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**ПРОБЛЕМИ НА ОРГАНИЗАЦИОННОТО ПРЕСТРУКТУРИРАНЕ НА  
ЗЕЛЕНЧУКОВОТО ПРОИЗВОДСТВО В БЪЛГАРИЯ  
PROBLEMS OF ORGANIZATIONAL RESTRUCTURING OF VEGETABLE  
PRODUCTION IN BULGARIA**

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**Abstract**

The study analyzes the status of vegetable production in Bulgaria in the last 10 years (2003–2013). Revealed unfavorable trends in its development. Identified factors that have an impact on retention in the industry. Organizational, economic, demographic, political and more. Require a few key findings: Vegetable production is in crisis; Sub-sector is undercapitalized and unable alone to generate funds for their development - Is needed external financial assistance; Possible outcome is organizational restructuring of vegetable production.

The focus in the article is placed on the principles and approaches for the establishment of vegetable producers by building functional farming cooperatives of different types - processing, procurement, marketing, finance or carry out certain services.

The aim is to create favorable economic conditions that will ensure sustainable vegetable farms, efficiency and competitiveness in the context of the CAP of EC.

**Key words:** vegetable production, organizational restructuring, cooperative organizational forms, organizations of vegetable growers, functional cooperatives

**INTRODUCTION**

The development of vegetable production in Bulgaria in the past 10 years is characterized by a number of negative trends, organizational, economic, demographic, etc. character. In fact, the vegetable is in deep crisis. The sub-sector is undercapitalized and unable alone to generate funds for its development. Possible outcome of this situation is the organizational restructuring of vegetable production and the search for appropriate organizational forms to regain its vitality and traditional positions in domestic and international market.

## PURPOSE

The aim of this study is to make a critical analysis of the Bulgarian vegetable to reveal the factors that have a restraining influence on its development and on this basis to propose organizational restructuring and development of organizational forms to create favorable economic conditions for sustainable development, efficiency and competitiveness in the context of the CAP.

## MATERIALS AND METHODS

The study covers a ten-year period (2003-2013 years) and is based on information from the official statistics of the Ministry of Agriculture and Food. Tracked trends in the area average yields and production of vegetables using the following parameters: Proportion of vegetables to the total UAA of GDP, in the plant in%, share of vegetables in total agricultural exports in% and other important. Analyzed the level of specialization of vegetable by indicators for: The structure of vegetable farms in legal status with the 2013; Proportion of specialized vegetable farms of the total number of farms producing vegetables for legal status.

## RESULTS AND DISCUSSION

### Analysis of the vegetable production

Vegetable is a traditional sub-structure-of Bulgarian agriculture. Currently, it occupies 2.2% of the utilized agricultural area and provides about 30% of the gross output of the plant in Bulgaria and 15% of GDP in the agriculture sector as a whole. There is a trend of increasing export orientation of vegetables. For the period 2000-2010, the value of exports increased nearly 3 times - from 14.9 to 48.2 million dollars, while its share in total agricultural exports rose lasting from 3% to 3.7%. (Table 1).

### Areas, yields and production

Although after 1990 Bulgaria lost its strong position in traditional producer and exporter of vegetables, vegetable remains an important sector of agriculture, because of its economic and social importance.

The data in the **Table. 1** show that for the period 2000-2013 a sustained downward trend in open spaces, both in relative and in absolute terms. Areas under vegetables are cut 3 times - from 214.9 thousand ha in 2000 to 71.0 thousand ha in 2013. Areas of the structure vegetable crops also decreased, most markedly decrease is in the tomatoes and cucumbers. Increase in areas with a green house and greenhouse production.

**The average yields** in all vegetable crops are relatively low and strongly fluctuating in years. They do not correspond to the potential of the technology employed. Poor agrotechnics makes gardening dependent on climatic factors and the risk of their care than other crops.

**The total production** is characterized by strong fluctuations due to differences in the level of production on the field vegetables. Decrease in production was observed in almost all vegetable crops.

