# STUDY ON THE FRUIT SECTOR IN ROMANIA

# STUDIU PRIVIND SECTORUL FRUCTELOR DIN ROMÂNIA

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**Abstract:** *The paper presents the evolution of the fruit production and processing sector in Romania. During the analysed interval, the results obtained in this sector are inferior to those obtained by EU producers and do not reflect the country's production potential at all. This situation was due to difficulties for the producers, which contributed to a decrease in the producers' return on investment. These difficulties were caused by certain domestic and foreign factors. The domestic factors are represented by the decrease in the areas covered by fruit-bearing orchards, low average yield, the increase in expenditures on orchard maintenance, fruit processing, storage and marketing, in the context in which imported fruit competed seriously with the local supply. Imported fruit, especially citrus ones, were often sold for less than a kilogram of Romanian apples. Another important phenomenon that contributed to the negative evolution in the sector was represented by the global economic crisis, which affected all national economies. During the same interval, we noticed a decrease in the average fruit consumption per capita, which was significantly below the population's consumption need. In conclusion, the fruit sector can develop in Romania so that it provides a large part of the amount required on the market, but it is necessary to set up producers' associations that are capable of increasing competitiveness along the fruit chain.*

***Key words:*** *Fruit, production, yield, import, export*

## INTRODUCTION

In Romania, fruit growing has long been an important occupation for a part of the population in the rural environment. The most representative fruit growing areas in our country are in the sub-Carpathian, southern and south-eastern hills. Most of the plum tree, apple tree and cherry tree

plantations are located in these areas. In the western part of the country there are favourable conditions for growing apricot trees and peach trees, this area extending along the Danube in the southern part of Mehedinti, Dolj, Olt, Teleorman counties down to Dobrudja, respectively Constanta-Tulcea counties. The areas favourable to growing apple-trees are especially found in Maramuers, Bistrita-Nasaud, Salaj, Mures Counties. Although the fruit growing areas are significant, the production obtained is much lower compared to the local population's demand. Meeting the consumption demand for fruit depends on a series of factors, of which we may mention:

- The minimum agricultural area per capita;
- The level of average yields per area unit;
- The soil and climate conditions favourable character;
- The cultivation system and technologies in use;
- The economic conditions, etc.

## MATERIAL AND METHOD

This study was possible with the support of the data provided by the National Institute of Statistics, Romania Trade and Invest, The Institute of Agricultural Economics within the Romanian Academy for the interval 2006-2010, and by other specialised studies. In order to correctly present the situation in the fruit sector, we analysed a set of factors, among which we mention: the area of fruit-bearing orchards, the total fruit production, the average yield per tree, imports, exports. These indicators give a synthetic picture of the sector producing and marketing the fruit obtained from the domestic production. The analysed indicators may be an important source of information for the Romanian producers, which they can use along the fruit chain, especially when they need to make decisions in very little time.

## RESULTS AND DISCUSSIONS

During the analysed interval, the fruit tree plantations area diminished significantly. In 2012, it decreased by 8% compared to 2006. The most important areas are cultivated with plum trees, pear trees, peach trees, cherry trees, sour cherry trees, apricot trees, nut trees.

Although the fruit-bearing orchards area diminished, in Romania it account for 1.45% of the agricultural area.

In connection to the area covered by fruit tree plantations, a survey of these plantations according to fruit tree types was carried out at European Union level. The survey results indicate that Romania has an area of 60,494 ha of apple trees, filling the second position after Poland (165,715 ha). The gap in terms of the area covered by apple trees is large, exceeding 100,000 ha, which also contributes to differences in profitability.

An important indicator in analysing this sector is the number of trees, according to various types (table no.1).

Table 1

**The evolution of the area and number of trees according to types, in the interval 2006-2010**

(number)

| Specification | U.M. | 2006 | 2007 | 2008 | 2009 | 2010 | 2010/ 2006 (%) |
|---|---|---|---|---|---|---|---|
| **Fruit-bearing orchards** | ha | 157,345 | 156,002 | 149,267 | 145,292 | 144,844 | 92.0 |
| **Fruit trees-Total** | no. of trees | 92,764,403 | 96,384,568 | 90,003,193 | 87,631,137 | 96,861,712 | 104.4 |
| **Plum trees** | no. of trees | 42970274 | 46170084 | 42840222 | 41973161 | 49346575 | 107.8 |
| **Apple trees** | no. of trees | 32058325 | 31344749 | 30730754 | 29695260 | 29967422 | 93.4 |
| **Pear trees** | no. of trees | 3820085 | 3645919 | 3120334 | 3120334 | 2244873 | 58.7 |
| **Peach trees** | no. of trees | 1389082 | 1586303 | 1300159 | 1178797 | 1282172 | 92.3 |
| **Cherry trees and sour cherry trees** | no. of trees | 6072583 | 6193585 | 5554509 | 5489720 | 6073096 | 100.0 |
| **Apricot trees** | no. of trees | 2614914 | 2706994 | 2448268 | 2387047 | 2307451 | 88.2 |
| **Nut trees** | no. of trees | 2039639 | 2790111 | 210427 | 1904308 | 1833118 | 87.3 |
| **Other trees** | no. of trees | 1775106 | 1935425 | 1627469 | 1567399 | 2114321 | 119.1 |

