

TOMATO MARKET TRENDS IN ROMANIA

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Abstract

The paper presents the main trends on the tomato market in Romania during 2008-2015. Tomatoes have a particular importance for the human consumption because they can be eaten fresh and on the other hand they are processed in a variety of canned foods. In order to clearly highlight the trends on the tomato market, the analysis was carried out at both national and macro regional level. A number of indicators specific to the tomato market have been analyzed, such as: tomato-cultivated are, tomato production, average yield per hectare of tomatoes, average purchase prices for field tomatoes, consumption of tomatoes. The amount of tomatoes purchased by a household; Imports and exports of tomatoes. The tendencies on the national tomato market were revealed by the quantitative analysis, which is focused mainly on the recorded fluctuations from one year to another. The data used in the paper was taken from the National Institute of Statistics and from other specialized sites.

Key words: tomato, production, consumption, market, Romania

INTRODUCTION

Tomatoes have a high prevalence in the world, coming from Peru, Central America and South America and Ecuador. In Europe, tomatoes have been grown since the 16th century. In Romania, tomatoes have been grown since the 19th century on small surfaces. The increase of tomato-cultivated areas in Romania was due to the growth in demographics and the growth of the urban population.

Tomatoes have a particular importance in human nutrition because they provide a variety of mineral salts, vitamins and vital water to function in normal human body parameters. According to the World Organization for Agriculture and Food (F.A.O), it is recommended to eat different vegetables depending by the age group. For consumers over 12 years old, 350g/day of vegetables are recommended. This consumption leads to an average annual consumption of 120 kg of vegetables.

Tomatoes are used for: fresh domestic consumption; Industrial processing in order to obtain the required products on the market

and export. As far as the export is concerned, it was found that mainly the greenhouse tomatoes, the early ones, but also the industrialized products are desired for consumption [4, 5, 9, 11].

The vegetable market has a number of peculiarities, of which: the seasonality of production; Atomizing supply and demand; the seasonality of vegetable production; Poor marketing, etc [14]. The internal and external demand for vegetables has a permanent character, thus contributing to the growing interest of farmers in cultivating vegetables in protected areas.

MATERIALS AND METHODS

In order to accomplish this paperwork, statistical data were taken from the National Statistics and FAOSTAT. Several studies, magazines and specialized newspapers have been consulted for a more realistic analysis of the tomato market in Romania. The analysis of tomato market at national and Macro-Regional level was based on several specific indicators, such as: tomato-cultivated area; Total tomato production; Average yield per

hectare of tomatoes; Human consumption of tomatoes by social categories and by residence; Average purchase prices for tomatoes; The amount of tomatoes bought by a household; Monthly average spend per person for buying tomatoes by social and average residence categories; Imports and exports.

RESULTS AND DISCUSSIONS

The area cultivated with tomatoes is a key element that influences the production made by farmers on a national level. The area cultivated with tomatoes in the period 2008-2015, both at national level and also at Macro-Regional level, varied from one year to another (Fig.1). From the statistical data presented it is noted that the largest surface cultivated with tomatoes has been registered at national level in 2011 - 51,754 ha.

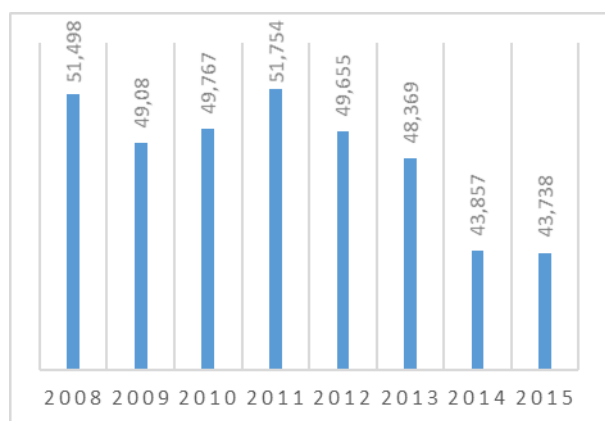


Fig.1. Dynamics of tomato areas at national level and macroregional level, 2008-2015 (ha)

Source: <http://statistici.insse.ro/shop>, 2017, [13]

On the opposite side, we find that the smallest area cultivated was of 43,738 ha (2015). In 2015, in Romania, a decrease in the tomatoes area (-15.1%) is observed compared to 2008. It can easily be noticed that, in Romania, the tomato teas are beginning to decrease, starting in 2012. This decrease in tomato areas was mainly due to the elimination of transitional payments. In this situation, farmers have reduced the areas cultivated with tomatoes. Cultivation of tomatoes involves high production costs, in a market economy where competition puts pressure, in order to decrease the selling price.

