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## ANALYSIS AND EVALUATION OF THE PRODUCTION AND TRADE IN FRUITS AND VEGETABLES

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### ABSTRACT

In the reality of Bulgaria being a member of the EU, the state support of agriculture is a mandatory condition for the development and prosperity of that sector. It is a fact that while being a country with very favorable climatic and nature conditions, the production of fruits and vegetables in Bulgaria decreases.

*The aim* of the current article is to analyze the situation and evaluate the development of production and trading fruits and vegetables in Bulgaria. The structure of production and trade is being examined. The factors defining the production and consumption of fruits and vegetables are analyzed and the major problems are pointed out.

**Keywords:** condition, tendencies, trade, factors affecting the production of fruits and vegetables, sale

Agriculture is among the most important sectors of the Bulgarian economy. After 1990, the Bulgarian agriculture, despite of all the problems during its development and undergoing major events (land reforms, total privatization and destruction of old production facilities, total withdrawal of the state from this sector and little to no support to farmers), still remains one of the pillars of Bulgarian socio-economic life.

In the reality of Bulgaria being a member of the EU, the state support of agriculture is a mandatory condition for the development and prosperity of that sector. It is a fact that while being a country with very favorable climatic and nature conditions, the production of fruits and vegetables in Bulgaria decreases.

*The current article aims* at analyzing the condition and evaluating the development of the production and trade of fruits and vegetables in Bulgaria. The structure of production and trade is being assessed. The factors defining production and consumption of fruits and vegetables are analyzed and the major problems are being outlined.

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In the beginning of 2007, the European Committee carried out a reform in the General Organization of the fruit and vegetable market. The suggested changes reflect the major principles of the new agriculture policy of the Community for the "Fruits and vegetables" sector.

*The main goals of the sector reform are, as follows:*

- Establishing a sustainable production of fruits and vegetables, that is competitive on both local as well as the global market;
- Diminishing the fluctuations of the revenues of fruit and vegetable manufacturers, which are caused by crises and increasing consumption;
- Manufacturing with emphasis to environmental preservation and protection;
- Simplification and relaxation of administrative procedures and expenses.

The support for farmers in the fruits and vegetables sector is implemented by means of two agricultural funds representing a part of the EU general budget.

- *The European Agricultural Guarantee Fund;*
- *The European Agricultural Guarantee Fund for Rural Development (EAFRD);*

Even after the reform of the General Organization of the fruit and vegetable market, the *fruit and vegetable manufacturers unions*

remain to be its main element. Establishing organizations of the fruit and vegetable manufacturers is a tendency in the future agricultural production in Bulgaria, as they are a real factor and a guarantee for the farmers future success. They continue to play an important role in consolidating the fruit and vegetable production and improving the manufacturers positions on the market, because the individual farmer faces serious problems in trying to keep up with marketing quality standards and control on quality compliance, due to the small production volume.

The state of the foreign trade flow is a reflection of the condition of agriculture. Bulgaria, being a country with favorable climatic and natural conditions for the main agricultural productions, as well as a country with well established traditions in the agricultural sphere, is expected to actively export farm and food products. Despite the fact that our country holds its position as net exporter for a number of basic products, it increasingly turns into an importer. Especially contradictory to traditions is the situation with fruits and vegetables, where our country more and more turns into a net importer despite good conditions and traditions of growing thereof.

#### *Analysis and Evaluation of Fruit and Vegetable Production and Trade*

The major foreign trade partner of Bulgaria are the EU member-states, while our country accounts for 55% of the European market exports. Bulgarian manufacturers, as well as the processing enterprises, which offer agricultural production on foreign markets, have to comply with the high European standards covering a number of properties, such as consumer protection, product safety, and environmental protection. Trading with agricultural products, including fruits and vegetables is rather dynamic, while the market is quite sensitive in regards to agricultural products shelf life, quality characteristics, and the influence of natural factors.