Source: NIS: The Romanian Statistical Yearbook, 2011
- NIS databaze

As we can see in the previous table, the number of fruit trees increased by 4.4% in the interval 2006-2010, in the context of the 8% decrease in the fruit-bearing area. According to types of trees, the situation

must be presented individually, as their evolutions were not similar. In the case of plum trees, there was a 7.8% increase, and in the case of other trees the increase was of 19.1%. The following categories recorded decreases: apple trees (- 6.6%), plum trees (- 41.3%), peach trees (- 7.7%), apricot trees (-11.8%), nut trees (-12.7%). The number of trees levelled out in the case of the cherry tree and sour cherry tree type.

Another important indicator in terms of this sector's efficiency is represented by the total fruit production and the structure of this production. This indicator's evolution depends on the fruit plantations area, the number of fruit-bearing trees, the productivity of various types, the climate conditions ain certain intervals, etc.

As expected, the production decreased in almost all types of fruit, the exception being the nut tree production. The highest decrease in production was recorded in the cherry and sour cherry category amounting to 38.9% in 2010 as compared to the reference year. The highest increase was recorded for the nut production, which was 48.1% larger in 2010 compared to 2006 (table no. 2). In terms of value, fruit do not account for an important ratio in the domestic production and fill the 6$^{th}$ position in the vegetal production.

Table 2

**The evolution of the fruit production, in the interval 2006-2010 (as equivalent to fresh fruit)** (thousands of tons)

| Specification | 2006 | 2007 | 2008 | 2009 | 2010 | 2010/2006 |
|---|---|---|---|---|---|---|
| **Total fruit** | 1486.4 | 1085.8 | 1179.2 | 1323.0 | 1399.4* | 94.1 |
| **Plums** | 598.8 | 372.6 | 475.3 | 533.7 | 550.3* | 93.2 |
| **Apples** | 590.4 | 475.4 | 459.0 | 517.5 | 558.8* | 94.6 |
| **Pears** | 62.4 | 62.8 | 52.6 | 66.1 | 55.6* | 89.1 |
| **Peaches** | 17.4 | 17.0 | 16.4 | 17.1 | 17.3* | 99.4 |
| **Cherries and sour cherries** | 104.8 | 65.2 | 67.7 | 67.9 | 64.1* | 61.1 |
| **Apricots** | 38.8 | 27.6 | 32.1 | 32.5 | 24.0* | 61.8 |
| **Nuts** | 38.5 | 25.5 | 32.3 | 38.3 | 34.3 | 148.1 |
| **Other fruits** | 13.7 | 23.2 | 22.6 | 27.9 | 20.3 | 100.4 |
| **Strawberries** | 21.6 | 16.5 | 21.2 | 22.0 | 21.7* | 100.4 |

Source: NIS: - The Romanian Statistical Yearbook, 2011
- Romania Trade and Invest
- * EUROSTAT database

Although Romania fills the second position in terms of the cultivated area, yet the production is much below the European Union average. This is emphasised by the data regarding the supply of apples for consumption. Thus, over 65% of the apple production is provided by four states: Poland (20.8%), Italy (18.6%), France (17.2%), Germany (18.7%), followed by Spain (5.6%), Hungary (4.7%), The Netherlands (4.6%), Romania (3.8%).

The average fruit yield is a very important indicator for the producer both in order to generate income, and to make decisions on competitiveness. This indicator depends on the total amount of fruit obtained and on the fruit tree plantations area. The evolution of this indicator in the interval 2006-2010 is presented in table no.3.

Table 3

**The evolution of average yields, according to tree types in the interval 2006-2010**

(kg/tree)

| Specification | 2006 | 2007 | 2008 | 2009 | 2010 | 2010/2006 (%)* |
|---|---|---|---|---|---|---|
| **Fruit total, of which** | 16 | 11 | 13 | 15 | 14 | 87.5 |
| **Plums** | 14 | 8 | 11 | 13 | 13 | 92.8 |
| **Apples** | 18 | 15 | 15 | 17 | 18 | 100 |
| **Pears** | 16 | 17 | 16 | 19 | 15 | 93.7 |
| **Peaches** | 12 | 11 | 13 | 14 | 8 | 66.6 |
| **Cherries and sour cherries** | 17 | 11 | 12 | 12 | 12 | 70.5 |
| **Apricots** | 15 | 10 | 13 | 13 | 10 | 66.6 |
| **Nuts** | 19 | 9 | 15 | 20 | 19 | 100 |
| **Other fruits** | 8 | 12 | 14 | 18 | 10 | 125 |

Source: NIS - The Romanian Statistical Yearbook, 2011
- NIS database
- *authors' own calculations

In the analysed interval, we notice a decrease in the average fruit yield by 22.5%. From the data above, we notice significant decreases in peaches (-33.4%), cherries and sour cherries (-29.5%), apricots (-33.4%). In the case of apples and nuts, the yield levelled out, and in the case of other fruits it increased by 25%. In general, decreases in yield per tree were due to climate conditions, to the lack of money which prevented the application of

treatments to trees at optimum times, and sometimes due to the existence of less productive tree types.

