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THE POSSIBILITY OF IMPROVING THE PRODUCTION OF FLOWERS IN THE REPUBLIC OF SERBIA

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Abstract

Flower production is highly intense production, which does not require large areas, but requires knowledge and organization of the overall production and sales. In recent years there has been growing interest of individuals, in the context of their family households, on small estates, organize the production of flowers. Production is mainly concentrated around the major cities and it deals with around 2,115 farms on a total area of 382, 24 hectares. In terms of production structure dominates production of seedlings of seasonal flowers, and the manufacture of some types of suitable for cut flower (rose, chrysanthemum, lilies, gladiolus, kala). The volume of annual production of 2500 t does not meet the needs of the domestic market. For these reasons, the import of flowers is several times higher than exports. Starting from the fact that the Republic of Serbia not only has significant land resources, but also scientific institutions in the field of agriculture which have made are significant scientific results, improvement of the total production of flowers, can significantly reduce imports but at the same time significantly increase the export of flowers to other countries.

Keywords: agriculture, production, floriculture, Serbia.

Production potentials of Serbia

Serbia is located in the southeastern part of Europe and occupies the central part of the Balkan Peninsula. It covers an area of 88361 km². It borders with eight neighboring states and with a total length of 2397 km, of which 1717 km of subway borders and 680 km of rivers. According to the administrative-territorial division, Serbia has 174 municipalities deployed in 29 administrative districts. Based on the results of the last 2011 population census, 7186862 inhabitants live in Serbia, of which 59.44% live in urban settlements, and 40.56% in other settlements, among which the largest number of rural areas. The population density is about 101 inhabitants / km². The moderate-continental climate dominates. It is characterized by an average annual rainfall of 500-700 mm and a average annual temperature of 10-12°C. In terms of land characteristics Serbia is rich in lands that are suitable for the production of agricultural crops in their physical and chemical properties. The most important types of soil are: black earth (carbonate, meadow, sandy), rattan black and alluvial deposits. By positioning favorable natural conditions, further development and improvement of agricultural production, Serbia can be the main lever of economic development in general, in which the production of flowers could find its significant place.

Areas under flowers in Serbia

According to the Statistical Office of the Republic of Serbia for 2016, the total area under arable land is 3861477 ha, while the number of registered agricultural holdings is 631552. The most developed branches of agriculture are cattle breeding (43%), field crops (42%), fruit growing and viticulture (12%). Thanks to demand throughout the year, the production of floral and decorative planting material has been showing a marked development in recent years. The production of flowers and ornamental plants in Serbia deals with 2125 farms (Tab. 1) on an area of 382.24 ha. Since the production of flowers is mainly concerned with small family farms, the main problem that hinders the further development of this branch of production is the inability to more efficiently use the workforce as well as the inability to rational use of modern means of production.

Table 1. Number of households and areas under flowers and ornamental plants in Serbia

	Total	
	Area, ha	Number of holdings
Flowers and ornamental plants: Number of farms and areas by size of flowers and ornamental plants area		
REPUBLIC OF SERBIA ¹		
Total	382.34	2125
Family	334.61	2010
Legal entity	28.19	44
Entrepreneurs	19.54	71

Flowering production is also organized in the open field and in a protected area. In 2016, the area of open space where flowers were grown was 263 ha, and a protected area of 119 ha (Tab. 2), which makes less than 10% of the total area per protected area in Serbia (2083 ha).

Table 2. Areas under flowers in Serbia (open field and protected area)

	≤ 1 ha	1,01 – 2 ha	2,01 – 5 ha	5,01 – 10 ha	10,01 – 50 ha	≥ 50 ha	Total
Total area (ha)	106	63	90	60	59	4	382
Protected place	42	18	24	23	10	2	119
Open field	64	45	66	37	49	2	263