**Таблица 1**

**Основни показатели за мястото на зеленчукопроизводството  
в селскостопанското производство на България  
Key indicators in place of vegetable farming in Bulgaria**

Показатели/ indicators	2000	2001	2002	2003	2004	2005	2006	2010
<b>Засадени площи със зеленчуци, хил. ha/ Areas planted with vegetables, ha</b>	<b>214,9</b>	<b>134,5</b>	<b>135,7</b>	<b>122,3</b>	<b>104,3</b>	<b>73,0</b>	<b>71,0</b>	<b>71,0</b>
<b>Отн. дял към общата ИЗП, %/ usable agricultural area (UAA)%</b>	<b>3,8</b>	<b>3,6</b>	<b>3,1</b>	<b>3,2</b>	<b>2,4</b>	<b>2,4</b>	<b>2,2</b>	<b>2,2</b>
<b>Отн. дял на площите с пресни зеленчуци към общата ИЗП, %/ Ref. share of land with fresh vegetables to the total UAA%</b>	<b>0,8</b>	<b>1,5</b>	<b>0,9</b>	<b>0,8</b>	<b>0,6</b>	<b>0,8</b>	<b>0,7</b>	<b>0,7</b>
<b>Брутна продукция от зеленчуци, млн. лв/ Gross output of vegetables million leva</b>	<b>1157,8</b>	<b>1183,2</b>	<b>1361,0</b>	<b>1343,3</b>	<b>1267,3</b>	<b>1199,4</b>	<b>1060</b>	<b>1060</b>
<b>В т.ч. зеленчуци (без картофи)/ Including vegetables (excluding potatoes)</b>	<b>940,1</b>	<b>944,1</b>	<b>1169,6</b>	<b>1119,7</b>	<b>1020,7</b>	<b>1027,5</b>	<b>998,1</b>	<b>998,1</b>
<b>Отн. дял на зеленчуците в БП от отрасъла, %/ Ref. share of vegetables in GDP by industry,%</b>	<b>13,7</b>	<b>12,6</b>	<b>15,9</b>	<b>16,8</b>	<b>14,4</b>	<b>14,9</b>	<b>15,0</b>	<b>15,0</b>
<b>Отн. дял на зеленчуците към БП от растениевъдството, %/Ref. proportion of vegetables to the GDP plant,%</b>	<b>34,0</b>	<b>29,6</b>	<b>34,0</b>	<b>33,1</b>	<b>27,7</b>	<b>30,3</b>	<b>29,6</b>	<b>29,6</b>
<b>Износ на зеленчуци, млн. долара/Export of vegetables million \$</b>	<b>14,9</b>	<b>14,8</b>	<b>32,2</b>	<b>34,4</b>	<b>48,5</b>	<b>54,8</b>	<b>48,2</b>	<b>48,2</b>
<b>Отн. дял на зеленчуците в общия износ на сел. стоп. стоки, %/ Ref. share of vegetables in total exports of agricul. goods,%</b>	<b>3,0</b>	<b>3,0</b>	<b>4,5</b>	<b>4,5</b>	<b>4,6</b>	<b>4,3</b>	<b>3,7</b>	<b>3,7</b>

*Източник: МЗХ, Аграрни доклади 2000-2010, НСИ, Статистически справочник 2000-2010г. и собствени изчисления.*

*Surs: MAF, Agricultural Reports 2000-2010, NSI, Statistical Yearbook 2000 and 2010. and own calculations.*

Due to the fact that Bulgaria has not yet built a lean market structure of exchanges, auctions, collecting market, etc., the implementation of vegetable production is very difficult. Manufacturers carry out the production of a product "blind", without the necessary marketing information about supply and demand levels, the level of prices, quality requirements, etc. As a result, prices have fluctuated greatly over seasons and years, and profits mostly went instead for manufacturers to resellers. To this must be added the strong competition of foreign producers. Home growers give up the business and the market permanently stay imported vegetables. Highest relative share of imported fresh vegetables - tomatoes, cucumbers, peppers, onions and potatoes mature - products that are traditional for the Bulgarian production and export.

#### **Level of specialization of vegetable farms**

Nearly 36% of farms in Bulgaria grown fresh vegetables, potatoes and strawberries on an area of 380 270 da.

Total of 134,016 farms grow vegetables in open areas (including potatoes and strawberries). Of these 600 farms grow more than 50 da vegetables outdoors in an area of 83 074 da. In the South Central region covers 48% of the open spaces of vegetables in the country and the number of farms that grow them is 22697.

A vegetables from the field, other than potatoes, grown in 21,920 holdings. Individuals grow 76% of them, and their average size is 5 da, while the holdings of the entities it reached 105 acres.