In Romania, in order to stimulate the growth of surfaces with tomatoes grown both in the field, but also in protected areas, financial support is granted [16]. In 2017, the financial support for tomatoes is a substantial one, of 3,000 euro/beneficiary/year, with a first condition, namely: the farmer has a tomato area in protected areas of at least 1,000 square meters [11]. At Macroregions level it is shown a variation of tomato areas from one year to the next.

Macroregion Two is on the first place at the macro-regional level, with regard to the area cultivated with tomatoes in the analyzed period. The largest area of tomatoes was in 2011- 17,951 ha. In 2015, the Macroregion Two accounted for 32.5% of the surface with autumn-grown national crops. On the opposite pole, we find Macroregion One, with the smallest areas cultivated with tomatoes. In 2015, this macro-region held a share of 15.8% of the area cultivated with tomatoes at national level. In 2015, all macroregions recorded a decrease in the areas under tomatoes, compared to 2010. The largest percentage drop occurred in Macroregion four (-24.1%).

Tomatoes production at national and Macro-Regional level, between 2008 and 2015, recorded variations from one year to the next (Fig. 2).

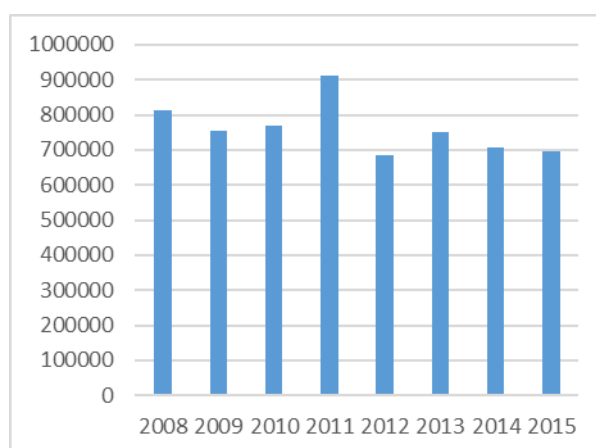


Fig.2. Dynamics of tomato production nationwide (tons)

Source: <http://statistici.insse.ro/shop>, 2017, [12]

In 2015, tomato production dropped by 14.7% compared to 2008. The largest national tomato production was in 2011 (910,978

tons), and the smallest vegetable production was recorded in 2012 (683,282 tons). Reducing tomatoes production has directly contributed to the increase in tomatoes [10]. At the level of macro-regions it can be noticed that the tomato production registered the same tendency of decrease in 2015 as compared to 2008. The decrease of the tomato production was due to the less favorable climatic conditions and the decrease of the areas cultivated with tomatoes [5, 6].

The most significant tomato production is obtained in Macroregion Two. In this macro-region, in 2015, a production of 250,773 tons was obtained. Production in 2015 decreased by 7.4% compared to 2008. The largest production in this macro-region was 333,839 tons (2011). On the opposite side, the smallest production was 230,572 tons (2012). In 2015, Macroregion Two made 36.07% of the total national vegetable production. Macroregion Four is the second-largest producer of tomatoes. In 2015, in this macroregion, 25.19% of the national tomato production was obtained. The biggest production achieved was 241,906 (2011). Macroregion Three is in the third position, in terms of tomato production. The highest yield of tomatoes in this macro-region was 228,284 tonnes (2011). Macroregion Three, in 2015, obtained 24.52% of tomato production in Romania. The smallest tomato production was obtained in Macroregion One. In 2015, this macro-region has produced 98,781 tons, which represented 14.20% of the national production. Unlike the rest of the macroregions that produced the largest production in 2011, the largest production in this macroregion was made in 2008 (123,676).

