

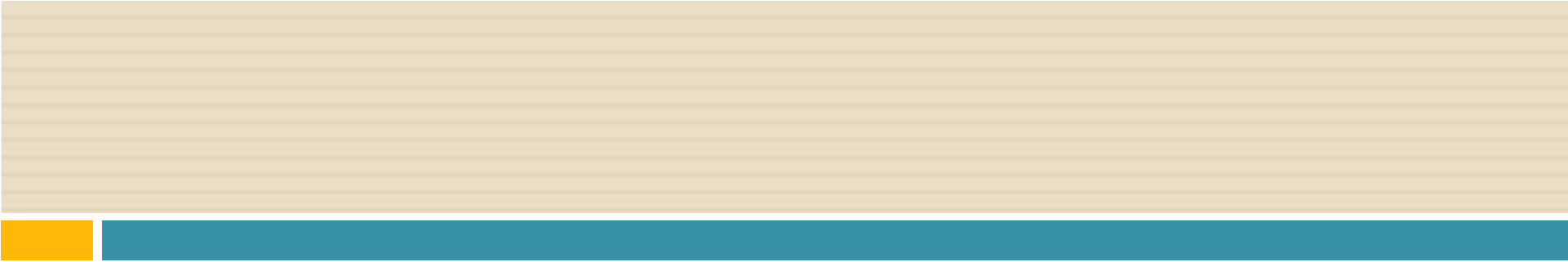


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**Organizational and economic issues and
challenges of open-field vegetable production in
Plovdiv region after the EU enlargement**



The aim of this publication is to show the challenges that Bulgarian vegetable production has been facing since the accession of our country to the Common European Market in 2007 .

After the accession of our country to the European Union the status and development of this traditional Bulgarian branch are getting worse in comparison to those European countries having similar territory and natural and climatic conditions. The implementation of the Common agricultural policy puts the competitiveness of Bulgarian vegetable production to a serious test as now it has to compete with the comparatively cheaper European production.

Advantages of Bulgarian production

- favourable soil and climatic conditions
- rich experience and traditions in vegetable growing
- high scientific potential and availability of a specific genotype of local crops and varieties
- good opportunities for creating jobs in underdeveloped rural areas
- creation of good conditions for organic vegetable production

- The level of average yields of the vegetable farms in Plovdiv region for the period 2007-2012 is a major factor that influences the effectiveness of filed vegetable production. Table 1 presents the average yields of the main vegetables grown in Plovdiv region over the period from 2007 to 2012.

Crops	2007	2008	2009	2010	2011	2012
Tomatoes	2120	2410	2340	2490	2804	2755
Cucumbers	3695	3536	3797	3210	2970	2088
Peppers	1900	1956	1895	1850	1730	1868
Onions	1710	1736	1783	1702	1690	1672
Cabbage	3120	2990	3064	2870	2710	2670
Water-melons	2830	2868	2868	2790	2840	2320

- The level of production costs of farms growing vegetables in Plovdiv region for the period 2007-2012 was directly affected by the economic situation in the country. The main components of production costs – raw materials, supplies and labor consumption, cannot be considered in isolation from the economic processes taking place in Bulgaria.
- Production costs (BGN/dca.) of vegetable farms in Plovdiv region for the period 2007-2012

Crops	2007	2008	2009	2010	2011	2012
Tomatoes	964,8	978,5	1027,3	1372,42	1483,5	1431,62
Cucumbers	1783,2	1863,42	1810,02	1589,9	1392,3	1721,14
Peppers	1283,4	1352,24	996,1	1022,34	1186,7	1203,82
Onions	584,4	637,5	757,41	753,2	703,96	786,6
Cabbage	484,76	559,17	576,1	699,11	684,8	758,36
Water-melons	608,3	659,62	618,84	640,18	730	701,35

- The data presented in Table 2 show an increase of production costs during the survey period, with certain fluctuations during the years, and in some vegetable crops – peppers for example, there was a reduction of these costs at the expense of material costs. In cucumbers there was a reduction both in material costs as well as in labor costs. However, there was a prevalence of the tendency of increase in production costs for cultivation of vegetables in Plovdiv region for the period 2007-2012, which was a natural process associated with inflation. Material costs varied according to the type and quantity of fertilizers used, type and frequency of use of plant protection products, method of irrigation, agricultural equipment used in accordance with the type and technology of cultivation of the relevant vegetable.