During the transitional period, the volume of the Bulgarian foreign trade with agricultural products is characterized by high instability. This mostly affects the export. Fruits and vegetables have their traditional place in the market of EU member-states, and over 65% of all deliveries throughout the last years are designated for those. Bulgarian fruits are well-known on the European markets, mostly

because of their good taste quality. For years Bulgaria has successfully been sharing markets in Austria, Germany, Great Britain, the Czech Republic, and the CIS country members.

The reasons for the diminished exports and the increased imports during these last years are complex, and largely related to production and sale of products.

The deep transformation of Bulgarian agriculture as a result of the agricultural reform leads to serious changes which have a negative impact on exporting agricultural products, including fresh fruits and vegetables. Bulgaria gradually transforms from a traditional exporter into an importer. The increased volume of imports is related to the greater consumer interest in products of higher quality, as well as changes in eating habits of the population and the large number of public catering establishments. The agricultural production is not able to satisfy the domestic market demands. The fruit and vegetable market is characterized by a domestic production deficit all year round. Almost all fruits and vegetables which our country had previously exported to the international market are now being imported. Fruit production is in a critical condition.

After Bulgaria joined the EU, a number of accepted easements and preferential treatments related to agricultural trade will be ceased. Bulgarian production and trade are facing the Union's technical barriers since January 1<sup>st</sup>, 2007. Bulgaria was transformed into a domestic market of the Union. A Bulgarian manufacturer has, in order to be competitive and hold his position in the structure of the European market, to compete with countries such as Hungary and Poland, which are major manufacturers of agricultural products, for a share on the same market niche. But in the same time, the EU preferential system will create new problems and apply pressure on Bulgarian manufacturers, in relation to Russia and China, which are among the biggest agricultural production manufacturers.

Plant growing is a strategic sector in our agriculture, creating the major raw material basis for development of the food industry and the country export. According to data from the NSI (National Statistical Institute) and the Department of Agrostistics 54.7% of arable lands in the country is seeded with grain cultures, 21.5% - with oil-yielding cultures,

and the rest is covered with technical crops, fruits and vegetables.

*The major factors which have negative impact on fruit and vegetable production, include:*

- Production fields are parceled out, and workable lands have decreased (i.e. undersized fields – a great number of private agricultural farms own workable land that is less than 2 hectares).
- Lack of proper equipment for good quality land cultivation and deteriorated state of the hydro land reclamation systems with poorly maintained and internally destroyed canal network.
- Reduced usage of quality seeds, fertilizers and plant protection chemicals due to a lack of funds for their purchase.
- Lack of knowledge in the field of agriculture, which leads to an incorrect land cultivation, irregular watering, sprinkling, trimming, incorrect crop planning, and knowledge of sort composition.
- Lack of marketing skills and knowledge of market-oriented production of high-quality and standardized products.
- Bad infrastructure.
- A decrease in raw material buying due to a crisis in the canning industry.

The crisis is due to shrinking of the domestic consumption and losses of foreign markets, which leads to buildups of large quantities of ready but unsold production.

For years now, Bulgarian manufacturers have been facing the question whether Bulgarian food and agricultural products will be able to set a certain share on the World market. After our most profitable markets in the East had consecutively been liquidated we began to seek for new markets within the EU states and in the USA. At the same time, most of our local manufacturers underwent changes and restructured their activities or went into bankruptcy and fell out of competitions.<sup>(1;8,9)</sup>

The decreased production of vegetables leads to collapses in the canning industry. Canning enterprises are not able to provide the required raw materials for their production lines, since there is practically no industrial production of vegetables in the country. Growing vegetables in the country is carried on small farms, on small fields and in an inefficient way, therefore those vegetables are quite expensive. It leads to higher production costs for the canning

industry and to decrease in our competitiveness on foreign markets.