It is worth mentioning that in 2015 Romania achieved 2.6% of tomato production at the European Union level. The most representative countries in terms of tomato production are: Italy; Spain; Portugal; Greece; Netherlands; Poland and France [5, 6, 10, 16]. In the period 2008-2015, average production per hectare of tomatoes registered fluctuations from year to year (Fig.3). The highest average yield per hectare of tomatoes at national level was achieved in the year 2011 (17,602 kg / ha). In 2011, the largest national tomato

production was obtained. In 2015, in Romania there was an insignificant increase in tomato production, with only 0.5% compared to 2008. In 2015, the highest average yield per hectare was registered in Macroregion Two (17,615 kg / ha).

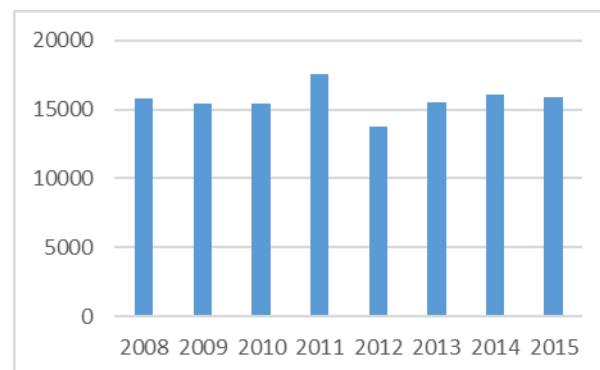


Fig.3. Dynamics of average production by hectare of tomatoes at national level (kg / ha)

Source: <http://statistici.insse.ro/shop>, 2017, [13]

In this macro-region the average yield per hectare of tomatoes registered an increase of 8.5% in 2015 compared to 2008. The lowest average productivity per hectare of tomatoes was registered in 2012 (17,602 kg / ha). The Macroregion Three ranks second in terms of production per hectare for tomato category. In 2015, an average yield per hectare of 15,436 (kg / ha) was achieved in this macro-region. In Macroregion Three, the average yield per hectare of tomatoes declined in 2015, by 5.6% compared to 2008. In Macroregion Four, the highest average yield per hectare of tomatoes was recorded in 16,028 kg / ha (2011). At macro-region level in 2015, the average yield per hectare of tomatoes decreased by 0.9% compared to 2008. Macro-region One recorded the lowest average yields per hectare over the analyzed period. The average yield per hectare of tomato grown in Macroregion One was 18,198 kg / ha (2011). In 2015, the average yield per hectare of tomatoes dropped by 5.9% compared to 2008. Mainly, the decrease in average yields per hectare was due to factors such as drought; Lack of irrigation and massive snowfall [7].

The average purchase prices for tomatoes registered fluctuations from year to year in 2008-2015 (Fig.4). From the data presented it can be seen that the highest average purchase

price was registered in 2012 (3.06 lei/kg). On the opposite side, the lowest purchase price for tomatoes was 0.98 lei/kg. In 2015, there was an increase in average purchases of tomatoes by 5.6% compared to 2008. Average purchasing prices are influenced on the one hand by the quantity of tomatoes offered by domestic producers and on the other by imports of tomatoes.

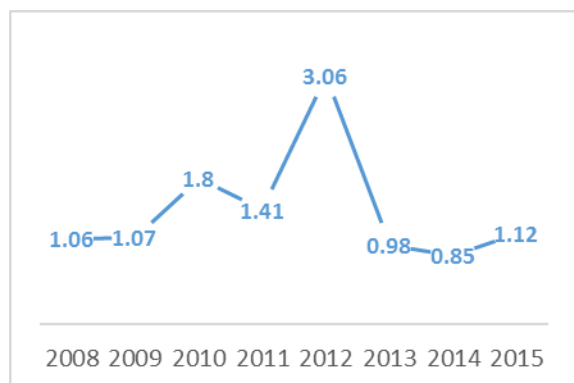


Fig.4. Dynamics of average purchase prices for tomatoes at national level (lei/kg)

Source: <http://statistici.insse.ro/shop>, 2017, [13]

Annual average consumption per capita in Romania has fluctuated from one year to the next (Fig.5). The highest annual average of tomatoes consumption per capita was recorded in 2008 (42.6 kilograms per capita) and the lowest was 35.4 kg/inhabitant. In 2015, the annual average consumption of tomatoes decreased by 9.4% compared to 2008.

