

Production of Raspberry in Kolubara District with Export Orientation towards Istria District Market¹

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Abstract

The Republic of Serbia represents one of the leading countries in the production of raspberries. Significant quantities of raspberries in the country are produced in the territory of Kolubara District, thanks to the good resource basis and benefits of climate conditions. Confronted with numerous obstacles while participating in the sophisticated European market, raspberry producers from Kolubara District should establish stronger links with market restaurateurs and other entrepreneurs from Istria and thus their products could reach the consumers from all over the world during their visits to Istria in the summer months. The aim of this paper is to point out the importance of increasing the volume of mutual cooperation between district and county in order to become competitive on the European market.

Key words: *production of raspberries, Kolubara district, county of Istria, bilateral cooperation*

JEL Classification: *D13, D14, L17, L66, O13, Q13, Q17*

Introduction

The basic development of the Kolubara District is represented by the primary agricultural production and food processing industries. Fruit growing, as a form of primary production, is characterized by a number of comparative advantages over other branches of agriculture, and raspberry growing is characterized by a number of advantages over the other branches of fruit growing. Favorable natural conditions, as well as a long tradition are very suitable for growing raspberries in the District. According with the increasing global demand for raspberries and the importance of productive capacity of this district, it is necessary to support the production of this precious species and make it more intensive and profitable. Surplus agriculture production, especially raspberry, could be placed on the neighboring markets of Croatia, particularly Istria. The aim of this research is to consider the possibility of strengthening cooperation and opening borders between the two regions for the free exchange of goods and services. The benefits that would result from the bilateral cooperation would be mutual. Raspberry growers from the Kolubara District would have safe market and sales of manufactured raspberry and other

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required agricultural products, and caterers from Istria County would be provided with healthy and genuine products. This would contribute to the affirmation of the Istrian hospitality and agricultural products from the area of Kolubara District.

The Main Characteristics of Production and Export of Raspberries in Serbia

Growing raspberries in Serbia has a long tradition so this paper will show a brief overview and development of this activity in our country. Raspberry growing review and dynamic growth area covered with raspberry from 1951 to 2005 is given in chart form below. According to available data, in Serbia during the period from 1951 to 1960 the raspberries were grown only on 2167 ha, and average production amounted to less than five thousand tons.² Seventies of the twentieth century expanded the production capacity of raspberry growing to three times larger area achieving three times higher yields. During the period from 1981 to 1990 the average annual production of raspberries in Serbia amounted to 34 thousand tons and during the nineties, it has increased to 54 thousand tons, and since then it represents one of our most important economy product. The largest volume of raspberry production in Serbia, over 90 thousand tons, was achieved during 2002 year.

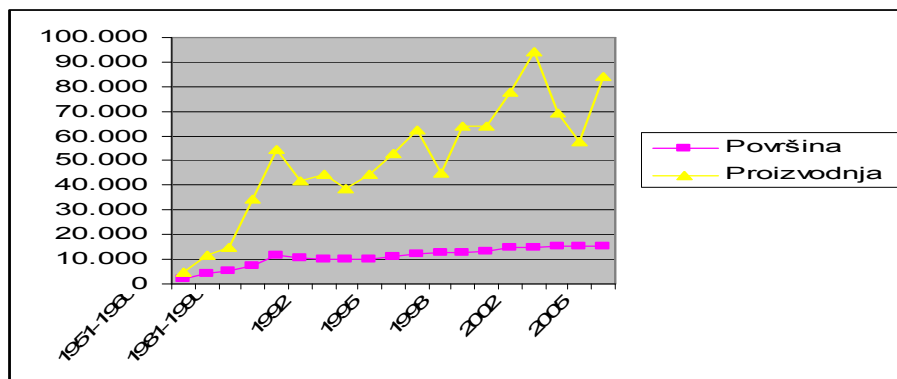


Fig. 1. Production and area of raspberry in Serbia from 1951 to 2005

Source: <http://www.agropress.org.rs/tekstovi/10681.html>

We have long been known as the world's biggest producer of raspberries, but in recent years first under the influence of the transition, and the global economic crisis effects, the number of planted raspberries was significantly reduced, thus decreasing the overall production, placing Serbia second/ranked producer in the world with approximately 80 thousand tons per year. The Russian Federation with an average annual production of 98.7 thousand tons, is taking the first place³. Today, raspberries are grown on the surface of approximately 15 thousand hectares, which tend to increase at an average rate of 2.8% per year. The dominant area under raspberry fields is located in the central part of Serbia (even 98%), and the average parcel size is 20 acres representing one of the weaknesses of our raspberry growing.