The lack of clear perspective in front of farmers leads to the same situation repeated from year to year – most of them throw themselves into the production of fruits and vegetables that were profitable in the previous year. This leads to overproduction and a surplus of a given kind of raw materials at the expense of others. The first cannot be sold on the market, and the prices of the latter grow higher than the international prices and the canning enterprises stop buying those.<sup>(3;7)</sup>

The main priority in the agricultural policy is increasing the competitiveness of the agricultural production on the international markets, since this sector plays a great part in forming the country's foreign currency revenues.

An analysis of the Bulgarian foreign trade indicated in 2005 an increase of 24.28% in trade volume compared to 2004. In 2005, there was a positive tendency of increase in export of USD 1958 million, while for the same period the import has grown by USD 3932 million compared to the previous year. According to the NSI data, the greater increase in import of 27.34%, compared to the increase in export of 19.83% has led to deterioration of the trade balance of the country and an increase in the negative trade balance in 2005. In the 2005, the exporting potential of the agricultural sector increased. This increase results from the signing of free trading agreements, which give more opportunities for preferential access of Bulgarian processed and unprocessed agricultural products to the international markets.

In 2006, an increase in the export of fresh fruits was observed. 5,297 tons have been exported during that year, i.e. 36.4% more than the quantity in 2005, mainly as a result from the increased export of nuts and tree-grown fruits. Like the previous years, the biggest share in the export structure is that of nuts – 82%. The export of nuts in 2006 is 4,352 tons, which is an increase of 40.5% over the previous year. This export is stimulated by contractual trading preferences with Turkey, Serbia, Albany, Israel, and Macedonia.

In 2006, the fresh tree-grown fruit export increased – by 2.3%, up to 453 tons. The tree-grown fruit export occupies an 8.5% share of the total fresh fruit export. 331 tons of

watermelons and melons have been exported, which is three times more than the previous year and is due to the significant increase in the production. An export of 11,598 tons of fresh vegetables, both indoor and outdoor grown, was registered, which is 3.7% more in comparison to the previous year.

The biggest share in the export of fresh vegetables is that of cucumbers and gherkins – 52% or 6,007 tons. 2,609 tons of them were grown outdoors, and 3,398 tons – in greenhouses. Quantitatively speaking the cucumber and gherkin export has increased by 6.2% over the previous year, due to increased production, higher export prices, and contractual preferences for duty-free importation into the EU. The onion and shallot export has increased by 36.7% in comparison to 2005. In 2006, the total fresh tomato export was 439 tons, which is 82% more than in the previous year and is due to the increased production in the country.

The registered fresh fruit import in 2006 was 180,064 tons – almost at the level of the previous year. The citrus fruits have the biggest share of the import structure, so in 2006, 57,988 tons were imported, i.e. 11.8% more than the previous year. In 2006, 45,484 tons of tree-grown fruits were imported, which is close to the level of the previous year. In 2006, a total of 80,451 tons of imported fresh vegetables was registered, which is 20% less than 2005.

The biggest share of the import of outdoor vegetables is that of onions and shallots – 31.2%. In 2006, a total of 25,142 tons of onion and shallot were imported – 47.2% more than 2005. Garlic import also marked a significant increase by 92.5% compared to the previous year. The tendency of decreasing fresh potato import that has been observed in the last three years continued in 2006 as well. The total fresh potato import has significantly decreased in comparison to the previous year, by 54.3%, amounting to 13,907 tons.

According to the Customs Agency data in 2006, a total of 9,918 tons of fresh tomatoes were imported in the country, 92% of which were greenhouse-grown (9,168 tons). In comparison with 2005, the total volume of imported fresh tomatoes has increased by 16%, and that of greenhouse-grown tomatoes – by 22%. The import is favored by the lower import prices compared to 2005. The total

volume of imported fresh cucumbers and gherkins in 2006 increased by 6.5% in comparison to the previous year, and amounted to 4,658 tons. The registered import of greenhouse-grown long cucumbers in 2006 was 4,347 tons – 44% more in comparison to 2005, due to increased consumption in the winter and early spring months, when usually there no domestic production is available and the importation is favored by the lower import price.