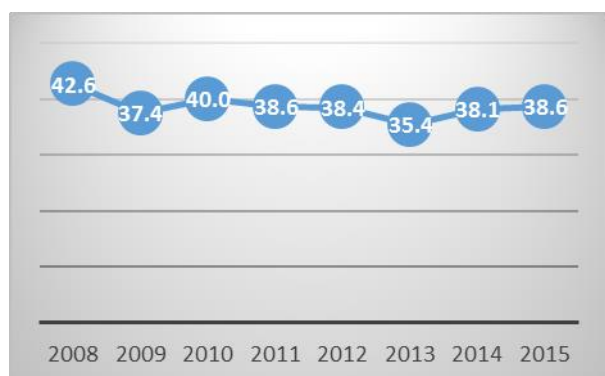


Fig.5. Annual average consumption of tomato per capita in Romania, 2008-2015 (kg)

Source: <http://statistici.insse.ro/shop>, 2017, [13]

Regarding the monthly average of tomato consumption per person, at national level and by residence area, it was found that it varied

from one year to another (Fig.6). The highest consumption is registered in the urban environment as opposed to rural areas. The highest monthly average consumption of tomato per person in the urban area was registered in 2009 (1.284 kg / inhabitant), and in the rural area was 0.982 kg/inhabitant (2009).

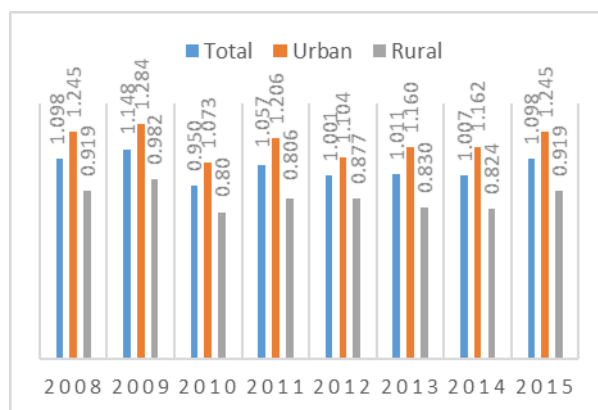


Fig.6. Monthly average consumption of tomatoes per person at national level and by residence area, 2008-2015 (kg)

Source: <http://statistici.insse.ro/shop>, 2017, [13]

The amount of tomatoes purchased by a household by residence area varied from one year to the next in the analyzed period (Fig. 7).

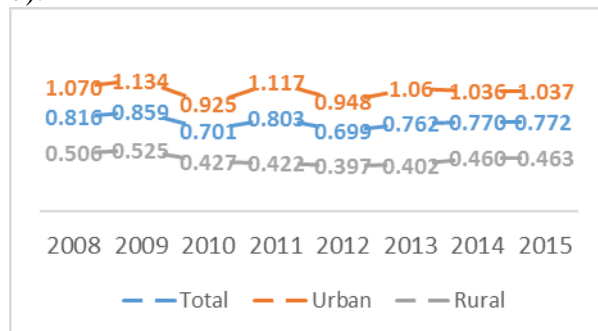


Fig.7. The quantity of tomatoes purchased by a household by residence area (monthly average per person - kg)

Source: <http://statistici.insse.ro/shop>, 2017, [13]

In 2015 there is a decrease (-5.4%) of the tomatoes quantity purchased at national level. The biggest quantity of tomatoes purchased was recorded in 2009 (0.859 kg), and the lowest was 0.699 kg (2012). From the data presented, it can easily be noticed that the situation in the residence area is different. In the urban area, the amount of tomatoes purchased by a household is definitely

superior to that purchased in rural areas. This is explained by the fact that part of the rural population produces in their households the tomatoes required for consumption. In winter, when imported tomatoes are generally eaten, rural households buy a small amount of tomatoes because of high prices for the category of tomatoes and, on the other hand, the small incomes of these households. In 2015, in the urban area, there is a 3.1% decrease in the quantity of purchased tomatoes. This decline can also be explained by the fact that consumers in the urban area acquire other categories of imported vegetables. In rural areas, in 2015, the amount of tomatoes purchased by a household accounted for only 44.6% of the amount purchased by the urban population. The smallest amount of tomatoes purchased by a household was 0.397 kg (2012), and the highest was 0.525 kg.