The number of farms raising garden vegetables, other than potatoes, were 45,953. Just over 88% of their area in the holdings of individuals, and the average size of these structures is 1.7 da. In legal persons average size is 34 da farm.

The number of vegetable producers in the country is very large. This is mainly due to the many small farms. Simultaneously, there is a clear trend of reduction of area under vegetables, as well as the total number of vegetable-growing farms. While in 2001 the number of farms growing vegetables amounted to 658 400, in 2003 it was 408 600, 2007 – 183 123, and in 2013 - 134 016, 5 times less than at the beginning of each period (Table 2).

To 2013 in Bulgaria vegetables grow in farms with an average size of 2,8 da an increase compared to 2007 with 27.3%. These trends are the result of processes of organizational restructuring in sub pronounced reduction in the number of vegetable growers. Most strongly is the reduction in individuals, but they remain at relatively high proportion - 99% by number and 83% of the area of vegetable (Table 2).

**Таблица 2**

**Структура на зеленчуковите стопанства по юридически статут към 2013 г.**  
**Structure of vegetable growing farms in legal status for 2013**

Юридически статут на стопанството Legal statute	Структура на стопанствата Structure of vegetable growing farms			
	по брой/number	%	по площ/area	%
Общо за страната/Total for the country	134016	100,00	380270	100,00
Физически лица/Physical persons	133035	99,27	316661	83,27
Еднолични търговци/Sole traders	418	31,19	15318	4,03
Кооперации/Cooperatives	63	0,05	6215	1,63
Търговски дружества/Companies	467	0,35	41532	10,92
Сдружения и други Associations&others	33	0,02	544	0,14

Източник: МЗХ, „Агростатистика“, Структура на земеделските стопанства в България за периода 2002-2010 г. Собствени изчисления.  
 Source: "Agrostatistics" Structure of agricultural holdings in Bulgaria for the period 2002-2010 Own calculations.

**Таблица 3**

**Относителен дял на специализираните зеленчукови стопанства от общия брой на стопанствата, произвеждащи зеленчуци по юридически статут към 2013 г.**  
**Proportion of specialized vegetable farms of the total number of farms producing vegetables legal status to 2013**

Юридически статут на стопанството Legal statute	Относителен дял на специализираните зеленчукови стопанства Proportion of specialized vegetable farms	
	От общия брой Of total, %	От общата площ Of the total area, %
Общо за страната/Total for the country	8,24	11,09
Физически лица/Physical persons	8,13	10,42
Еднолични търговци/Sole trader	28,86	8,48
Кооперации/Cooperatives	5,94	3,56
Търговски дружества/Companies	66,03	24,41
Сдружения и други/Associations&others	-	47,34

Източник: МЗХ, „Агростатистика“, Структура на земеделските стопанства в България за периода 2002-2010 г. Собствени изчисления. Резултати от преброяването на земеделските стопанства в България, 2003-2012, Собствени изчисления.  
 Source: "Agrostatistics" Structure of agricultural holdings in Bulgaria for the period 2002-2010 Own calculations.  
 Results of the census of agricultural holdings in Bulgaria, 2003-2012, own calculations.

The data in Table 3 show another feature of the vegetable - its low degree of specialization. The number of specialized farms in 2013 are only 8.24% of all farms growing vegetables. Negative trend is the continued decline in the number of specialized farms of 21,827 units in 2003 to 15,093 units. - In 2007 specialized farms remain high share of farms with an economic size to 2 ESU (ESU). The total number at the end of the period amounted to 11,200. Over 70% of them producing exclusively for self-sufficiency.

Some volatility into account the number of subsistence farms (2-4 ESU) - 2400, which is a testament to their instability. One of the most serious problems of these farms is their inability to adapt to the market due to the small production batches they produce. In the context of the European Union, they will experience more serious difficulties, because they have the potential for restructuring, consolidation, modernization of production to meet the marketing standards for quality and competitiveness. There is an alarming trend in the number of commercial farms with size 4 ESU - 1180 that have a competitive advantage and respond to the market conditions. Continued negative trend shows that a supportive economic environment and the producers have no interest in developing vegetables (Koteva, 2010).

The results of the analysis give rise to the following major conclusions:

1. The vegetables production is in deep crisis. Sub-sector is undercapitalized and unable alone to generate funds for its development.

