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SERBIA'S FRUIT OFFERING

Due to its geographical position, favorable agro-ecological and climatic conditions, coupled with the introduction of the latest technologies used in the most developed countries, and a broadbase of fruit varieties that are competitive in foreign markets, Serbia has become one of the leading apple and raspberry producers in Europe.

The intensification and modernization of agricultural production, construction of irrigation systems and investments in anti-hail nets represent a winning strategy that has led to significant growth yields and excellent fruit quality.

With its high natural potential resulting from the physical, chemical and biological properties of the land, the Republic of Serbia is also among countries where organic production is successfully expanding. Recognizing the economic and export potential, the Serbian Ministry of Agriculture will focus its future activities on intensifying and strengthening

this type of agricultural production.

On the global level, Serbia ranks 12th in the world based on the total land area (25,134 hectares) under apple production.

Apple production in Serbia is expanding. The average annual apple production is approximately 426,000 tonnes. More and more advanced apple orchards are using modern cultivation technologies, with irrigation and anti-grid systems, to harvest apple varieties that are competitive on foreign markets. New cultivation systems employing a greater concentration of seedlings per unit area have led to an intensification of production and an increase in production volumes on smaller land areas.

The average apple yield in the last five years has been approximately 17.3 t/ha. In newly-developed high-intensity plantations that have introduced compact seedlings, anti-hail nets and new irrigation systems, yields range from 50 to 70 t/ha, depending on the apple variety. Apples are one of the few fruit species where





producers have introduced the latest technologies that are comparable to the most advanced fruit plantations seen around the world.

In line with the intensification and modernization of apple production, the typical manufacturer structure has changed over the years. Ten years ago, apple producers were individual producers who traditionally cultivated apples on a surface of 2 to 5 hectares. In recent years, apple producers run operations on more than 10 ha of orchards and use ULO refrigerators. These are mostly comprised of commercial agricultural holdings that gradually increase cultivated area and modernize production, introduce new technologies and are ready to engage professional consultants. Furthermore, there is an increasing number of large-scale companies that own plantations ranging in size from 30 to 250 ha. These growers operate modern intensive plantations that employ the most modern cultivation practices and technology. Their average yield is about 50-70 t/ha with a high concentration of first-class apples.



The leading apple variety in Serbia is still the Idared, with a share of 20-25% of the total production. In the past few years, there has been a change in the assortment. As such, Idared is slowly losing its primacy, and is currently being replaced by new varieties belonging to a group of autumn varieties, with an earlier maturation period, which helps extend the harvest window.

There is a pronounced industry trend to introduce other varieties depending on end-market demands. The presence of Granny Smith, Golden Delicious and Jonagold is growing. Also present to a lesser

extent are Red Delicious, Gloucester, Mucu, Gala and others. Additionally, club varieties have also been introduced: Pink Lady, Modi, Fuji Kiku.

Last year, 197,602 tonnes of apples were exported in total value of \$122.4 million dollars. Of the total export of apples, a large majority (84%) was exported to the Russian Federation. Other countries include Italy, Germany, Hungary and others. Aside from fresh apple exports, we also seek to increase exports of apple concentrate as well as other apple-based processed products.

The most important apple products include apple juice and apple concentrate. More and more people are consuming dried apples in the form of apple chips. Apples are used in marmalades, sweet preserves, jams, jellies, purees, vinegars, syrups, juices, etc. The juice can also be fermented to make apple brandy or so-called Calvados. There is also an increasing trend in low-alcoholic beverages, such as cider and other apple-based variations.

The raspberry has a significant place and role in the fruit and agricultural production of the Republic of Serbia. The agro-

ecological conditions of Serbia enable growth of raspberries of top quality and provide higher production yields per unit area compared to other countries where raspberries are produced. Serbian raspberries are generally more aromatic and contain a higher percentage of sugar, due to the country's unique climate conditions.

Raspberries, cultivated on 21,862 hectares of land, represent the leading position in Serbia's total value of exports. According to the Food and Agricultural Organization (FAO), if you add the total area under blackberry cultivation (5,076ha), Serbia ranks third in Europe for the total area under cultivation of these two fruits.