Monthly average spends per person for tomato purchases at the national and resident levels recorded fluctuations from one year to the next (Fig.8).

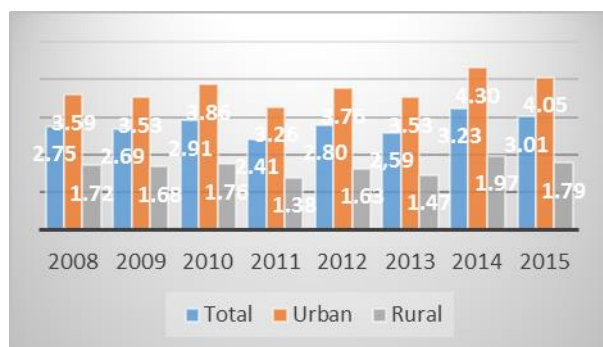


Fig.8. Monthly average expenses per person for buying tomatoes by residence area (lei)
 Source: <http://statistici.insse.ro/shop>, 2017, [13]

At national level, the largest expenditures were recorded in 2014 (3.23 lei). In 2015, the monthly average expenses per person for the purchase of tomatoes grew by 9.4% compared to 2008. During the analyzed period the lowest monthly average expenses for the purchase of tomatoes were recorded in 2011 (2.41 lei). These small expenses recorded in 2011 were possible due to the large supply of tomatoes at low prices. According to the published statistic data, in the urban area, the average consumption per person for the

purchase of tomatoes is much higher than in rural areas. Large urban spending is mainly due to the fact that they buy predominantly tomatoes on the market. In 2015, in the urban area, the monthly median spending per person for tomato purchases increased by 12.8% compared to 2008. In the rural area, the average monthly expenses per person for the purchase of tomatoes accounted for 44.1% of those made in the medulla urban. Most expenditures were recorded in 2011 (1.38 lei) and the highest were 1.79 lei (2015).

Import values for the category "Tomatoes prepared or preserved otherwise than in vinegar or acetic acid" have recorded variations from one year to the next (Fig.9).

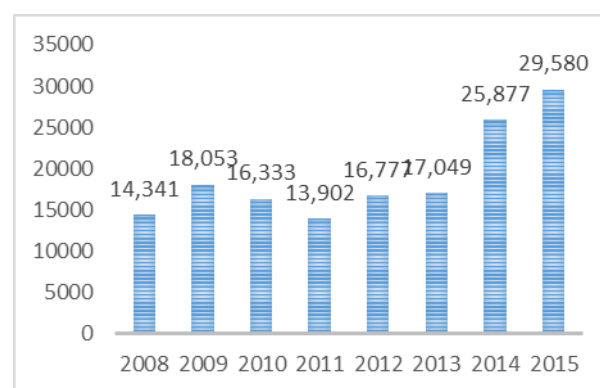


Fig. 9. Imports for the category "Tomatoes prepared or preserved otherwise than in vinegar or acetic acid" (thousand Euros)

Source: <http://statistici.insse.ro/shop>, 2017, [13]

The largest value imports were recorded in 2015 (29,580 thousand Euros). On the opposite, the lowest value imports were registered in 2011 (13,902 thousand Euros). In 2015, value imports increased by 106.2% compared to 2008.

Value exports for the "Tomato, fresh or chilled tomatoes" category recorded oscillations during the analysis period (Fig. 10). In 2015, value exports increased by 124.4% compared to 2008.

The smallest value exports were registered in 2008 (433 thousand Euro), and the highest ones value exports were recorded in 2012 (2,362 thousand Euro).

The exports and imports of tomatoes during the analyzed period have varied from one year to the next (Fig.11).