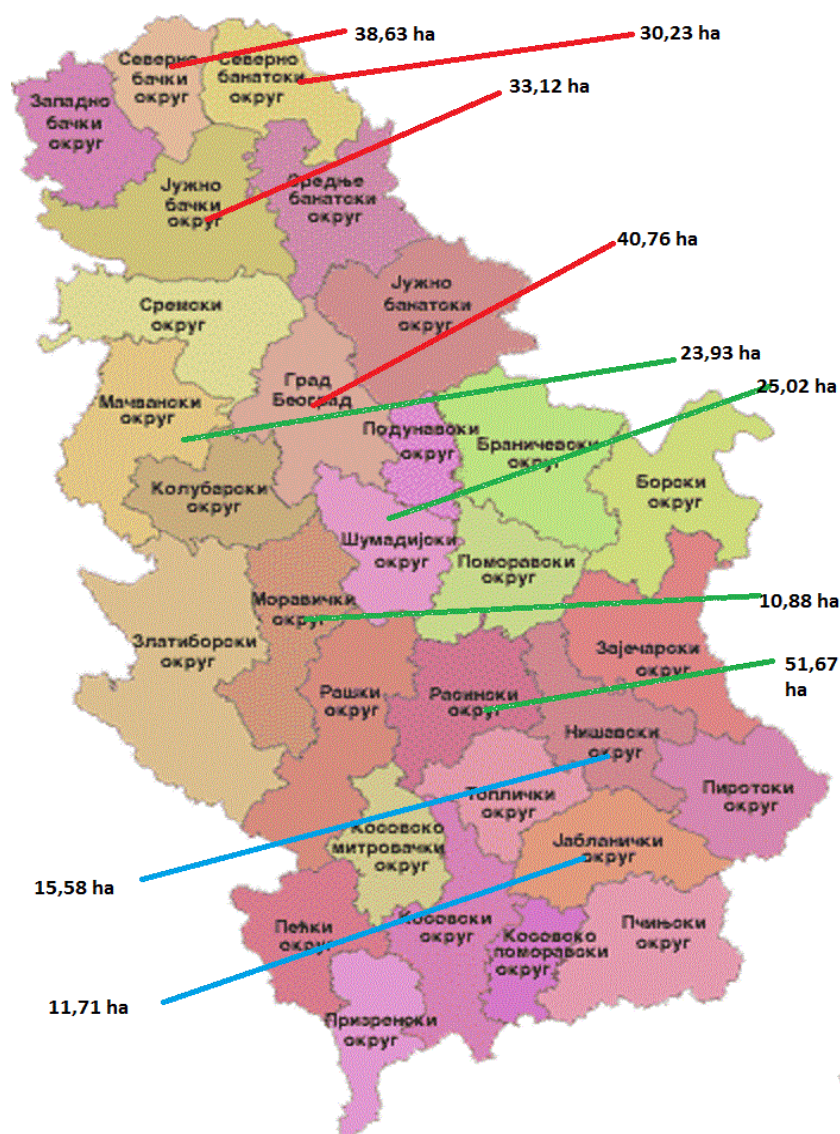
Data source: Republic Institute for Statistics, January 2016.

In protected areas, the production of flowers is done in small batches because they are small objects. The number of flower-producing objects in the last decade has been gradually decreasing, not due to the consequence of reducing the need for flowers, but because of the high construction and maintenance costs. Flowering production is concentrated in several major areas (Fig. 1). The main production centers are: Belgrade region with 40.76 ha; Macvan region (Sabac with 19.44 ha); Moravian region (Čačak with 9.88 ha); Rasin's region (Varvarin with 18,96 ha, Krusevac with 12,45 ha) and Sumadija region (Kragujevac with 11,58 ha).

In terms of production structure, the production of seasonal flower plants dominates in the protected area. In the open field, the most prevalent is the production of Rose, Gladiolus, Chrysanthemum, Calla and Lily. The areas under these cultures vary from year to year. The largest areas occupy roses, while other cultures are represented in a much smaller percentage. In relation to the countries of the region, the production of flowers in Serbia is organized on larger areas in relation to Croatia (300 ha) and Bosnia and Herzegovina (there is no accurate data), and half of the area in relation to Macedonia (691 ha) and Hungary (670 ha).

Foreign trade of flowers

According to statistics from the World Trade Organization, more than sixty countries in the world are participating in international flower trade, which exceeds \$ 7 billion annually. Half of these revenues come from the placement of cut flowers, and the rest of nursery production, flower pots and seeds. Since the 1990s, the volume of foreign trade of flowers in the world has started to grow.



Flowers worth EUR 4 million are exported from Serbia annually, while the value of imports is tripled. Therefore, a foreign trade deficit is expressed in this economic branch. A similar situation exists in countries in the region. In the structure of imports, according to the Serbian Chamber of Commerce, the largest share in 2016 has a group of cut flowers (roses, carnations, chrysanthemums and orchids), with 44% of total imports (Tab. 3 and 4), followed by seed and fruit material and flower pots. Importing dried flowers is negligible. Compared to the structure of imports from 2006 and 2007, there are no major changes either in assortment or in value (43%). Most flowers are imported from EU countries (Netherlands, Italy, Belgium, Hungary), then from Kenya, Turkey, Ecuador and Colombia.

