



Аграрен университет – Пловдив, Научни трудове, т. LVII, 2013 г.  
Втора българо-полска научнопрактическа конференция  
София–Крапец–Добруджа, 9-14 септември, 2013  
Agricultural University – Plovdiv, Scientific Works, vol. LVII, 2013  
Second Bulgarian-Polish Scientific and Practical Conference  
Sofia–Krapets–Dobrudzha, 9-14 September, 2013

---

**ПОТЕНЦИАЛ ЗА РАЗВИТИЕ НА БЪЛГАРСКОТО  
ЗЕЛЕНЧУКОПРОИЗВОДСТВО В КОНТЕКСТА НА ОБЩАТА  
СЕЛСКОСТОПАНСКА ПОЛИТИКА  
BULGARIAN VEGETABLE PRODUCTION POTENTIAL IN THE CONTEXT OF  
COMMON AGRICULTURAL POLICY**

**Теодора Стоева  
Teodora Stoeva**

Аграрен университет – Пловдив  
Agricultural University - Plovdiv

**E-mail: teodorastoeva@gmail.com**

**Abstract**

Under current conditions, Bulgarian vegetable production is a traditional and fast developing sector of Bulgarian agriculture. Its status and development is determined by the various natural and geographic conditions in the country and the experience in cultivating and farming vegetable crops, which are traditional for the Bulgarian population.

During recent years vegetable production has been passing through a crisis. The crisis in the vegetable farming raised a lot of questions that need to be answered.

The aim of this publication is to show the influence of some to analyze the prospects and conditions for the development of field vegetable production in Bulgaria.

**Key words:** vegetable production, potential, common agricultural policy

**INTRODUCTION**

Filed vegetable production is a dynamically developing sub-sector of Bulgarian agriculture. Its potential for development is predetermined by the favorable natural and geographical conditions in our country as well as by the rich experience in the production and cultivation of vegetables which are traditional for Bulgarians.

The status, potential for development and trends in field vegetable production as well as the preconditions and factors that determine it are presently issues because of their significance for the development of agricultural sector in Bulgaria. After the accession of our country to the European Union, the potential for development of home vegetable production has grown considerably due to the increased opportunities provided by the common European policy in the sphere of agriculture.

The purpose of this study is to show the status and potential of vegetable production so that an analysis to be made of certain agricultural indicators such as harvested areas and average yields of some major vegetable crops as well as to reveal the main trends in this important sub-sector of Bulgarian agriculture.

### MATERIALS AND METHODS

Vegetable production in Bulgaria is a basic agricultural sub-sector and vegetable cultivation is a characteristic agricultural activity for many regions of our country.

Favorable natural and weather conditions allow the cultivation of a wide variety of vegetables and as a result there are more than 30 varieties of vegetable crops grown in our country. In recent years vegetable production has been going through a crisis. For the period 2002-2011 its share in plant-growing and in agricultural sector as a whole decreased by 76 percent. For the same period the area harvested with vegetables decreased by 61%. Our own Bulgarian production does not have a sufficient potential to meet the market needs and if once Bulgaria used to be an exporter, now it has become a net importer of fruit and vegetables. The competitive import of certain crops at relatively low prices from neighboring countries such as Turkey and Greece, where the climate is more favorable almost throughout the whole of the year, exerts pressure on Bulgarian production.

The data shown in table 1 illustrate the size and dynamics of harvested areas of eight vegetables.

**Size and dynamics of harvested areas planted with some vegetable crops in all categories of farms in the Republic of Bulgaria for 2007-2012**

**Table 1**

#### Harvested areas – hectares

TOTAL CROPS	YEARS						DYNAMICS - IN %					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Tomatoes	4828	3474	3007	2924	3860	3401	100	-28,1	-37,8	-39,5	-20,1	-29,6
Cucumbers	496	125	369	749	550	566	100	-74,8	-25,7	51	10,0	14,1
Pepper	5497	3751	5013	4703	4620	3013	100	-31,8	-8,9	-14,5	-16,0	-45,2
Onions	1262	1281	1179	1666	1498	1279	100	1,5	-6,6	32	18,7	1,3
Cabbage	2246	2093	1596	2616	2554	2084	100	-6,8	-28,9	16	13,7	-7,2
Potatoes	22427	21711	14002	13805	16218	14906	100	-3,2	-37,6	-38,5	-27,7	-33,5
Watermelons	3383	3507	3859	3302	3793	3091	100	3,6	14	-2,4	12,0	-8,6
Melons	1189	1242	1734	991	1504	1267	100	4,5	45,8	-16,7	26,5	6,6