2. Factors that have a restraining influence on the production of vegetables are:

- **Organizational** - irrational organizational and production structure. Dominated by small subsistence farms are fragmented, low productivity and uncompetitive;

- **Economic** - cost - low-yield production, poor quality of production; relatively low level of mechanization and low labor productivity, a strong dependence of production on weather conditions, lack of planning measures, leading to periodic crises of deficiency or oversupply.

- **Demographic** - shortage of skilled labor, poor age structure - more than 50% of people aged 55; outflow of labor from the sector due to the low prestige and low income;

- **Political** - highly fragmented land ownership, lack of purposeful policy of financial assistance to small manufacturers with EU funds. 3. A general conclusion: The producer of vegetables in Bulgaria is small, fragmented, poor, unskilled, poorly organized and disinterested.

Under these conditions, one of the possible solutions in vegetable has its restructuring and the creation of organizations of vegetables.

### **Organizations of the farmers**

In our opinion, one of the undeniable advantages of organizational restructuring is that it can be done with minimal financial resources as sub and anyway does not have. Establishment of producer organizations is a trend of the future development of vegetable production in the country and a real factor in its success.

Joining farmers in organization of producer allows to produce and offer larger quantities of output from one species and variety.

Thus achieving a better market price, flexibility and plasticity in the market. To reduce production costs and improve product quality.

Organizations allow for better implementation and better market the products produced by its members, it is hard to achieve individual producer.

Objectives set by a producer organization are: to promote the concentration of production and ensure its members marketing. Moreover, the producer guarantees to its members that their production is planned and adjusted in accordance with market demand, especially in terms of quality and quantity. Producer organizations promote the application of new advanced manufacturing technologies and practices, and reasonable, environmentally friendly waste management vegetables, in order to protect soil, water, landscape and protect and enhance biodiversity.

In our country, the process of creation and recognition of producers' organizations began in 2001. In 2007 was adopted national legislation fully harmonized with the EU legislation.

Regulations that determine the conditions for the establishment and recognition of vegetable growers include:

**European regulations: Regulation (EC) № 1234/2007** of Council of 14 April 2008 amending Regulation (EC) № 1234/2007 establishing a common organization of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation); **Regulation (EC) № 1580/2007** of 21 December 2007 laying down implementing rules of Council Regulations (EC) № 2200/96, (EC) № 2201/96 and (EC) № 1182/2007.

**National regulations:** Law implementing the common organizations of the agricultural markets in the EU SG. 96/2006, amended. and supplemented. SG 16 of 15.02.2008; **Ordinance № 11** of 15.05.2007 on the terms and conditions for recognition of producer organizations in fruit and vegetables and their associations, and the terms and conditions of the approval and modification of operational programs, SG 42 of 29.05.2007.

Under these regulations, to be recognized as an organization of vegetable producers, it must have a minimum number of members not less than 7, the minimum period of membership it must be at least 1 year. Have annual production capacity, not less than 200,000 Levs. Constitution and Bylaws her work to ensure that members exercise democratic control over her. Farm organizations can be cooperatives under the Cooperatives Act, general partnerships or limited under the Companies Act.

#### **Restructuring and new organizational forms in the vegetable production**

Built new cooperative structures in the course of agrarian reforms in Bulgaria (since 1989) largely repeated the principles and features of the old

collective farms. The members of agricultural production cooperatives (PZK) form the initial capital of the cooperative by pooling their labor and capital resources. They worked the land together, define their terms of their business and are jointly and severally liable for the losses of the association (Kanchev, Doychinova, 2005).

Agricultural production cooperatives arise naturally in response to the difficult economic conditions in which it is placed agriculture in general and horticulture in particular.

New cooperatives differ from the former one, mainly in terms of land ownership and its implementation. They have not yet confirmed the typical features of a modern association of private farmers. Some weaknesses exist in terms of: how the formation of new enterprises; way of farming and other means of production, forms of organization of production and its management. Significant deficiencies exist in the accepted principles of income distribution. (Kanchev, 2000). They create opportunities for conflicts of interest between the cooperative and its members and degrade the material interest of the individual producer.

The reasons for these failures can be combined in several ways:

- Errors in the transformation of the property;
- Fluctuations in legislative activity; inertia of the past and traditions existing in the cooperative movement;
- Insufficient level of gardening equipment and poor state of infrastructure in the sub-sector;
- Lack of financial resources and capital;
- Fragmentation of land and construction of small farms;
- Weakening bonds of many owners, a member cooperative with earth, poor staffing, lack of interest of the state to the processes in the industry and its regulation and assistance.

