# **Challenges Associated with the Development of Vegetable Production in Bulgaria after the EU Enlargement**

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# Предизвикателства, свързани с развитието на зеленчукопроизводството, след присъединяването на България към ЕС

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След присъединяването на България към ЕС в сектор "Зеленчукопроизводство" настъпват редица промени.

Подкрепата, която се оказва на земеделските производители, предизвика преструктуриране на сектора и нови адаптационни процеси.

Зеленчуковите култури се отглеждат в най-подходящите почвено-климатични райони на България, което санкционира необходимостта от тяхното правилно райониране, респективно териториална специализация и концентрация на производството.

Зеленчукопроизводството е основна и неделима част от аграрното производство, отличаващо се с голяма интензивност и динамика. Този традиционен подотрасъл разполага с добър потенциал за развитие, особено в селските райони, в които е съсредоточена значителна част от българското население. Вносът на земеделска продукция влияе върху структурата и обема на българското земеделско производство. Аграрната политика на България трябва да има ясни приоритети за развитие на селското стопанство и превръщането му в конкурентоспособен отрасъл на икономиката.

### Introduction

The vegetable production has always been an inseparable part of Bulgarian agriculture and it is distinguished with its dynamics and intensity. Bulgarian vegetable production has faced serious challenges after the accession of our country to the EU. This traditional sub-sector of Bulgarian agriculture has been subjected to a constant pressure by the competitive import of cheap vegetables from other European countries.

There are a number of adverse factors dominating the development of vegetable production that have a negative impact on the recovery of this important Bulgarian sub-sector. More precisely, these include the insignificant financial support provided by the state, the inability of Bulgarian production to compete with the smuggling of vegetables from other countries, the outdated and destroyed irrigation system, the ineffective relationships between the producers and the market, low levels of organization among the producers themselves, lack of well-trained and skilled people employed in vegetable production.

The purpose of this article is to analyze the challenges and the development of vegetable production in Bulgaria with a view to enhancing its competitiveness and sustainable development.

### **Material and Methods**

To achieve the objective pursued, the statistical yearbooks and reference books of the National Statistical Institute (NSI) have been used as well as the agricultural reports of the Ministry of agriculture and food, newsletters of the Agro statistics Directorate to the Ministry of agriculture and food, and own researches. For the purposes of the research different information sources have been used – scientific journals, publications by Bulgarian and foreign authors, on-line (electronic) periodicals, as well as the author's own research.

Three production strands are distinguished in field production itself – early, medium early and late production. The distribution by regions of the possibilities for the organization of respective production strands is presented in Fig.1. To a greater extent, geographic and climatic factors determine the regional specificities in the specialization in the sub-sector.

A major challenge for Bulgarian vegetable production is the lack of organization and cooperation between the producers and traders, which hinders the access to the market and reduces competitiveness of the marketed vegetable production. The pooling of Bulgarian vegetable producers in independent professional organizations is a difficult and lengthy process. **The advantages of such professional associations** among vegetable producers can be divided into several basic aspects:

• The members of such associations have a better opportunity to know and research the market.

• Their position regarding the formation of the purchase price is significantly strengthened. Thus, the influence of resellers involved in the whole process is limited to a greater extent which subsequently leads to fairer prices.

• The possibilities for buying and using specialized equipment would increase significantly. To a great extent, it would lead to enhancement of labor productivity in the sector as well as to lowering the



Fig. 1. Regionalization of production strands in field vegetable production

1 - early field production; 2 - medium early field production; 3 - late field production

production cost and would automatically contribute to increasing the production competitiveness.

• Unfortunately, in Bulgaria the level of professional associations is the lowest in the sector within the whole EU. Presently, there are eight organizations of fruit and vegetable producers established in our country, five of them are directly linked with the production of vegetables. According to the Ministry of Agriculture and Food, the total farmed area is 7 626 decares, which represents only 1.4% of the total area planted with vegetables in the country.

#### **Results and Discussion**

After the accession of Bulgaria in the EU the vegetable farming in the country is affected more and more intensely by the impact of the common European market. Therefore it is required to follow the key factors that are most influencing on the market development prospects. In the EU the biggest vegetable producers are Italy, Spain, France and Poland. Although our country has favorable natural conditions, Bulgaria takes 13<sup>th</sup> place by volume of produced fresh vegetables.

The crisis in the vegetable farming raised a lot of questions that need to be answered. First, it is necessary to overcome the decrease of vegetable production. This can be achieved by establishing efficient functional organization forms. Another problem is the necessity to improve the system for access of vegetable farmers to cash resources. The market infrastructure of this industry should enable regulation of processes. The most important reasons for the reported decrease are result of the improperly conducted reforms in the agriculture industry as a result of which the economic condition of the sector is declining. A serious flaw is that the farmers are selecting certain crop production without conducting any preliminary marketing and without any signed contracts for produce realization. Farmers are looking to market already produced produce under the pressure of a strong market competition.

Negative impact on the efficiency of vegetable farming, besides the high dependence on climate conditions, have a number of factors that form the economic conditions in the subsector: an unfavorable demographic trend in the population structure, high concentration of population in the cities, high average age of the workforce, relatively low degree of mechanization and low labor productivity, high fragmentation of arable land, lack of planning characteristic for the large farms.

