

STUDY ON THE SUNFLOWER SEEDS MARKET IN ROMANIA

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Abstract

The present research aims to present and analyze the production and marketing of sunflower seeds in Romania, based on data obtained from the National Institute of Statistics and from the website of the Ministry of Agriculture and Rural Development, for the period 2015-2020. In order to highlight as realistically as possible the production and marketing of sunflower seeds at the national level, it was necessary to analyze the most important quantitative indicators, such as: the total area cultivated with sunflowers; the total production of sunflower seeds; average production of sunflower seeds per hectare; the average price for sunflower seeds on the domestic market; the exports and imports of sunflower seeds related to Romania. The sunflower crop has a particular importance, being spread all over the globe, but in different proportions from one region to another. Sunflower seeds are characterized by superior nutritional value because they contain monosaturated fats, proteins, polysaturated fats, as well as other beneficial elements for the human body. In 2020, Romania ranked first among the sunflower growers and producers in the European Union.

Key words: sunflower, cultivated area, seeds yield, average export price, exports and imports, Romania

INTRODUCTION

According to studies regarding sunflowers, it has been found that it is widespread around the globe, being cultivated especially for seeds that are rich in oil. Sunflowers are native to America and are annual plants [3, 5]. It is necessary to specify that sunflowers have many uses because they are used in: human nutrition, especially through the sunflower oil; animal food; industry etc [2, 7, 11, 12].

It has been found that sunflower is a plant with a cycle of vegetation about 120 days, with a height that varies between 1.7 m and 2.5 m. Sunflower cultivation is suitable on several types of soil, but the most favorable ones are those that have a pH between 6.5-7.5 [3].

Sunflowers are oleaginous plants that are very widespread in Romania. Many farmers in our country have turned to sunflower crops, due to the fact that, on the one hand, it has many uses, and on the other hand, it benefits from financial aid from the state [10].

According to specialists in the field, sunflowers have a number of advantages from an agronomic point of view, such as:

- the fertility status of the soil is quite good after the sunflower crop;
- it is a very good precursor plant, especially for autumn wheat;
- the crop does not require huge expenses.
- sunflower withstands better the water stress;
- the works carried out on this culture are mechanized, thus facilitating the work of the farmer etc [7].



Photo 1. Sunflower field
Source: [1].

In Romania, sunflower is considered a valuable plant because, on the one hand, it is grown on large areas, and on the other hand, it has a favorable secretion of nectar [7, 14].

Another special aspect that is attributed to sunflower seeds is that they have a complex nutritional value, because they contain a substantial amount of: vitamin E; proteins; magnesium; monosaturated and polysaturated fats [4, 6, 13, 11].

Farmers in Romania will grow sunflowers on the long term due to the fact that it has both technical and economic advantages.

In this context, the goal of the paper is to analyze the evolution of cultivated area, production, yield, average export price of seeds and also export and import of sunflower seeds in the period 2015-2020 in Romania.

MATERIALS AND METHODS

The present research highlights the main trends related to the production and marketing of sunflower seeds in Romania for the period 2015-2020. In the paper are presented and analyzed a series of quantitative indicators, as follows: the total area cultivated with sunflower at national level; the total production of sunflower seeds at national level; the average production of sunflower seeds per hectare recorded at national level; the average price for sunflower seeds on the domestic market; exports and imports of sunflower seeds recorded by Romania.

The empirical data underlying the present research were obtained from the National Institute of Statistics and from the website of the Ministry of Agriculture and Rural Development.

In order to make the research as clear as possible, it was necessary to present the results in graphical form.

RESULTS AND DISCUSSIONS

Between 2015-2020, certain changes related to the production and marketing of sunflower seeds were observed in Romania. At national level, it was found that sunflowers are grown on large areas, especially in: Dobrogea; the Romanian Plain and the Western Plain [1].