Source:  
Ministry of agriculture and food, Agrostatics

Another specific characteristic related to the potential of vegetable production is that the peculiarities of the climate in our country do not allow cultivation of vegetables all year round which makes this kind of production seasonal. Comparative stability of the fixed costs due to the specific nature of the production is a peculiarity which is important for the potential of production – investments are made despite the uncertainty whether the agricultural output would be good or would fail. On the other hand, incomes are characterized with a constant uncertainty given the seasonal nature of vegetable production and the constant dependence between cash incomes and the quantity of marketed vegetable production, its correlation with quality and deadlines for market realization. A distinctive peculiarity of vegetable production is the high degree of risk due to the extremely short shelf-life of the products combined with increased sensitivity to temperature changes, diseases and pests, transport and etc., which turns vegetable crops in perishable products with a risk for realization./4/.

For the period 2007-2012, the harvested areas of the above-mentioned vegetable crops show a trend of change: the areas planted with tomatoes, potatoes and green pepper have decreased whilst the areas planted with the other crops have increased.

A major reason for the reduction of harvested areas and increasingly weak potential of home vegetable production is the fragmentation of arable land since most of the farms are small in size and produce products primarily to satisfy their own needs. Consolidation of arable land would lead to a significant increase in the level of land use and would enhance significantly the potential of vegetable production /1/.

## RESULTS AND DISCUSSION

### Average yields of the main vegetable crops for the country in all categories of farms for 2007-2012

Table 2

#### Average yields– kg/dca

Total crops	Years						Dynamics – in %					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Tomatoes	1970,9	2834,5	2418,2	2854,5	1757,6	2166,6	100	43,8	22,7	44,8	-10,8	9,9
Cucumbers	1148,8	1528,1	1433,5	2520,9	2073,4	1000,2	100	33	24,8	119,4	80,5	-12,9
Pepper	1439,5	1512,4	1364,8	1401,4	1371,7	1524,2	100	5,1	-5,2	-2,6	-4,7	5,9
Onions	839,6	1248,5	697,3	1148,9	1117,5	809,1	100	48,7	-16,9	36,8	33,1	-3,6
Cabbage	2205,5	3095,7	2463,6	3012,4	1746,4	2267,4	100	40,4	11,7	36,6	-20,8	2,8
Potatoes	1331,7	1625,8	1653,9	1819,3	1432	1015,0	100	22,1	24,2	36,6	7,5	-23,8
Watermelons	2273,5	2271,9	2302	1876,3	1792,6	1802,0	100	-0,1	1,3	-17,5	-21,2	-20,7
Melons	1564,8	1095,5	1249,6	889,3	1007,4	1393,4	100	-30,0	-20,1	-43,2	-35,6	-11

Source:

Ministry of agriculture and food, Agrostatistics

The levels of average yields are of fundamental importance to the final economic results and are connected with the potential for development of the sub-sector. The data in table 2 show the average yields of some major vegetable crops for all categories of farms for the period 2007-2012. The average yields obtained in the period surveyed were quite hesitant. Depending on the direction and dynamics of variation of average yields, vegetable crops can be classified in four main groups:

*First group* – crops which average yields increase every year compared to 2007 – cucumbers and potatoes;

*Second group* – crops which average yields increase unevenly throughout the period surveyed – onions and tomatoes;

*Third group* – crops which average yields decrease throughout the period surveyed – green pepper, watermelons, melons;

*Fourth group* – crops which average yields decrease but the process is hesitant – cabbage;

Regarding the first group, cucumbers are with the highest rate of increase of average yield followed by potatoes. Regarding the second group, the average yield of tomatoes was growing but in 2011 a significant reduction was observed. The lowest average yield of onions was realized in 2009. Regarding the third group which includes green pepper, watermelons and melons, there is a well-expressed and distinct tendency of lowering the average yield during the survey period. Regarding cabbage, which is included in the fourth group, there is hesitation in the dynamics of average yields.