In 2006, a great share of the fresh vegetable import was covered by carrots and turnips – 8,960 tons. Sweet pepper import significantly decreased in comparison to the previous year – by 78.4%, down to 3,019 tons, as a result of the increased production in the country in that year.

In 2007, a total of 13,083 fresh fruits were exported – more than twice the amount of the previous year, and an increase in the export of almost all types of fresh fruits, except for nuts, was noticed. The fresh tree-grown fruit export has greatly increased – more than 7 times, up to 3,857 tons. Tree-grown fruit export accounts for 29% of the total fresh fruit export. In 2007, a total of 1,143 tons of melons and watermelons were exported, which is more than three times the amount of the previous year. Also significant is the export of raspberries, blackberries, and others – 1,092 tons, strawberries – 1,001 tons, kiwi – 385 tons. The nut export in 2007 was 3,982 tons, which is 9% less than the previous year.

According to the NSI data in 2007 the registered export of fresh vegetables amounted to 11,980 tons, which is by 3.3% higher in comparison to the previous year. The greatest share in the fresh vegetable export belongs to the cucumbers and gherkins – 61% or 7,263 tons (7,249 tons of cucumbers and 14 tons of gherkins). Quantitatively speaking the cucumber and gherkin export increased by 21% in comparison to the previous year. In 2007, 1,300 tons of mushrooms were exported, which is 22.5% less in comparison to the previous year. Onion and shallot export decreased by 63% compared to 2006. Fresh tomato export was 945 tons, i.e. twice the amount of the previous year as a result of the increased production in the country.

The registered import of fresh vegetables in 2007 was 204,717 tons, which is an increase of 15% over the previous year. This increase is

due to a decrease in domestic fruit production, resulting from the unfavorable climatic conditions during that year. The biggest share of the import structure of fresh vegetables was that of the tree-grown fruits – 54,563 tons, i.e. 20% more than the previous year. The registered import of citrus fruits was 53,937 tons, 7% less than the previous year. Importation of watermelons and melons grew more than three times in comparison to the previous year, reaching 39,230 tons. Nut import has increased by 35% in comparison to 2006 amounting to 3,440 tons.

The extremely unfavorable climatic conditions during 2007 resulted in a decrease in domestic vegetable production, which in turn stimulated the importation thereof.

In 2007, the fresh vegetable, potato and mushroom import increased by 84.3% over the previous year, up to a total amount of 148,256 tons. The biggest share of the yearly vegetable import was that of tomatoes – 27.2%, or 40,290 tons. Compared to 2006, the total amount of tomato import of 2007 increased over four times. Further 3,2516 tons of onion, shallots, garlic and leek were imported – a 10% increase over 2006.

The total volume of imported fresh potato significantly increased in comparison to the previous year – by 92.5%, and amounted to 26,770 tons. The total volume of fresh cucumber and gherkin imported in 2007 increased in comparison to the previous year by 63.8% and amounted to 7,630 tons. The volume of imported carrots and turnips increased by about 21% and was 10,991 tons. Importation of white and red cabbage amounted to 12,061 tons, marking a 70% increase over 2006.

In 2007, a total of 14,334 tons of fresh sweet peppers were imported, which is 4 times more than the previous year.

In 2008, the registered export of fresh fruits increased to 18,135 tons, i.e. by 38.4% more than in 2007. The implemented export of fresh vegetables, potatoes and mushrooms became 22,377 tons, which is almost by 87% more than the previous year. The significant increase in exportation is largely due to the reported increase in vegetable production – 8.1% more in comparison to 2007 (according to the Department of Agrostatics data, the MAF)

and to the higher average yields of almost all vegetable cultures.

