



PRODUCTION OF MEDICINAL PLANTS IN SMEs AS A SUCCESSFUL MODEL OF RURAL COMMUNITY DEVELOPMENT

BLAŽENKA S. POPOVIĆ, RADOJKA O. MALETIĆ,
 TAMARA Ž. PAUNOVIĆ

Abstract

The European market shows great interest in quality medicinal plants from this area and in that way provide significant financial effects for business entities. Incentives of the Ministry of Agriculture for growing medicinal plants on the one side, and development of small and medium entrepreneurship in this area on the other, would significantly contribute to the development of rural communities of the Republic of Serbia.

Key words: medicinal plants, SMEs, rural community development

INTRODUCTION

Increase in interest for medicinal plants is a worldwide trend. In modern urban society, the accent is on industry, on technology of synthetic products, chemistry and on everything else that in uncontrolled conditions can be double-edged sword. It must be emphasized the importance of synthetic products, especially medicines, which have contributed to significant development of medicine. Modern medicine and pharmacology cannot be even imagined today without such a development. However, in the last couple of years, it is realized that, on the one side, the synthetic products are not omnipotent and that the use of these medicines is excessive, and on the other, the skill of treatment, which was developed for centuries and which became inseparable part of the cultural history of mankind, is neglected. After World War II, development of science and technology throughout the world experienced a complete revolution. We are used to the constant new discoveries, and we are even more used on their application. The aspiration for something new led us to neglect the old, traditional, reaffirmed in centuries and in fact, very often, irreplaceable experience. Therefore, the role of modern science is to determine and define the importance of herbs in medicine, nutrition, cosmetics and other human living and working areas.

Thanks to its geographical position, climate and soil, as well as a rich tradition, it can be said that Serbia is very suitable for collection and cultivation of medicinal, aromatic and spice plants. However, it can also be concluded that these potential opportunities are not used properly.

RESULTS AND DISCUSSION

Medicinal and aromatic plants are an important natural resource. Today, about 35.000 species of these plants are in use, both in official as well as in traditional medicine, and most of them have local significance. There are over 700 species of medicinal and aromatic plants in very rich and very diverse flora of our country, 420 of them are officially registered (11% of total flora) and 279 is in trade system.

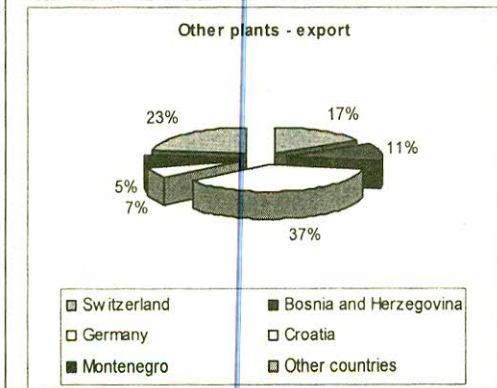
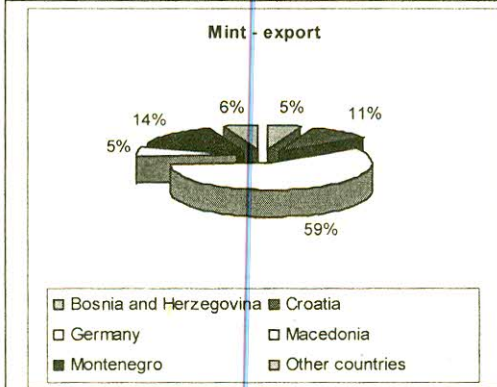
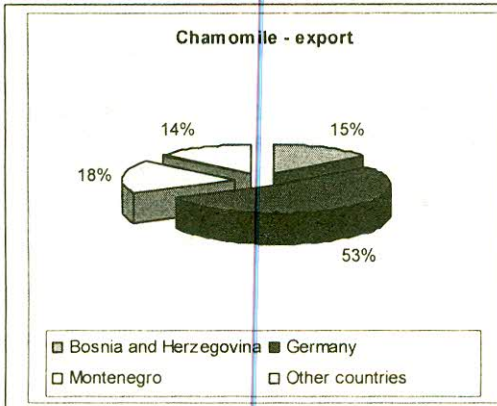
Medicinal plants are very important commercial item, both in internal and in international trade. Trade circulation includes medicinal plants, either raw or dried, extracted medicinal ingredients as pharmaceutical raw material, but also as seed and planting material. Profitable production and export of medicinal plants and various extracts, pure compounds and essential oils, as well as completed (ready-made) remedies has commercial effects, but also represent a source of significant financial resources. Recently, demand for medicinal raw materials is growing rapidly, especially in the US, Canada and in the developed Western European countries. Serbia has a minor role in this type of activity in the European market, with only 0,43% of total imports into the EU. The former enviably high level (in the period after the Second World War) of export of some medicinal plants (chamomile, sage) has drastically decreased. Extraordinary economic profit from the export of chamomile in former Yugoslavia, is now taken over by some neighboring countries. According to the Balkan Herbal Sector, Serbia was a major exporter of medicinal plants and their products. Namely, just twelve years ago, Serbia exported almost 40 thousand tons of medicinal plants and a large amount of essential oils. Now, this sector is quite neglected in Serbia, while in Bosnia and Croatia, it is developed, and former position of Serbia is now taken over by Bulgaria and Albania.