- In vegetable production there are a number of organizational and economic issues such as: lack of good organization in the production sector characterized by a low technological level; production with high costs, including high prices of seeds, fertilizers, plant protection products, irrigation water; lack of mechanization and use of human labor in harvesting. Producers' low degree of organization, lack of commercial arrangements between producers and dealers regarding the realization of output, low buying-in prices of vegetables, use of low-skilled workers – all these are significant organizational and economic issues of the sub-sector waiting to be resolved for many years.

- Despite the difficulties accompanying vegetable production, still, there was a profit from all vegetables grown in the region. There was a higher profit in the production of tomatoes and cabbage during the second period – 2010-2012 in comparison with the first period, from 2007 to 2009. What was essential to the profit growth was the selling price, which increased in all crops surveyed.
- As a whole, however, the profit remained relatively low in all vegetables.

Crops	Profit BGN/dca		Profit BGN/ton	
	Period 2007 – 2009	Period 2010 – 2012	Period 2007 – 2009	Period 2010 – 2012
Tomatoes	93,72	171,68	40,93	63,99
Cucumbers	668,55	315,48	181,87	114,47
Peppers	73,81	42,78	38,45	23,56
Cabbage	122,57	130,17	40,08	47,28
Onions	110,06	70,76	63,14	41,92
Water-melons	153,50	11,74	53,56	4,43

Influence of average yields, selling price and production costs on change in profit from 1 dca of vegetable production in Plovdiv region for the period 2007 - 2012

Crops	Total profit deviation in BGN	Average yield	Selling prices in BGN	Production costs in BGN	Material costs in BGN	Labor costs in BGN
Tomatoes	+77,96	+186,02	+330,92	-438,98	-280,16	-158,82
Green peppers	-31,03	-67,67	-24,04	+60,68	+122,04	-61,36
Dry onions	-39,30	-24,30	+73,15	-88,15	-68,74	-19,41
Cabbage	+7,60	-66,09	+247,77	-174,08	-112,29	-61,79
Cucumbers	-353,07	-622,53	+18,36	+251,10	+45,98	+205,12
Water-melons	+7,60	-66,09	+247,77	-174,08	-112,29	-61,79

- Having in mind the above said regarding the profit, we may draw the following conclusions:
- The trends in profit change from 1 dca of vegetable production produced in Plovdiv region over the period from 2007 to 2012 were rather diverse in direction. There was a positive change in this economic index in the production of tomatoes, cabbage and watermelons, the highest one being in tomatoes: +77,96 BGN. The opposite trend was observed in green peppers, dry onions and cucumbers – there was a reduction in profit from 1 dca of vegetable production, most significantly expressed in cucumbers

- Considering the factors surveyed, the selling price factor was the one acting in a positive direction in all vegetables grown in the region (except for the green peppers). The unfavorable negative trend in the index change under the influence of the average yield factor is also analogical. In all vegetable crops (with the exception of tomatoes) the factor acted in a negative direction.
- Production costs, including material costs and labor costs, had different effect over the change in profit from a unit area.
- The average yields of the main vegetables grown in Plovdiv region are lower than their potential biological productivity. It is noticeable that during the survey period from 2007 to 2012, the average yields of vegetable crops in Plovdiv region were rather fluctuating, though an overall increasing trend was observed.

- There was an increase in production costs during the survey period, with some fluctuations in years. Overall, however, there was a prevalence of the tendency of increase in production costs for cultivation of vegetables in Plovdiv region for the period 2007-2012. To a large degree the level of production costs depends on the inflation processes taking place in the country – in most cases they are closely related to the rising prices of main raw materials and supplies as well as to the rise in the cost of labor.
- The instability of the survey indexes associated with vegetable production in Plovdiv region show serious organizational and economic issues related to the development of this industry.



THANK YOU!