The amount supplied on the market from the domestic production is sometimes inadequate from a qualitative point of view, and then the consumer prefers to consume imported fruits.

The fruits marketed on the domestic market are from both the domestic production and from imports. Thus, it was necessary to perform a small study on fruit imports and exports in terms of quantities. Their evolution and the trade balance are presented in table no. 4

Table 4

**Foreign trade in the interval 2005-2010**
**(as equivalent to fresh fruit)**
(thousand of tons)

| Specification | Flow | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|
| **Total fruits, Of which** | Import | 746.388 | 706.169 | 782.982 | 608.827 | 680.284 |
| | Export | 86.051 | 137.420 | 142.129 | 142.830 | 186.056 |
| | E-I | -660.337 | -568.749 | -640.853 | -465.997 | -494.228 |
| **Apples** | Import | 88866 | 78557 | 54751 | 49651 | 61554 |
| | Export | 40272 | 90942 | 88486 | 73830 | 76903 |
| | E-I | -48594 | 12385 | 33735 | 24179 | 15349 |
| **Plums** | Import | 1339 | 2286 | 3771 | 2997 | 2958 |
| | Export | 11419 | 1456 | 3077 | 1678 | 1741 |
| | E-I | 10080 | -830 | -694 | -1319 | -1217 |
| **Peaches** | Import | 30177 | 33711 | 29526 | 16125 | 18663 |
| | Export | 87 | 168 | 410 | 172 | 674 |
| | E-I | -30090 | -33543 | -29116 | -15953 | -17989 |
| **Cherries and sour cherries** | Import | 635 | 775 | 2707 | 2532 | 2639 |
| | Export | 5900 | 30360 | 2424 | 3625 | 2562 |
| | E-I | 5265 | 29585 | -283 | 1093 | -77 |

Source: NIS: - The Romanian Statistical Yearbook, 2011
-Food balances 2005-2010
-authors' own calculations

From the data above regarding the evolution of the foreign trade we notice an increase in the imports of plums from 1,339 thousand tons (2006) to 2,958 thousand tons (2010). This situation is maintained in the cherries and sour cherries category, the imports increasing substantially from 635

thousand tons (2006) to 2,639 thousand tons (2010). For the apples and peaches category, the imports decreased significantly.

The amount of exported fruit increased during the analysed interval from 86,051 thousand tons (2006) to 186,056 thousand tons (2010). From the analysed data, we notice an increase in the export of peaches from 87 thousand tons (2006) to 674 thousand tons (2010). This situation does not mean that Romania gave up exports, but the fact that certain Romanian producers targeted other foreign markets in order to sell their products. These are demanded as exports because they are tastier and many of them are obtained ecologically. The most representative Romanian fruit importing countries were: Germany (34.2% of the overall Romanian fruit exports), Italy (27.6%), the Russian Federation (5.8%), Hungary (4.6%), Austria (3/4%), Poland (3.2%).

In the case of apples, we notice a decrease in imports and an increase in exports in the interval 2006-2010.

The quantity supplied on the market from the domestic production is sometimes inadequate from a qualitative point of view and then the consumer prefers to consume imported fruits. This has a negative financial impact on the Romanian producers.

Another aspect that contributes to the increase in imports is the small number of fruit warehouses, which makes the producers sell much of the fruit immediately upon harvest. In this context, there are losses both for the producers and for the consumers. The warehouses problem and many more would be solved if the producers' interest in associations increased.

According to the data provided by the National Institute of Statistics, the average annual fruit consumption in Romania decreased by 24%, from 83.2kg/inhabitant (2006) to 63.3 kg/inhabitant (2010). This situation was generated both by the decrease in the consumers' revenues due to the economic crisis, and by the increase in the consumption of citrus fruits which were marketed for lower prices than the domestic products. Although the average annual fruit consumption decreased, we notice an increase in the position filled by the fruit consumption in the daily diet. It is not insignificant that this increase does not represent the amount of fruit recommended by doctors, in order to preserve the population's health. In order to stimulate the fruit consumption, intense advertising campaigns have been organised lately.

## CONCLUSIONS

Upon performing this study, we noticed that the fruit sector in Romania is not well represented in the Romania agriculture, as it contributes only to a small extent to the GDP. This is mainly due to:

- the decrease in fruit-growing plantation areas;
- the decrease in the average yield per tree;
- the seasonal character of the fruit supply from the domestic production;
- the adverse trade balance;

In conclusion, we can state the need to revive this sector as there are favourable conditions for the fruit-growing plantations, the labour force for the maintenance, harvesting, processing and marketing works and the domestic market is not saturated with domestic fruit. In order to achieve this objective, it is necessary to set up associations in order to increase this sector's productivity and appeal.

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