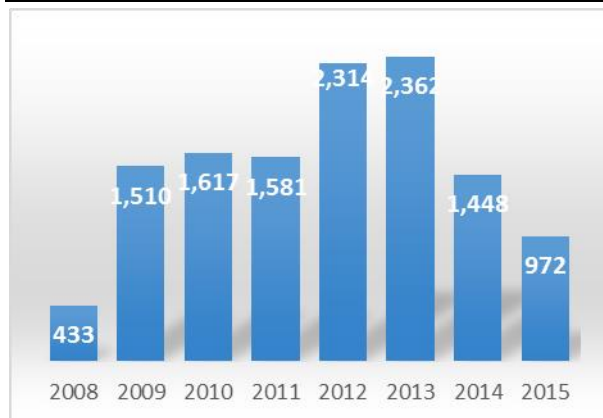


Fig. 10. Value exports for "Tomatoes, fresh or chilled" (thousands of euros)

Source: <http://statistici.inse.ro/shop>, 2017, [13]

Quantitative tomato exports increased from 694 tonnes (2008) to 4 421 tonnes (2015). The largest quantity exported from the analyzed period was recorded in 2014 (16,470 tonnes). In terms of quantitative imports of tomatoes, they were clearly higher than quantitative exports.

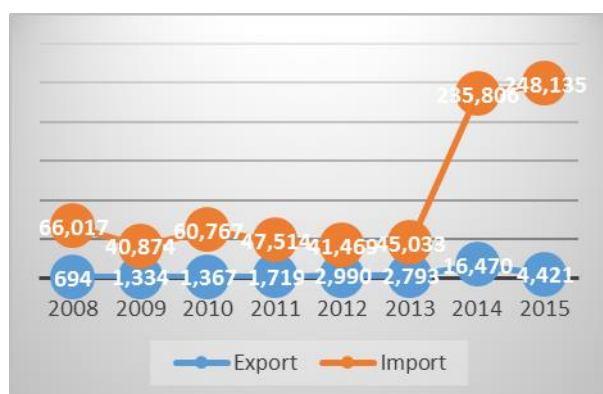


Fig. 11. Dynamics of Romania's tomatoes imports and exports during 2008-2015 (tonnes)

Source: <http://statistici.inse.ro/shop>, 2017, [13]

The most significant amount of tomatoes imported was in 2015 (248,135 tonnes), and the smallest imported quantity was registered in 2009 (40,874 tonnes).

In 2015, the quantity of tomato imports increased by 275.8% compared to 2008. This increase in quantitative imports was due, on the one hand, to the decrease in domestic tomato production and, on the other hand, to the consumption of tomatoes in the winter / spring production is greatly diminished.

The Romanian vegetable sector contributes to ensuring the food security and safety of the population, and for this reason there is a need

for a consolidated system [2].

This association between producers would lead to easier access to European funds.

These funds would give the possibility to realize investments in the vegetable sector [3]. Starting from 2017, the state will grant an aid for tomato cultivation in protected areas, amounting to 3000 euro/ year [8].

This aid is to ensure the consumption needs from the domestic production. The aim is also for:

- increasing the quality of products;
- increasing economic efficiency on chain (production and valorization)
- Increasing competitiveness.

CONCLUSIONS

This research shows that Romanian tomatoes market has multiple weaknesses. In the analyzed period (2008-2015), the area cultivated with tomatoes and production decrease. Regards from area decreased in 2015 with 15.1%.

Also, total tomatoes production decreased with 14.7% and average production registered the same trend. The most significant average production per hectare of tomatoes was obtained in 2011 (17,602 kg / ha).

This made to increase quantitative imports of tomatoes and to decrease exports. As a result the highest average annual consumption per capita of tomatoes was achieved in 2008 (42.6 kilograms per capita).

The highest average annual per capita consumption was recorded in urban areas as opposed to rural areas. The quantity of tomatoes purchased by residential household has recorded oscillations by year to year.

Also, the highest average price was registered in 2012 (3.06 lei / kg). The average monthly expenditure per person for the purchase of tomatoes increased by 9.4% in 2015 compared to 2008.

The highest value imports were recorded in 2015 (€ 29,580 thousand) for the category "Tomatoes prepared or preserved otherwise than in vinegar or acetic acid" and the exports for the category "Tomatoes, fresh or chilled" recorded variations. In 2015, value exports increased by 124.4% compared to 2008.

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