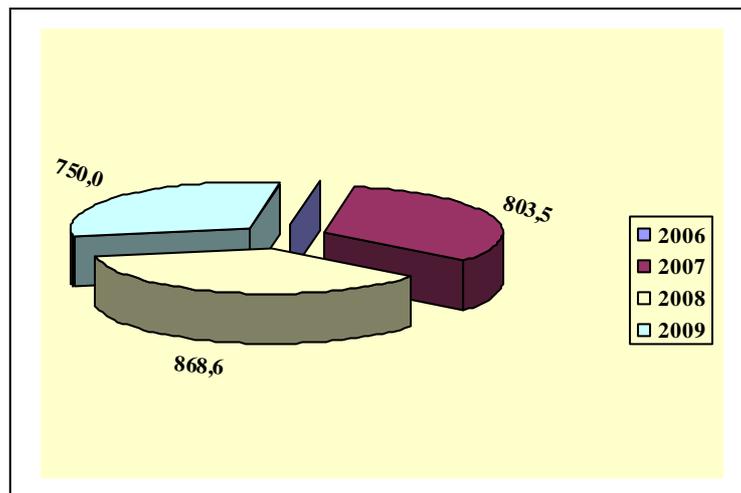
The fresh vegetable import in 2008, amounted to 180,640 tons, i.e. by 12.5% less than the previous year. The tendency of increasing the import of fresh vegetables, potatoes and mushroom that has been established throughout the last few years, continued to exist. A total of 167,955 tons were imported, which is 13% more in comparison to 2007. The main reason for the increase in importation lies in the insufficient production, which cannot satisfy the demand and increasing needs of the canning industry for higher volumes of cheaper homogenous products. <sup>(2;5,6,10)</sup>

A total of 1,183 thousand tons of vegetables were produced in 2006, i.e. 35% more than in 2005. An increase in production was observed in almost all vegetable products. The biggest share of the total fresh vegetable production is that of tomatoes (27%), peppers (20%) and watermelons (17%). Almost all fresh vegetables had higher average yields in comparison to the previous year.

In 2007, the total vegetable production amounted to 803.5 thousand tons, i.e. 32% less than the previous economic year. A decrease in the production was observed in almost all vegetable products. There is a significant increase in the production of sweet corn – 56.8%. The biggest share of the total fresh vegetable production was that of tomatoes (27%), peppers (17%) and watermelons (16%). Due to unfavorable climatic conditions the average yields from nearly all vegetable cultures decreased in comparison to 2006.

In 2008, the vegetable production was 8.1% higher in comparison to 2007. There was a significant increase in the production of cucumbers and gherkins – 9.5% in comparison to the previous year. The biggest share of the total fresh vegetable production was that of tomatoes (around 27%) and watermelons (around 16%).

In 2009, the vegetable production decreased by 15.9%, and the biggest share of the total fresh vegetable production was that of tomatoes (21.5%) and watermelons (18.3%), followed by peppers (14.7%). About 6.5 thousand tons of legumes (beans, lentils, chick-peas, etc.) were produced.