During the analyzed period, the area cultivated with sunflowers at national level varied from one year to the next. The most significant area with sunflower crops was

recorded in 2019 (1,282,697 ha). At the opposite pole, the smallest area cultivated with sunflower was of 998,415 ha (2017) (Fig. 1). In 2020, the area cultivated with sunflowers at national level increased by 12.9% compared to 2015. Also in 2020, there was a decrease of 11.0% of the area cultivated with sunflowers, compared to 2019, when the maximum cultivated area was registered.

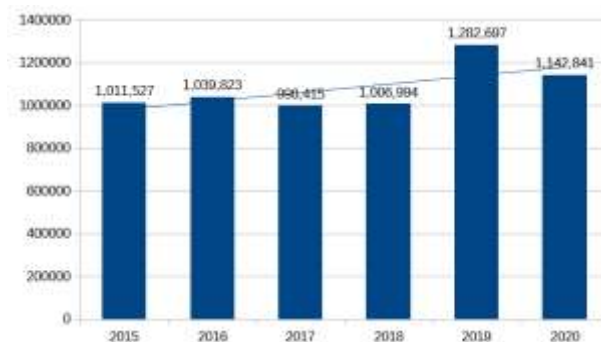


Fig. 1. Sunflower area cultivated at national level, in the period 2015-2020 (ha)

Source: Own design based on NIS database 2022 [9].

In Romania the sunflower crop is sustained by various forms of support, such as:

- Direct payment schemes;
- Transitional national aid 1 (ANT 1); - TNA
- State aid for the diesel fuel used in agriculture [8].

In the period 2015-2020, at national level, the total production of sunflower seeds recorded a series of oscillations. From the data presented it can be easily ascertained that, between 2015-2019, the production of sunflower seeds was on an upward trend, and in 2020, there was a significant decrease compared to 2019 (-1,446,285 tons). The lowest production of sunflower seeds was achieved in 2015 (1,785,771 tons), and the most significant was of 3,569,150 tons (2019) (Fig. 2). The total production of sunflower seeds in 2019 was closely connected on the one hand with the cultivated area, and on the other hand with the average production per hectare achieved. In 2020, the production of sunflower seeds increased by 18.8% compared to 2015, but decreased by 40.6% compared to 2019. The decline in sunflower seeds production was mainly due to the drought in 2020.

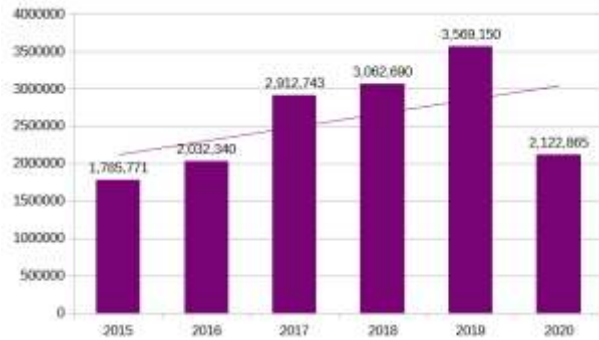


Fig. 2. Total production of sunflower seeds at national level, in the period 2015-2020 (tons)
 Source: Own design based on NIS database 2022 [9].

In 2020, Romania ranked first in the top of sunflower seeds producers in the European Union [1].

The average production per hectare of sunflower seeds in Romania changed from year to year during the analyzed period. From the data presented, it can be seen that the most significant average production per hectare of sunflower seeds was recorded in 2018 (3,041 kg/ha), and the lowest was of 1,765 kg/ha (2015) (Fig. 3). In 2020, the production of sunflower seeds changed as follows:

- increased by 5.2% compared to 2015;
- decreased by 33.3% compared to the previous year;
- decreased by 39.0% compared to 2018, when the maximum point for the average production per hectare in the analyzed period was reached.

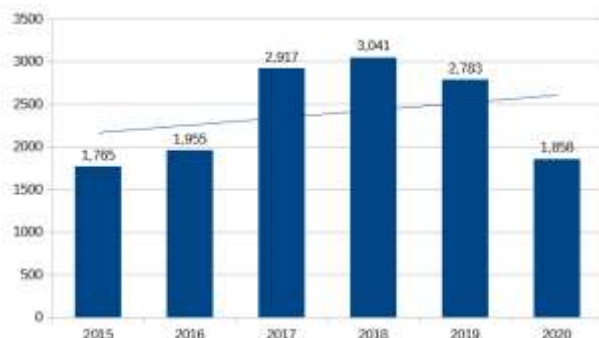


Fig. 3. Average production of sunflower seeds per hectare at national level, in the period 2015-2020 (tons)
 Source: Own design based on NIS database 2022 [9].