Addressing the issue of land ownership and the development of market relations in Bulgarian agriculture create favorable conditions for the establishment of **agricultural cooperatives of functional type**.

In developed countries, this type of cooperatives are also known as farmer cooperatives. They occur in some countries of Western Europe and the United States as early as the 19th century. Farmer cooperatives gradually take over the functions (hence their name) intermediary capital - credit, processing and marketing of agricultural products procurement of machinery and equipment, seeds, fertilizers, and more.

Farmers' cooperatives are one of the most powerful unions in the economic life with a high degree of cooperation. In this movement are covered 100% of farm holdings in the Netherlands, Finland, Iceland, Norway, Sweden and Japan, 80% in France and Germany, 30% in the U.S. Great Britain and Italy (Barton, 1989).

Es economically are voluntarily formed, self-governing and self-supporting enterprises by individual farmers - united on the basis of democratic principle of direct personal participation in decision-making and control their performance. In farm cooperatives associate unlimited number of individuals with equal rights and



obligations. They are legal entities separate account in the bank and private balance sheets. The basis of these cooperatives stand personal interest as consumers, family farmers and producers.

Farmers' cooperatives are associations of people, not of capital. Anytime they accept new members without restrictions from social, racial, political or religious nature. The main objective of the cooperative is to meet and develop business interests of its members and to increase their income through mutual aid, solidarity and joint efforts.

Unlike production cooperatives (PZK) where members come to the land and cultivate it together, functional members of cooperatives are autonomous, independent farmers entrepreneurs. They cultivate their own land and carry out independent production and business activities independent of the other farmers. Individual farmers enter into alliances and form cooperative units to perform particular services.

The established network of processing plants in Bulgaria is a real prerequisite for the construction of vegetable-growing cooperatives for processing and marketing of agricultural products (marketing cooperatives).

Another type of functional cooperatives associations to supply farmers with the necessary means of production, fertilizers, feed, seed, chemicals, drugs, etc.

(Supply cooperatives).

Strong distribution in this country can get and cooperatives for production services to farmers: repair of agricultural equipment, tillage, fertilization and plant protection, etc.

The difficult financial situation and unfavorable economic conditions in which work is currently Bulgarian vegetable-growing farms are a major obstacle in their production activities. Natural outcome of this situation is the development of credit and savings account and farm cooperatives. They can function as separate frames of local importance or major banks - Bank cooperatives (Mihaylov, 1999).

Overlapping of various cooperative forms will enable multifold solve problems in Bulgarian vegetable. Thus, each farmer will be able to participate simultaneously in several cooperative depending on their needs and interests.

The functional cooperatives work best when their work is based on the following key principles:

1. Voluntary membership.
2. The control of decisions can be made in several ways:
  - a) one member - one vote;
  - b) depending of the basis of participation in business;
  - c) mixed principle and operational decisions are adopted the principle of "one member, one vote."
3. Payment of profit on the basis of participation in economic activity.
4. Regulation of restrictions on the share of profits that is paid on the capital invested.
5. The cooperative is engaged in activities that members have a direct interest.
6. The cooperative expanded its capital through the retention of part of the profits of the business.

## CONCLUSIONS

The advantages of cooperatives of functional type are demonstrated in world practice. With their construction is achieved:

1. Unity of the owner and master. Strong interest and incentives for efficient production and working in isolated farms.
2. Increasing the efficiency of vegetable production by increasing production scale and reduce the cost per unit of output.
3. Maximum convergence of production and management, which increases economic responsibility Individual farmers work as entrepreneurs in their own farm.
4. High adaptation to the characteristics of vegetable production.
5. High social spirit, comradeship and mutual assistance, which is a prerequisite for high productivity, strong economic performance and a guarantee to increase farmers' incomes.
6. Provides easier access to the markets of raw materials, products and services.
7. Assign additional profit from the next level in the chain of channels implement.
8. Provides loyalty marketing of local markets through measurement and standardization of production and compliance with respect to the materials in use.
9. Cooperatives are factor in maintaining and enhancing the competitiveness of the vegetable in domestic and international market, where small farmers have no chance.

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