Oscillation achieved in the volume of production per year (Fig. 1 and Table 1) represents the typical characteristic for agricultural production in our country, thus raspberries production, too. In addition to weather conditions, the causes of this phenomenon are, among other things, disorder and disorganization of market and manufacturers. According to the Ministry of

² <http://www.agropress.org.rs/tekstovi/10681.html>

³ http://www.poljopartner.rs/index.php?option=com_content&task=view&id=95&Itemid=81, article „How to make national brand“

Agriculture, Forestry and Water Management, raspberry production in the last five years move about the range of 77 to 90 thousand tons with an average yield from 5.5 tons per hectare.

Table 1. Production and consumption of raspberries in Serbia in the period 2005-2009 and projections for May 2010th

		2005/06	2006/07	2007/08	2008/09	2009/10
Production	000t	84	80	77	84	90
Yield	t/ha	5,4	5,3	5,3	6	6
Consumption						
Domestic consumption	000t	12	2	6	24	15
Deficit	000t	6	4	4	4	5
Total domestic consumption	000t	18	6	10	28	20
Export	000t	71	74	67	56	70

Source: Ministry of Agriculture, Forestry and Water Management

The year 2007 was particularly unfavorable for the production of raspberries caused by severe drought which reduced yield by about 4% compared to 2006 year, confirming the fact that raspberry growing greatly depend on weather conditions (irrigation practice is represented only on small areas, and only smaller areas have a hail protection). In addition to fluctuations in the total production, shown in table, it also indicates the percentage of oscillations in the exported quantities of raspberries that are observed in the five years period ranged from 67% (2008/09 year) to 92.7% (2006/07 year) of total production. The reasons for this drastic fluctuations in exports observed years are numerous and consistent with the allegations relating to the barriers in exporting to European markets. Another characteristic of raspberry growing in Serbia is that the highest percentage of final fruit goes in the global market, only small quantities are consumed in the domestic (Table 1). As a third feature, we mention the fact that of the total exported quantity 93% seems to be frozen raspberries, and 7% of raspberries are exported fresh or in processed form, such as grits, fruit juices, sweet and the other products. Our raspberries export is oriented towards sophisticated European market and Serbian main obstacles in this market are:

- Insufficient level of production is the cause of the small surplus that we can offer to the global market. Extensiveness of production, poor production technology and old orchards are directly reflecting the realized yield;
- Low percentage of fresh raspberries exports. In Serbian raspberry fields predominantly industrial varieties are grown, which are suitable for processing, but poor for fresh consuming;
- The average lot is 20 acres and in such small areas it is difficult to apply modern systems of growing raspberries;
- Lack of suitable refrigerators which are possible to store produced raspberry and guarantee its quality;
- Lack of modern distribution centers with suitable equipment for pre-cooling, cooling, calibration and packaging, compatible with EU standards for packaging and transport, providing continuity of delivery of the contracted quantity with prescribed quality;
- Introduction of HACCP and Eurogap certificate for standardizing the production, packaging, handling and transport.
- Lack of professional services that would enable faster flow of information to producers;
- The prices are freely established on the market, as a result of negotiations between repurchases and manufacturers, and previously had been controlled by the state;

- Lack of working capital and high cost of banking capital is inappropriate in terms of overall agricultural production;
- Disorganization of manufacturers who are non-competitive to existing repurchases and more.

Regarding production and export raspberries to the European market, Serbia has its biggest competitor - Poland, which has a similar structure of exports, but with different varieties of raspberries. Also, Poland in relation to Serbia exports more consumer raspberry. Although, for many years, Chile was mentioned as competition to Serbia, the data from the market say otherwise. In fact, the most important markets for Chile, are USA and Canada, and much smaller amounts of raspberries, about 30 percent of the genus, are exported to Europe.