According to the data provided by the Ministry of Agriculture and Rural Development on the average price for sunflower seeds on the domestic market for the period 2015-2020, it was found that it has changed. The highest average price was

recorded in 2016 (1.51 lei/kg). At the opposite end, the lowest average price was highlighted in 2019 (1.29 lei /kg). This price recorded in 2019 was determined by the generous offer existing on the domestic market, due to the achievement of a very high total production of sunflower seeds.

In 2020, the average price for sunflower seeds on the domestic market remained constant, compared to 2015, at 1.50 lei/kg.

Quantitative exports of sunflower seeds related to Romania have recorded variations from one period to another. The largest quantitative exports were highlighted in 2019 (2,104,661.9 tons). Romania's massive exports of sunflower seeds in 2019 were possible due to the large production. In 2015, the smallest quantitative exports of sunflower seeds related to Romania were made, of 1,099,348.7 tons. Reduced quantitative exports were influenced by the achievement of a small production of sunflower seeds. In 2020, quantitative exports increased by 40.4% compared to 2015. It is necessary to specify that Romania exports most of the sunflower harvest, because it has a limited processing capacity [1].

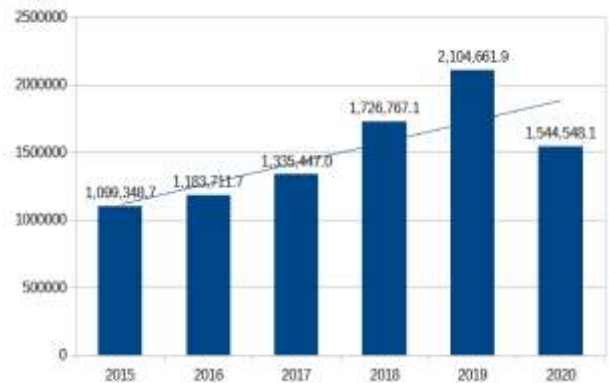


Fig. 4. Quantitative exports of sunflower seeds related to Romania in the period 2015-2020 (tons)
 Source: Own design based on data provided by the Ministry of Agriculture and Rural Development database 2022 [9].

Romania's main export markets for sunflower production are: Turkey; Bulgaria; Hungary; France; the Netherlands, Spain etc [1].

The value of exports for the “Sunflower Seeds” category recorded by Romania in the analyzed period varied from one year to another. The most substantial value of exports

was of EUR 757,016.6 thousand (2019), and the lowest was of EUR 452,228.0 thousand (2015). This situation was influenced, on the one hand, by the quantity exported and, on the other hand, by the export price. In 2020, the value of exports for the “Sunflower Seeds” category increased by 33.9% compared to 2015.

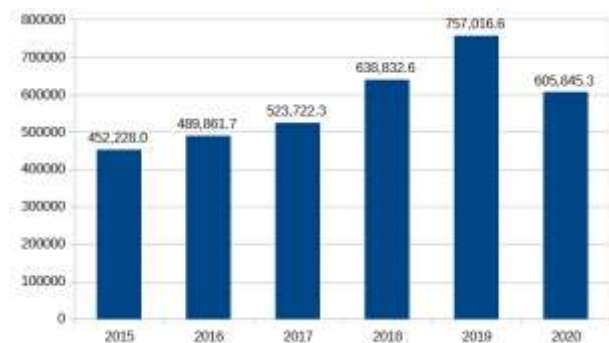


Fig. 5. Value of exports for the category "Sunflower seeds" related to Romania, in the period 2015-2020 (thousand Euro)

Source: Own design based on data provided by the Ministry of Agriculture and Rural Development database 2022 [9].