In Serbia, the average annual raspberry production is about 75,000 tonnes, even though over 100,000 tonnes were produced in the past year. According to the International Raspberry Organization (IRO), an industry body overseeing 13 countries that collectively represent 90% of total raspberry production

globally, world-wide raspberry production stands at approximately 450,000 tonnes. In 2016, raspberry production reached a global record of 475,200 tonnes. Serbia was in second place with its 70,000+ tonnes.

Producers that introduce production improvements through field expansions, proper application of agrotechnical measures and new irrigation systems, generally yield 20 tonnes per hectare of raspberries, which is significantly higher compared to traditional cultivation methods, where yields are approximately 5 t/ha.

In terms of raspberry varieties in Serbia, Willamette dominates with about 95%, followed by Meeker with 3-4%, and all the other varieties account for 1-2%. These represent high-quality varieties that are competitive in the global market. As for other varieties, the most abundant are fall-bearing raspberries, such as Polka, Polana, Heritage, Tulameen and others.

Raspberry represents a key strategic fruit in Serbia as it has

been among the first three exported agricultural products (along with corn and sugar) in the past ten years. It also achieves the highest export value compared to other fruits. The value of raspberry exports compared to total fruit exports stands at over 40%.

In 2017, Serbia exported 99,664 tonnes of raspberries in total value of 214 million Euros. Raspberries are primarily exported in frozen form (approximately 95%), with the largest quantities exported to countries of the European Union (Germany, France, Belgium, The Netherlands, UK, Austria, Sweden, Poland, Slovenia, Italy), the US and others. Germany and France are the largest buyers of Serbian raspberries, with exports to these two countries accounting for approximately 52% of total exports.

Raspberries have the highest economic significance within the group of berry fruits and represent an extraordinary raw material for the food processing industry. They have a wide range of processing possibilities, and frozen raspberries



can be used year-round. In the Republic of Serbia, most raspberry production (about 85%) is frozen, while the rest is generally used for various forms of processing. They represent an important fruit in both domestic and foreign markets. Raspberries can be processed into juices, syrups, compotes, sweets, jams, wine, dehydrated, etc.

In addition to apple and raspberry exports which have proved to be very successful to date, organic production also shows significant potential to further increase the total value of exports, as organic products are in high demand world-wide, as well as in Serbia, and overall demand for organic products continues to grow on a constant basis.

Regions ideal for development of organic production in Serbia include areas located within Serbia's protected natural areas (approximately 7% of Serbia's territory) where agricultural production is allowed in Level 2 and 3 protected areas.

The advantages of these conservation areas include high-quality air, water, and soil resources as well as the overall stability of the ecosystems. Additionally, from a rural development aspect, underdeveloped villages are usually found close or nearby these protected areas. Special production offers the possibility of supporting sustainable development of these villages in combination with ecotourism that further generates value.

The goal of the Serbian Ministry of Agriculture is to increase the total area under organic production, as well as the number of animals that are bred using organic production methods. It is encouraging that these parameters are increasing with each passing year, and that a growing



number of organic producers have opted to engage in this type of agricultural production.

In Serbia, organic production regulations are prepared in accordance with EU legislation. In an effort to fully harmonize regulations in this field, the Ministry of Agriculture commenced implementation of the Twinning project, funded through the EU's Instrument for Pre-Accession (IPA), which supports capacity building and further development of the legislative framework in the field of organic production and food quality.

Since the global market for organic products continues to grow, and organic products represent a significant export potential for Serbia, a comprehensive plan for the development of organic production has been prepared that sets out

strategic goals and measures. This plan is part of the National Rural Development Program from 2018 to 2020.

Within the framework of its agrarian policy, the Ministry of Agriculture has created a special program of measures aimed at supporting the development of organic production in Serbia. In addition to financial support, a system of control and certification has been established that enables Serbian organic products to be placed on both domestic and foreign markets.

The largest share of Serbian organic products are exported to Germany, Italy, USA, Poland, Belgium and Austria. These primarily include frozen organic raspberries, blackberries, plums and apple concentrates. ■