The Benefits of Natural Conditions for Growing Raspberries and its Assortment of Kolubara District

Kolubara district has a relatively stable, moderate-continental climate, with some peculiarities, manifested as elements of sub humid and micro thermal climate, one of the primary requirements for raspberries to achieve regular and abundant yield. The relief structure is dominated by the hilly terrain and mountains with altitude of 75-980 meters. Different varieties of raspberries can be grown at the altitude of 1,200 meters, but the best kind is realized at an altitude between 300 and 800 meters. In addition to these features of the natural environment the district is also characterized by a variety of different types of land solvent production values, which is directly reflected in the way of land use. Extremely favorable relief and pedology soil characteristics, as well as climate-hydrological conditions enabled the raspberries grown successfully in pre-mountainous zone of Kolubara District.

Table 2. Structure of use of agricultural land in the district Kolubara - structure in %

	Total agricultural land	Plough land	Orchards	Vineyards	Meadows	Pastures
Kolubara district	100	59.71	10.73	0.015	15.72	13.82
Valjevo	100	48.91	13.42	0.032	19.93	17.72
Lajkovac	100	70.05	5.19	0.007	14.69	10.06
Ljig	100	50.36	12.30	-	22.79	14.55
Mionica	100	60.28	10.70	0.009	14.69	14.31
Osečina	100	56.51	14.83	-	13.53	15.12
Ub	100	78.96	5.52	0.01	7.82	7.68

Source: Municipal yearbook for 2008 and calculations of the authors

Contrary to previous claims about the benefits of the conditions for the cultivation of raspberries, the table indicates that the presence of orchards in the total agricultural area is relatively low. At district level, according to the proportional presence of areas under fruits, the municipality Osečina stands out, followed by Valjevo, Ljig and Mionica, while in Ub and Lajkovac, the presence of orchards is significantly lower. Production of raspberries in the Kolubara district is placed in approximately 2,000ha which makes app. 11% of the land under orchards in the County and 14% of the total area covered with the raspberry in Serbia. It was observed that there is a decreasing trend of total seedlings under raspberry in primary agricultural producers on the territory of Kolubara district, while the experts in the field evaluate

that the decrease amounts around 250-300 ha. ⁴ Considering the plenty of raspberry fruit requested goods to foreign markets, we must not allow the production to decline.

As for the variety composition, between 90 and 95% grown raspberries in Serbia and in the region Kolubara belong to the sort of "North American Willamette". This type covers the majority of the total planted 1600 hectares of Valjevo raspberry fields. Other breeding species are Meeker, Promise and Gradina. Raspberry cultivars originate from different species and are characterized by very different economic, technological and biological properties. According to the economic importance especially important varieties of red raspberries include Vilamet (Willamette) variety. This variety is very fertile, giving the yield up to 20 tons during the intensive growing. Recently many new and better sorts have emerged, and the changes in assortment represent assumption of further development of this production and its compliance to the requirements of overseas demand.

Raspberry Production in the Kolubara District and the Possibility of Placing on the Istrian Market

Kolubara district represents the second by volume of raspberry production in Serbia, after the Zlatibor District. Raspberries production in the Kolubara region shows mild oscillatory, keeping nearly constant yield per hectare (Table 2). According to the Regional Chamber of Commerce in Valjevo during 2008 the territory Kolubara District achieved the total production of 7782 tons of raspberries with an average yield of 3907 tons per hectare. During the year 2008 production was 16% higher compared to 2007, and about 10% higher compared to 2006. The district achieved production of raspberries in 2008 which formed about 10% of total raspberry production in Serbia. Average yields are lower as compared to the average achieved at the level of Republic due to lack of resources, knowledge and experience in the application of modern technologies used in growing this noble fruit

Table 3. Production of raspberry on the Republic and Kolubara district level, in period 2006-2008

Godine	Republic / District	Area in ha	Production in t	Average yield in t/ha
2008	Republic Serbia	14.680	84.299	5.742
	<i>Kolubara district</i>	1.992	7.782	3.907
2007	Republic Serbia	14.496	76.991	5.311
	<i>Kolubara district</i>	1.995	6.658	3.337
2006	Republic Serbia	15.024	79.680	5.304
	<i>Kolubara district</i>	2.263	7.070	3.124