Table 3. The quantity of imported flowers in Serbia (in tones)

Product	2012.	2013.	2014.	2015.	2016.
Fresh cut flowers and buds for bouquets	1968	2000	2031	1907	2244
Bulbs, tubers, rhizomes	139	125	189	189	225

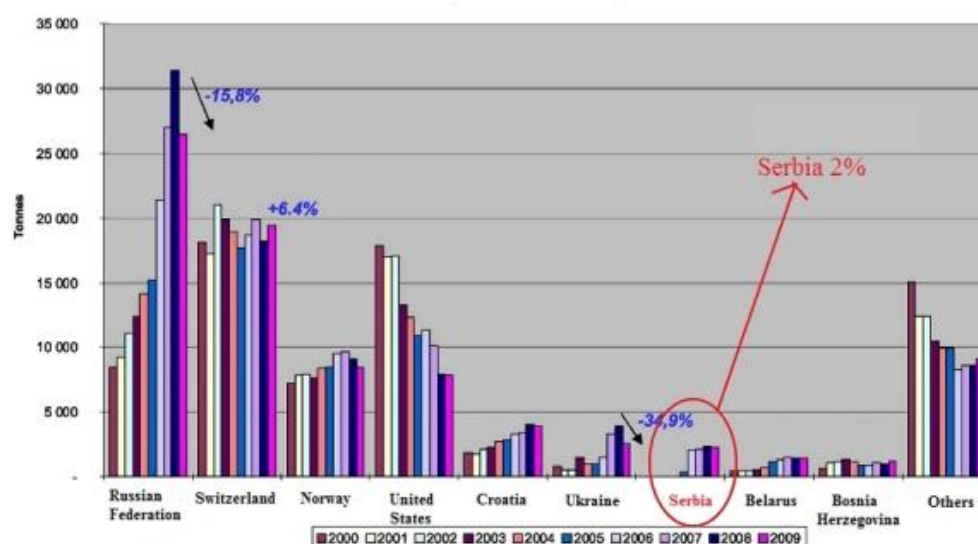
Data source: Republic Institute for Statistics, January 2016.

Table 4. Imports of flowers in Serbia (000 USD)

Product	2012.	2013.	2014.	2015.	2016.
Fresh cut flowers and buds for bouquets	4070	3835	3638	3000	2979
Bulbs, tubers, rhizomes	526	514	718	640	971

Data source: Republic Institute for Statistics, January 2016.

The most important foreign trade partners of Serbia in the trade of flowers and ornamental plants are the countries of the European Union (EU) and the Free Trade Zone in Central Europe (CEFTA), which account for almost 80% of the total exchange of these products (Graph 1). Of the CEFTA countries, most flowers are exported to Bosnia and Herzegovina and Croatia (391t) and from the EU countries to the Netherlands, Poland and Germany. Serbia also exports flowers to Russia, Belarus, Switzerland, the United States.



Graph1. Exports of cut flowers and greenery by countries in tonnes

A similar situation exists in countries in the region. Croatia, with nearly the same production area, imports as much as 90% of its flowers. Macedonia imports 80%, although it has larger areas under flowers than Serbia. In Hungary, there is also a higher rate of imports compared to exports, which also indicates higher consumption.

Conclusions

Starting from the fact that the Republic of Serbia does not only have significant land resources, but also scientific institutions in the fields of agriculture that have given significant scientific results, improving the overall production of flowers, can significantly reduce imports, but at the same time significantly increase the export of flowers to other countries. The main lever for the improvement of flower production is the strategy of the country's economic development and the strategies of foreign trade relations. Associated manufacturers have great chances to improve their production, provide a greater quantity of products that will enable them to increase their competitiveness in both the domestic and foreign markets. The education programs of producers represent a very important segment of the promotion of flower production in Serbia. Because only in this way manufacturers can be introduced to the potentials that they possess and which can be used and thus participate in the development of their environment and society as a whole. For a better foreign trade, it is necessary to organize a stock market for the flow of flowers, which will ensure the

continuity of supply, trade and demand. In conceiving the export strategy to the international market, priority should be given to the countries in the environment. And to the countries of CEFT (Bosnia and Herzegovina, Macedonia, Croatia and Albania), which now exceeds 50% of exports. Also, we should strive for greater participation in the market of the Russian Federation, Ukraine and other countries of the former USSR. In this way, domestic placement would be relieved, and production and thus revenues would increase.

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