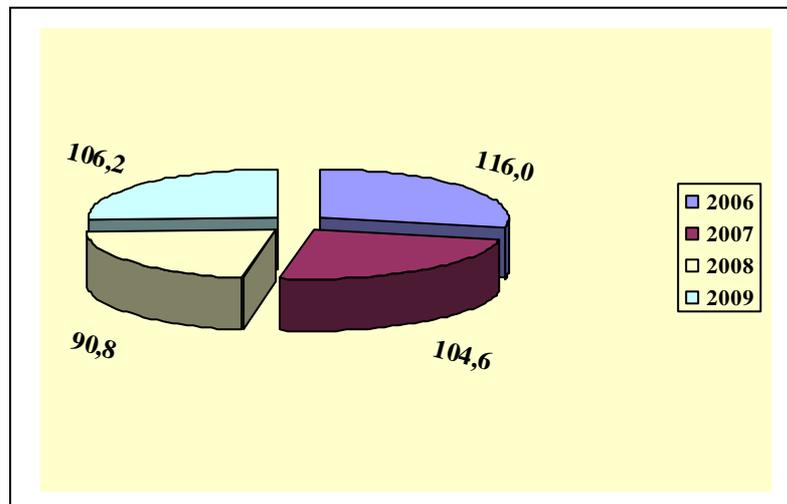


**Fig. 1** Vegetable production, in thousands of tons

Fruit production in Bulgaria in 2006 marked an increase in the average yields of most tree-grown fruits in comparison with 2005, and the biggest increase in average yield was that of peaches – by 41%. Apricots and raspberries marked an increase of 40% and 28%, respectively. The biggest relative share of the total fruit production in 2006 was the apple yield – 23%, followed by peaches – 19%,

plums, wild plums, and cherries – by 18% each, and apricots – 11%.

The total fruit production in 2008 marked a 13.2% decrease over 2007. The reasons are complex, but for the most part the decrease was due to smaller harvested fields. Of the total fruit production of the year the biggest relative share was that of apples – 25.9%, cherries – 17.7%, peaches – 16.4%, and plums – 15.8%.



**Fig. 2** Fruit production, in thousands of tons

*Sale of the Fruit and Vegetable Production*

In 2006, an increase in the area of greenhouse fields used and higher vegetable production was observed. The bigger part of the vegetable production was designated for the market. 65% of the tomato production went to the trade network.

Of the vegetable production directly sold to the processing industry the biggest share was that

of garden peas, sweet corn, gherkins, eggplants, French beans, and peppers. Of the vegetables which were designated for exportation the biggest share was that of cucumbers.

In 2007, 98% of the vegetable production was sold, and the bigger part of it was directed to the domestic market (69%). Over 70% of the tomato production was distributed on the trade

network. Of the vegetable production directly sold to the processing industry the biggest share was that of tomatoes, peppers, potatoes, and gherkins. Of the vegetables which were designated for exportation the biggest share was that of cucumbers, followed by tomatoes and peppers.

In 2008, 99% of the vegetable production was sold out, and the bigger part of it was directed to the domestic market (72%). Around 60% of the tomato production was distributed on the trade network. Of the vegetable production directly sold to the processing industry the biggest share was that of tomatoes, potatoes and eggplants. Of the vegetables which were designated for exportation the biggest share being that of cucumbers, followed by tomatoes and potatoes.

In 2009, 97.9% of the vegetable production was sold, and 72% of it was directed to the domestic market. Around 96.4% of the carrot production and 95.2% of the melon production were distributed on the trade network.

*On the grounds of the analysis performed the following major conclusions may be drawn:*

- The tendencies related to the import structure over the last few years are rather unfavorable. The export of processed products was marked with a steady tendency of decreasing at the expense of an increase in exportation of raw material.
- A stabilization of the financial, economical, and social status of the country, and establishing a good investment climate. An improvement of the professional expertise of the manufacturers for the purpose of significant improvement of the quality while keeping up with technological requirements.
- An increase in the competitiveness of the Bulgarian agricultural products requires huge amounts of investments.
- The main priority of Bulgarian agricultural policy should be increasing the competitiveness of the agricultural production on the international markets.
- The fact that Bulgaria joined the European Union and its structures meant that the country became a part of the united European market, where the free movement of products and capitals has been a major factor in increasing the economic growth and improving the quality of life.
- A necessity of improvement of marketing skills and expertise for market-oriented

production of high-quality and standardized products.

- Stabilizing the major macro economical indexes will have a stimulating effect on fruit and vegetable producers.
- Due to the tendency of building regional fruit and vegetable exchange markets and marketplaces, the Bulgarian fruit and vegetable production will gain a wider scope of influence, resulting in providing good opportunities to our country producers to participate on both the domestic and World markets with their products.

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