Regarding the quantitative imports of sunflower seeds related to Romania for the period 2015-2020, it was found that they recorded a series of variations. The largest amount of sunflower seeds imported was recorded in 2019 (333,590 tons), and the lowest was of 189,252.40 tons (2015) (Fig. 6). In 2020, Romanian imports of sunflower seeds increased by 32.4% compared to 2015.

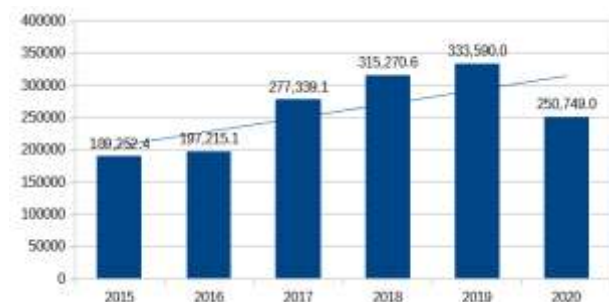


Fig. 6. Quantitative imports of sunflower seeds related to Romania in the period 2015-2020 (tons)

Source: Own design based on data provided by the Ministry of Agriculture and Rural Development database 2022 [9].

The value of imports for the category “Sunflower Seeds” registered by Romania, oscillated from one year to the next, in the

interval under analysis. It was determined, on the one hand, by the quantity imported and, on the other hand, by the import price. During the analyzed period, the value of imports for the category "Sunflower seeds" registered an upward trend. In 2015, the lowest value of imports was of 127,697.6 thousand Euro (Fig. 7).

At the opposite end, the highest value of imports for the “Sunflower Seeds” category was of EUR 207,088.0 thousand (2020).

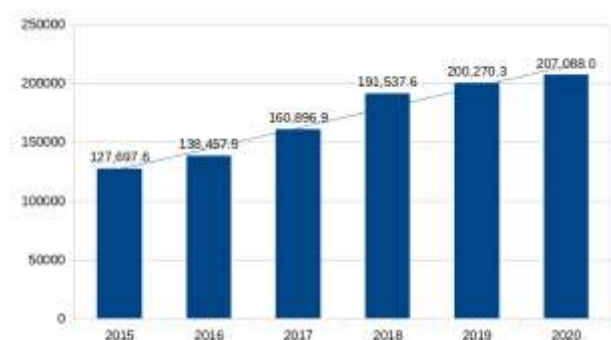


Fig. 7. Value of imports for the category "Sunflower seeds" related to Romania, in the period 2015-2020 (thousand Euro)

Source: Own design based on data provided by the Ministry of Agriculture and Rural Development database 2022 [9].

CONCLUSIONS

According to the analysis of the most significant specific indicators for the production and marketing of sunflower seeds in Romania, between 2015-2020, the following results were obtained:

- In 2019, the largest surface cultivated with sunflowers was of 1,282,697 ha;
- The largest production of sunflower seeds was achieved in 2019 (3,569,150 tons);
- In 2018, the highest average production per hectare of sunflower seeds was achieved, 3,041 kg/ha;
- In 2016, the highest average price for sunflower seeds on the domestic market was recorded of 1.51 lei/kg;
- The most significant sunflower seed export was of 2,104,661.9 tons;
- In 2019, the highest value of exports for the category "Sunflower Seeds" was recorded, 757,016.6 thousand Euro;
- The largest amount of sunflower seeds imported was of 333,590 tons (2019);

-In 2020, the highest value of imports was recorded for the category "Sunflower seeds", of 207,088.0 thousand Euro.

In order to increase the competitiveness of the sunflower seed production and marketing sector, we recommend the following:

-expansion of areas cultivated with sunflowers;

-increasing the yield per hectare;

-expanding the processing capacities of sunflower seeds and marketing an increased amount of sunflower oil, both on the domestic market and on the external market;

-attracting domestic and foreign investments;

-access to European funds.