By establishing associations and organizations the vegetable producers would have much greater opportunities for market research as well as for better realization of their production that would comply with the high quality and quantity requirements of the commercial chains.

The vegetable production is a highly labor-intensive sub-sector of the agricultural sector. This fact imposes the necessity for combining different vegetable crops and production lines in such a way so as to optimize the use of the labor force and agricultural equipment to the greatest extent. The specialization of production is a prerequisite for the better utilization of the production factors and the increase of economic efficiency of the vegetable production.

The specialization of production has a direct influence over the employment in the agricultural farms.

Due to the fragmentation of the arable land the vegetable production is inefficient and fragmented; the majority of farms are small in size and the biggest part of their production satisfies primarily their own needs while the rest of it, which is offered on the market, is of poor quality. Consolidation of arable land will lead to a significant increase in the utilization rate of the production factors and will improve the access to irrigation systems and canals. The advantage of establishing associations is bilateral - the market will also benefit from the actions performed by the professional organizations. Bulgarian vegetable production has some specific distinctive features that turn it into a unique production. The favorable natural and climatic conditions, the longstanding traditions and experience of Bulgarian people in cultivating vegetables and the availability of a wide range of local varieties, all these have a positive effect over the taste of vegetable crops grown in Bulgaria and turn them into marketable products preferred both by consumers and exporters. Unfortunately, the vegetable production is not particularly attractive due to the weak financial support in comparison with other subsectors of the agricultural sector.

To improve the organization of the vegetable production it is necessary to consolidate the production which at present is very fragmented and consists mainly of small family farms. The consolidation and grouping of small-sized agricultural farms would increase the effectiveness and

**Table 1.** A vegetable farm in Plovdiv region – 40 decares, cultivation of three crops, specialized in growing tomatoes

Crops	Area		Production costs		Labor input		Profit	
	decares	%	BGN	%	man-days	%	BGN	%
Peas	10	25	860	2.7	80	11.9	640	11.8
Tomatoes	10	25	12800	38.8	220	32.8	2050	37.7
Water-melons	10	25	6500	19.7	150	22.5	700	12.8
Tomatoes	10	25	12800	38.8	220	32.8	2050	37.7
Total:	40	100	32960	100	670	100	5440	100

Profitability: 16.5%

Table 2. A vegetable farm in Plovdiv region – 40 decares, cultivation of four crops, without specialization

Crops	Area		Production costs		Labor input		Profit	
	decares	%	BGN	%	man-days	%	BGN	%
Tomatoes	10	25	13500	41.9	300	36.6	2050	51
Water-melons	10	25	6500	20.2	150	18.3	720	17.9
Pepper	10	25	11300	35.1	310	37.8	620	15.4
Green beans	10	25	900	2.8	60	7.3	630	15.7
Total:	40	100	32200	100	820	100	4020	100

Profitability: 12.48%

competitiveness of vegetable production. The consolidation would facilitate the modernization of agricultural farms as well as the access to the irrigation systems and irrigation channels. The unification of vegetable production would lead to increase in the level of mechanization of the work processes and above all of the processes associated with crop harvesting. It is a well-known fact that vegetable production is one of the most labor-intensive sub-sectors of the agricultural sector, with a high share of manual work – about 80–90% of the total labor input.

## Conclusions

• The vegetable production has been classified as one of the vulnerable sectors of Bulgarian agriculture in applying CAP after 2015. The sector will receive financial assistance linked to the production. Competitiveness and sustainable development of production are the basic priorities of Bulgarian agricultural policy.

• A major challenge facing Bulgarian vegetable production is its modernization – it would help increase the production competitiveness so that the vegetable products meet the current quality requirements and compete with the imported vegetables.

• The priorities and challenges facing the Bulgarian vegetable production after the accession of our country to the common European market in 2007 are connected with the opportunities for market survival, the overcoming of the low competitiveness of agricultural production as well as with the perspectives for sustainable development of this traditional sub-sector of Bulgarian agriculture.

• Encouraging vegetable producers to expand their vegetable repertoire by growing not only traditional vegetable crops but also new ones that are sought in the market and can be grown in our soil and climate.

• The opportunities for increasing the competitiveness and sustainability of vegetable production in Bulgaria are revealed by means of the effective implementation of the CAP in the EU.

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#### (Summary)

After the accession of Bulgaria to the European Union, a series of changes have occurred in the vegetable production sector.

The support that has been rendered to the vegetable producers has caused restructuring of the sector and has led to some new adaptation processes.

Vegetable crops are grown in the most suitable soil and climatic regions in Bulgaria which eliminates the need for their proper zoning, respectively their territorial specialization and concentration of production.

Vegetable production is a fundamental and integral part of agricultural production and it is characterized with great intensity and dynamics. This traditional sub-sector has a good potential for development especially in rural areas where a considerable part of Bulgarian population is concentrated. The import of fruits and vegetables affects the structure and volume of Bulgarian agricultural production. Therefore, Bulgarian agricultural policy should have clear priorities for the development of the sector and its transformation into a competitive branch of Bulgarian economy.

*Key words:* vegetable production, changes, development, competitiveness, challenges