-Rahoveanu, A., (editor), 2009, Organizing the oilseeds branch in Romania- disparities against the European Union, Ars Academica Publishing House, Bucharest, 161-165
- [6]Ursu, A., 2010, Productivity of factors in agriculture of Romania and the European Union – a retrospective

comparative, Scientific Papers, Series "Management, Economic Engineering in Agriculture and rural development", Vol.10(1):235-239

[7]Zahiu, L., Năstase, M., Dachin, A., 2001, The business plan of an agricultural company with vegetal profile, Academy of Economic Studies, Publishing House, Bucharest, 58-61

[8]Zahiu, L., (editor), 2005, Policies and Agricultural Markets- Reform and European Integration Ceres Publishing House, Bucharest, 292

[9]Zahiu, L., Toma, E., Dachin, A., Alexandri, C., 2010, Agriculture within Romania's Economy-between expectations and realities-, Ceres Publishing House, Bucharest, 61-63

[10]www.agravista.md/.../Studiu sectorial-Cercetarea pietei regionale a oleaginoaselor pentru extinderea oportunitatilor de comert transfrontalier: Moldova, Romania, Ucraina, 2013

[11]agrointel.ro/20129/eurostat-romania-este-pe-primele-locuri-in-ue-din-punct-de-vedere-al-suprafetelor-cultivate-cu-cereale-dar-randamentele-sunt-inferioare-fata-de-principalele-state-membre

[12]<http://www.agrias.ro/2011/12/romania-importa-soia-si-produse-din-soia/>

[13]<http://www.curierulnational.ro/Economie/2014-08-25/Romania+inregistreaza+o+productie-record+de+rapita>

[14]http://www.dce.gov.ro/Info_business/produse/SemOleag2012.pdf

[15]economie.hotnews.ro/stiri-economie-17946983-ministerul-agriculturii-anunta-agricol-crestere-productia-grau-secara-2014-este-7-37-milioane-tone-pestee-cea-din-2013-record-rapita-din-1970-incoace.htm

[16]http://www.economica.net/mai-suntem-granarul-europei-ce-putere-mai-are-romania-pe-piata-agricola-la-5-ani-de-la-aderare_49467.html#ixzz3KCINvJzJ;

[17]<http://faostat.fao.org>;

[18]<http://www.gazetadeagricultura.info/plante/plante-tehnice/470-floarea-soarelui/351-cultura-de-floarea-soarelui.html>

[19]<http://www.gandul.info/financiar/vedeta-anului-2014-in-romania-fotografia-unui-camp-de-250-de-milioane-de-euro-toata-lumea-vede-acum-galben-in-fata-ochilor-si-zice-ca-situatia-este-roz-12614891>;

[20]<http://www.insse.ro/cms>

[21]<http://www.insse.ro,2014,Tempo-Online>

[22]<http://www.madr.ro/ro/culturi-de-camp/plante-tehnice/soia.html>

[23]<http://multilingual.bionetsyst.com/images/docs/6400677781335502327.pdf>