Thanks to favorable climate, soil and unpolluted environment, but also thanks to a long tradition, Serbia is very suitable for intensive cultivation of medicinal plants. Although the cultivation of medicinal plants is excellent investment – makes several times more income per hectare than corn or wheat – only between 1300 and 1900 hectares per year are planted in Serbia.

Table 1
Area under cultivated industrial crops in the Republic of Serbia

Year	Area (ha)	B _i (%) (2003=100)
2003	1740	100.00
2004	1684	96.78
2005	1621	93.16
2006	1211	69.60
2007	1289	74.08
2008	1436	82.53
2009	1674	96.21

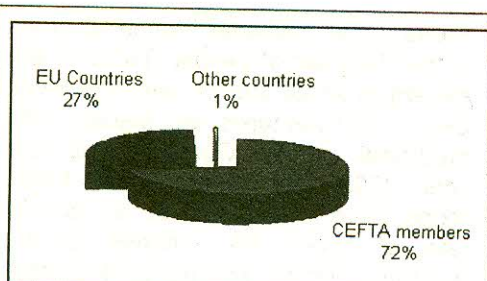
Source: Republic Bureau of Statistics



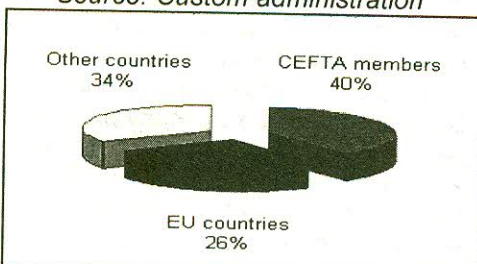
Graph 1. Export of medicinal plants in Republic of Serbia in year 2009.

Areas under cultivated industrial crops in the Republic of Serbia (Table 1) are extremely small and on very low level. Only 1.700 hectares are planted with medicinal plants. Compared to the year 2003, the areas under these crops have decreased at an annual rate of about 1%. Thanks to the favorable climate and unpolluted land, as well as a long folk tradition in the cultivation and use of medicinal herbs, there are favorable conditions for the development of this activity, especially in the domain of SME business.

Production of medicinal plants has been accompanied by many problems: lack of organization, program separation, lack of equipment, as well as technical staff, irrelevance of science and practice, limited number of cultivated species, very low yield, quality that is dissatisfactory, under-developed market – resulting in decline in production and in export of medicinal plants. The most exported plants are: mint, chamomile, maelissa officinalis, marshmallow, parsley, fennel. Serbia was one of the leading countries in the region in the export of medicinal plants, but now, there is not even ten percent of that former export. Currently, export of medicinal plants worth about a million and a half euros. In the observed ten-year period, the export value of medicinal plants grew at an average annual rate of 50%, while on the other side, the export quantities have increased at an average annual rate of 6.8%. At the same time, the average export price increased for about 5% annually. This means that a high growth rate of export value is not only a consequence of increasing the export quantities, but also a consequence of increasing the export prices.



Graph 2. The most important export markets of medicinal plants and teas
Source: Custom administration



Graph 3. Origin of imported medicinal plants
Source: Custom administration

The target export market for Serbia is EU and CEFTA member countries (graph. 2). Great amounts are exported to Germany, but significant share in export belongs to the former Yugoslav republics: Bosnia and Herzegovina, Croatia, Macedonia and Montenegro (graph 1).