Source: *Republican Bureau of Statistics Bulletin* for 2006, 2007 and 2008 year

Agriculture, and therefore fruit production, is not traditionally presented in Istria. Tourism is the predominant activity and source of income for most people. According to data published in the project entitled "Strategic Programme of Istria Rural Development (2008-2013)" this county is planted with different kinds of fruit on app. 300 ha. Peaches affect about 100 ha, plums are grown on 65 hectares, apples on 35 ha, pears 35 ha, cherries about 25 ha, walnut about 15 ha and other fruit 25 ha, approximately. It is obvious that raspberries field, and if any, affects a very small area presented in the 25 ha consisting of "other fruits" category. Kolubara District farmers should take their advantage (a tradition and more resources available for carrying out various agricultural activities, thus creating greater surpluses) for the penetration on Istria market and provide secure placement of their products making them competitive in relation to the other similar items that are imported for the catering of the county.

⁴ Bulletin 7/09, Agricultural professional service Valjevo

In order to strengthen the production and competitiveness, Valjevo Regional Chamber of Commerce has launched a support program for food products exports produced in the territory of Kolubara - Mačva - Podrinje. According to this program, frozen raspberries are the first on the list of "products that achieve the highest value of exports from the region". The total value of exported raspberries from the territory covered by Valjevo Regional Chamber of Commerce in 2007 was over 274 million U.S. \$.⁵ In addition to individually frozen raspberries, a significant export of other frozen products such as raspberries, semolina (frozen and then ground raspberry), Bruch (whole and crushed raspberries - B class), original (frozen raspberries without grading) and block (frozen stick and the remains of raspberries - C class) was recorded. The most important export destinations for frozen raspberry in the region are: Austria, Germany, France and Great Britain, but there are efforts to sell these products to neighboring markets and Istria.

Except for fresh and frozen raspberries, the other district traditional products such as prunes, brandy, fruit juices, jams, sweet, blackberry wine, cereals with dried fruit, homemade cookies with prunes and apples, should not be neglected. Dried fruit and other traditional and authentic district products would certainly be very competitive in the Istria market. Plenty of drying companies in the territory of Kolubara District produce dried fruits. One of the best known is "Agranela", based in Valjevo. This dryer received HACCP quality certification and was successfully engaged in fruit processing and drying technology, during the 2007. They have a new planting, also. Basic types of fruit that might be found in their assortment are dried plum, cherry, pear, apple. Modern manufacturing facility achieved a capacity of 600-700 tons of dried plums a year, and had planned 1000 tons, which is the capacity of the dryer. This company is making significant export on the EU market, markets of Russia, Sudan and Egypt. Besides "Agranela", "Plemic-commerce" in Valjevo, "Podgorina fruht" in Osečina as well as many other smaller companies are engaged in the organic food sale.

Therefore it is already classified as a product that achieved the highest value of exports from the region Kolubara - Mačva - Podrinje, increasing competitiveness through investing in knowledge and equipment that can improve the profitability of raspberry, as well as important economic sectors of the state and county.

Conclusion

Bearing in mind that Istria is a well-known tourist destination and has a great need for healthy and quality food and that Kolubara district has enough quality raspberries, as well as many other well-known agricultural products (milk and meat) it is necessary to broaden cooperation and open borders for free flow of goods and services between the two regions. In this way not only the support of agricultural products from Kolubara District safe placement, but also the contribution to their recognition, and the secure supply of healthy products for Istrian caterers might be achieved. Close cooperation between Kolubara District and the Istrian County may have its full effect through the development of a joint bid, which would be unique, highly differentiated and competitive as a sophisticated market in the EU.

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Producția de zmeură din districtul Kolubara și orientarea exportului către piața districtului Istria

Rezumat

Republica Serbia reprezintă una dintre țările recunoscute pentru producția de zmeură. Cantități semnificative de zmeură sunt produse în țară pe teritoriul Districtului Kolubara, datorită resurselor și a condițiilor climatice favorabile. Confrunțați cu numeroase obstacole odată ajunși pe piața europeană, producătorii de zmeură din Kolubara ar trebui să stabilească legături puternice cu întreprinzătorii din Istria, astfel încât produsele lor să ajungă la consumatori din întreaga lume pe durata lunilor turistice de vară. Scopul articolului este de a evidenția importanța creșterii cooperării dintre zone pentru ca acestea să devină competitive pe piața europeană.