### Production of major vegetable crops in Bulgaria total and in crops – in thousands tons

**Table 3**

Years	Total vegetables	Tomatoes	Pepper	Cucumbers	Potatoes	Onions	Cabbage
2001	1567,4	272,6	141,3	62,5	600,4	36,0	138,5
2002	1583,5	221,4	164,6	73,5	627,3	38,0	109,4
2003	1834,5	398,0	208,6	56,1	450,1	42,2	138,0
2004	1590,0	238,0	125,9	87,0	573,0	45,0	117,0
2005	872,6	126,4	72,1	44,7	375,5	14,3	69,3
2006	1182,9	212,9	156,7	61,5	386,0	20,2	72,6
2007	803,5	133,2	81,7	57,2	298,7	10,6	50,0
2008	874,3	134,1	59,5	62,6	353,6	16,1	64,9
2009	734,9	104,2	71,5	78,0	231,7	8,22	39,4
2010	356,5	114,6	69,1	65,7	251,2	19,1	78,9
2011	368,0	103,1	66,3	58,6	232,3	16,6	44,6
2012	275,8	94,0	47,1	33,7	151,3	10,3	47,3

Source:

*Ministry of agriculture and food, Department of Agrostatistics, 2001-2012*

The highest average yield was obtained in 2010—3012,4 kg and the lowest average yield was in 2011—746,4 kg. It is worth noting that the average yields obtained during the period surveyed are far from the biological possibilities for these vegetable crops and do not meet the favorable agro-climatic conditions in our country. The reasons are of organizational and economic nature, namely the preference to crops whose cultivation requires less manual labor and which are more cost-effective, non-compliance with technological requirements, lack of specialized agricultural machines.

Having in mind the good possibilities, traditions and potential for development of our country in the sphere of vegetable production, the average yields of major vegetable crops are relatively low yet they manage to keep the cost at a lower level comparing to the prices at which the production is realized.

The analysis of the total vegetable production for 2001-2012, as well as the production of the main vegetable crops shows that the total production of vegetables follows an extremely unfavorable trend of continuous reduction of production output. In 2012 the production of tomatoes, peppers, cucumbers, potatoes and onions reached its lowest point comparing to 2001 /2/.

The data in table 3 outline clearly the trend of sharp decrease in vegetable production as a whole and in major crops. For the period 2001-2012 the situation regarding vegetable production has been deteriorating continuously showing more and more declining growth rate and potential for development of this traditional Bulgarian sub-sector of agriculture.



### CONCLUSIONS

The lack of a national policy and responsible long-term strategy in the sphere of agriculture and in particular in fruit and vegetable sector in recent years has contributed to falling into a state of collapse /3/.

Another feature of vegetable production which has an impact on the potential for development is that a large part of agricultural farms are relatively small which

in turn leads to lower yields from a unit area and decrease in product competitiveness. The fragmentation of the basic production resource – the land, the inevitable dependence of vegetable production on natural and climatic conditions, the out-of-date agricultural machines and the low level of mechanization of production process, the low wages of those working in vegetable production are just a small part of the current issues that reduce the potential for development of this traditional Bulgarian sub-sector of agriculture.

The main benefits which determine the potential for development of vegetable production are: favorable soil and climatic conditions, rich experience and traditions in vegetable growing and production of propagating material, high scientific potential and presence of a specific gene pool of local varieties and crops, good market opportunities for realization of production on European markets, good opportunities for creating employment in depressed rural areas, creating good conditions for organic production of vegetables /4/.

#### LITERATURE

National strategy for sustainable development of agriculture in the Republic of Bulgaria for the period 2014-2020, Ministry of agriculture and food, p.125.

*Terziyska, K.*, „Competitiveness of Bulgarian vegetables on the international market“.

*Tonchev, T.*, “The decline in fruit production is 12 times“; „Bulgarian farmer “, 2013.

National strategy for sustainable operational programmes of organizations and producers of fruit and vegetables in the Republic of Bulgaria for the period 2009-2013, p.50.

**Рецензент – д-р инж. Агниешка Вжохалска**  
**E-mail: wrzochalska@ierigz.waw.pl**