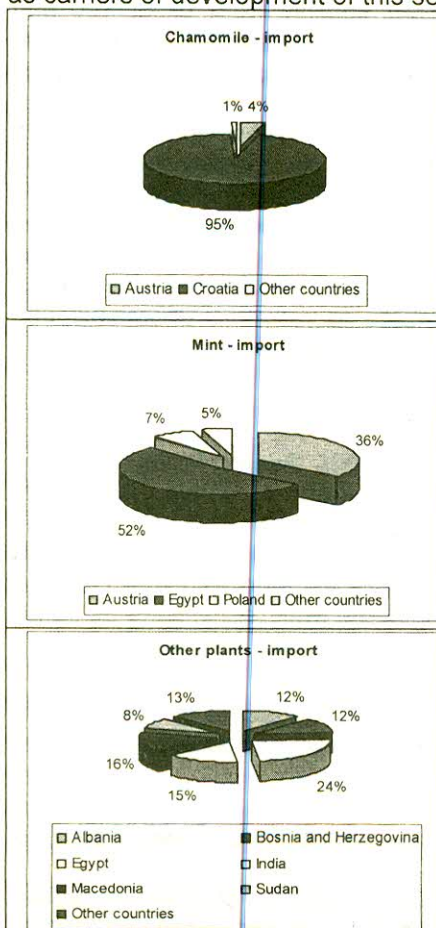
Significantly, higher share in the foreign trade of medicinal plants is refer to export and is nearly three times higher than import (Table 2).

Table 2
Import and export of medicinal plants in Republic of Serbia

Years	Export		Import	
	Quantity (kg)	B_i (%) (2000=100)	Quantity (kg)	B_i (%) (2000=100)
2000	1755140	100	506975	100
2001	1646864	93.83	517261	102.03
2002	2615446	149.02	678157	133.76
2003	2967921	169.10	999267	197.10
2004	2616397	149.07	1100686	217.11
2005	2731778	155.64	755262	148.97
2006	3112753	177.35	1042610	205.65
2007	3461594	197.23	1386142	273.41
2008	3656863	208.35	1371047	270.44
2009	3178826	181.12	1216668	239.98

Source: Republic Bureau of Statistics

At the same time, unevenness with an upward tendency can be noticed in trends of imported medicinal plants. In fact, in year 2009, both, the value and the quantity of import increased twice as compared with year 2000. The average annual growth rate of import was 10.22%. There is a significantly larger amount of imports of medicinal and aromatic plants in the last few years. The countries that are important for Serbia for import of medicinal plants are Croatia, Egypt, Austria and others (graph 3, and graph. 4), and in the case of EU countries, that are Slovenia, the Netherlands and Germany. According to the ongoing principles of organic agriculture throughout the world, production of medicinal and aromatic plants in our country, has its future especially in mountainous areas, which are on the one side completely ecologically acceptable for this type of activity, and on the other side, these are economically undeveloped areas with a large number of unemployed. Processing and growing medicinal plants is just a way to win foreign markets, but the main role should be given to small and medium-sized enterprises as carriers of development of this sector of the economy.



Graph 4. Import of medicinal plants in Republic of Serbia in 2009.

It is necessary to provide adequate stimulating conditions for development of small and medium-sized enterprises, but also for development of this sector of the economy. First, it is necessary to provide institutional conditions through appropriate state institutions. Legislation is an important prerequisite because it should provide such conditions that will enable small and medium-sized businesses to operate in a regulated and secure legal environment. Modernization and reform of state administration would be very incentive for SMEs (tax administration, judiciary, customs administration and inspection services). An important prerequisite for the development of this sector of the economy is ensuring sufficient funds, where both the state and the banks should have an unavoidable role. Development of managing skills and abilities is one of the most important prerequisite for a successful and developed sector of SMEs.

Great importance is given to the effective program of quality system that will be available to all who are interested in a successful business.

Application of modern information technology and communication technology affects the competitiveness of enterprises by raising the quality and efficiency of business and represent an important prerequisite for the development of small and medium sized entrepreneurship.

CONCLUSIONS

Medicinal plants are part of tradition and culture in the Republic of Serbia. Thanks to favorable climate, soil and unpolluted environment, Serbia is very suitable for intensive cultivation of medicinal plants. Production of medicinal plants makes bigger, faster and easier profit than other agriculture production. The main role in the sustainable development of medicinal and aromatic plants sector certainly belongs to plantation way of growing plants that are significant, either in terms of nature conservation, either in terms of demand (thus reducing pressure on natural population). Growing medicinal plants, if organized in appropriate circumstances, can achieve optimal yield, in total plant mass, but also in quantities of medicinal substances. Therefore, this way of growing often has an advantage over traditional collection of plant materials in their habitats. That is primarily because of preserving endemic and endangered species from extinction, and because of the fact that this way of growing can ensure predictable, clean, acceptable and quality medicinal plants raw materials, which are indispensable for industrial production of medicines or cosmetics and chemical products. Plantation growing can produce species that are non-native to our region, and thereby can reduce the import of raw materials. Soil, climate and plant species selection and also, adequate growing technology, can provide raw materials that are better and uniform quality compared to the raw materials that are collected in nature.

The development of small and medium-sized companies in sector of growing medicinal plants would greatly contribute to increasing production and export of medicinal plants in Serbia, which would contribute to reducing unemployment, which would further lead to the development of rural areas of Serbia.

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