ACKNOWLEDGEMENTS

This work was supported by a grant of the University of Agronomic Sciences and Veterinary Medicine of Bucharest, Project number 1060/15.06.2022, "Propuneri de măsuri strategice în agricultura din România în contextul instabilității geopolitice/ Proposals for strategic measures in Romanian agriculture in the context of geopolitical instability" Acronym AgRoMaS, within IPC 2022.

REFERENCES

[1]AgriPortal, August 12, 2022, Romania maintains its position as the EU leader in sunflower production (România își menține poziția de lider al UE la producția de floarea soarelui, 12.08.2022),

<https://agriportal.ro/stiri/focus/romania-isi-mentine-pozitia-de-lider-al-ue-la-productia-de-floarea-soarelui-1283.htm>, Accessed on January 14, 2023.

[2]Arghiroiu, G.A., Cristea, S., Alecu, I.N, 2015, Tendencies regarding trade with oleaginous seeds of Romania. Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 15(3), 49-58.

[3]Ciupag, P., August 18, 2020, Sunflower: all about culture, exploitation, profit, Farm Magazine (Floarea soarelui: totul despre cultură, valorificare, profit, Revista Ferma, 18 August, 2020),

<https://www.revista-ferma.ro/articole/agronomie/floarea-soarelui-totul-despre-cultura-valorificare-profit>), Accessed on January 8, 2023.

[4]Cuzino, O., Sunflower seeds: benefits and properties (Semintele de floarea-soarelui: beneficii și proprietăți),

<https://www.doc.ro/dieta-si-sport/semintele-de-floarea-soarelui-beneficii-proprietati>, Accessed on January 12, 2023.

[5]Global Sunflower Seeds Market - Industry Analysis, Market Size, Share, Trends, Application Analysis, Growth And Forecast 2022-2027, INDUSTRY ARC, <https://www.industryarc.com/Research/Global-Sunflower-Seeds-Market-Research-513241>, Accessed on January 15, 2023.

[6]How healthy are sunflower seeds, 2023 (Cât de sănătoase sunt semințele de floarea-soarelui, 2023) <https://www.eva.ro/dietafitness/nutritie/cat-de-sanatoase-sunt-semintele-de-floarea-soarelui-articol-195269.html>, Accessed on January 12, 2023.

[7]Ion, V., Fitotechnology, 2010, Faculty of Horticulture (Fitotehnie, 2010, Facultatea de Horticultura), <https://www.horticultura-bucuresti.ro/images/pdf/Fitotehnie.pdf>, Accessed on January 20, 2023.

[8]Ministry of Agriculture and Rural Development, Sunflower, 2022 (Ministerul Agriculturii si Dezvoltarii Rurale, Floarea-soarelui, 2022), <https://www.madr.ro/culturi-de-camp/plante-tehnice/floarea-soarelui.html>, Accessed on December 10, 2022.

[9]National Institute of Statistics, 2022 (Institutul Național de Statistică, 2022), <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table>, Accessed on December 15, 2022.

[10]Nistor, T., April 21, 2020, Sunflower culture technology, Agrimanet (Tehnologia de cultură a floarii soarelui, Agrimanet, 21 Aprilie 2020), <https://agrimanet.ro/tehnologia-de-cultura-a-floarii-soarelui/>, Accessed on January 10, 2023.

[11]Popescu, A., Stoian, E., Șerban, V., 2019, Oil seeds crops cultivated area and production in the EU-28-trends and correlations, 2008-2018. Scientific Papers Series "Management, Economic Engineering in Agriculture and Rural Development, Vol. 19(4), 265-272.

[12]Soare, E., David, L., Bălan, A.V., 2014, Researches on oilseeds market in Romania. Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 14(4), 265-271.

[13]Sunflower Seeds Market Size, Regional Outlook, Application Development Potential, Price Trends, COVID-19 Impact Analysis, Competitive Market Share & Forecast, 2022 – 2028, Global Market Insights, <https://www.gminsights.com/industry-analysis/sunflower-seeds-market>, Accessed on January 18, 2023.

[14]Turek-Rahoveanu, A., (editor), 2009, Organizing the oilseeds branch in Romania- disparities against the European Union, Ars Academica Publishing House, Bucharest, 161-165.

