

Status and Possibilities of Apple Export from the Republic of Serbia

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Abstract

According to the scope of apple production and its economical significance, apples are highly significant for producers of continental fruit in Serbia. It ranks among the most extensive and economically most useful fruit sorts. Within the structure of the total area planted with fruits, apples account for 27 % occupying the second place immediately after the plums. Out of the total domestic production 10 % gets exported. The average export amounts to US \$ 6.2 million. Apple export should serve as a driving force of production increase and it represents an imperative of fruit production in the future. The paper deals with export of apples from the Republic of Serbia. The purpose of this study is to analyze regional destination of export, as well as the necessary measures for increased export to the international market. Absence of marketing concept in production and export, rather marked government's role, and effect of measures of agrarian protectionism of the developed countries represent limiting factors of improved apple export from this country.

Key words: *apple, export, marketing*

JEL Classification: *Q13, Q10, Q17*

Introduction

The essential purpose of this research is to analyze export and implemented export tendencies of apples from the Republic of Serbia, as well as a regional export destination. It is also the purpose of this research to point to necessary measures of export increase. Source data was taken over from the Republic Bureau of Statistics in Belgrade for the period of 2001 to 2007. Research is based on the so-called “desk research”, i.e. according to the data available. Data processing was performed by means of standard statistical-mathematical methods, and the results are presented in the table and figure below.

Research Results

Apple Export

Owing to its geographical location, the Republic of Serbia has favorable natural conditions and areas for planting a high number of fruit species and sorts of high-quality fruit. “Apple belongs to fruit species whose production technology is highly complex and requires high investments in

terms of work and funds, but it is also a highly accumulative and economically very interesting”¹. However, it must be stated that its structure so far is relatively unfavorable, namely the major part consists of old and depreciated plants. The area is rather small and scattered; a lot of plants are cultivated in infields i.e. family households where the yield is relatively low too. Average production output in this country amounts to 200 thousand tones per year (2007). Apple is at the second place within the structure of fruit production in the Republic of Serbia, which is immediately after plum production accounting for 19 %². Regionally analyzed, the greatest producer is the Northern region of Bačka, with the following plantations: *Peščara Majur*, *Palić Subotica*, and *Bačka Horgoš*. In order to stimulate more intensive fruit planting, in 2007, Ministry of Agriculture of Serbia signed a contract, with 17 business banks for providing long-term loans of agriculture and food processing industry. 15 % loan capital is aimed at establishing perennial plantations, grape-wine plantations and fleshy fruit species, whereas 12 % of loan capital is intended for other purposes. Effective annual interest rate of long-term loans cannot be higher than 12.5 %, minimum loan amount is 5,000, whereas the maximum one is 300,000 Euros³.

The development of any country is based on the assumption of expanding goods exchange with the world. Export is governed, first of all, by the scope and dynamics of domestic production, rate of consumption, level of government support, as well as by customs and other non-tariff limitations of importing countries and market prices.

Within the analyzed period (2001-2007), average export of apples amounted to 21,140 tones with a tendency of further significant increase at the rate of 95.62 % per year and variation of 123,4 % (Figure 1). In 2007, record apple export of over 70 thousand tones was recorder, which is twice as much as that realized last year.

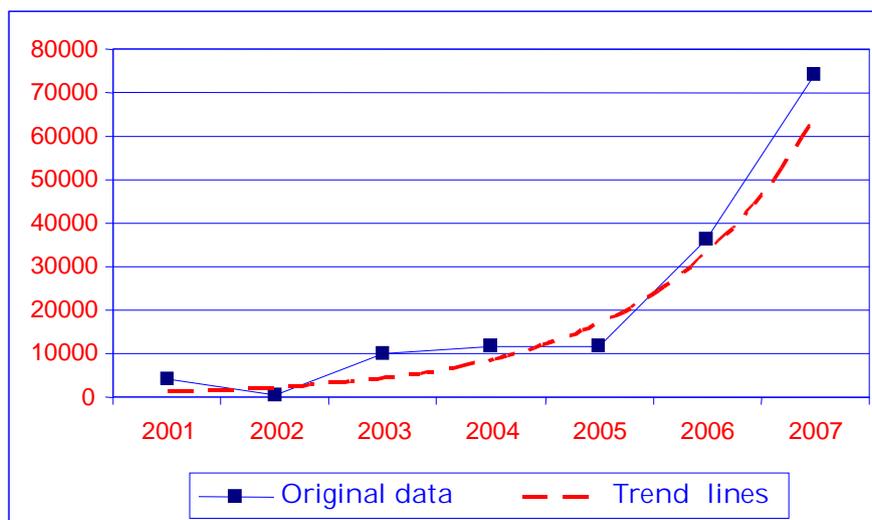


Fig. 1. Apple export trends in the Republic in Serbia (2001-2007), tones

As it can be seen, there is a rather significant increase during the last two years of the analyzed period. About 10 % out of the total domestic production is exported. In terms of value, average export amounts to US\$ 6.2.

The achieved export results are affected by a number of factors. Internal factors include: scope and quality of production, financial means for boosting production and export, since plantations require high financial resources, planted areas are rather small and scattered, etc. Without

¹ Gvozdenović, D. et al., *Jabuka*, Novi Sad, 1998

² Vlahović, B. et al., *Agrarna proizvodnja u Republici Srbiji*, Novi Sad, 2006

³ www.minpolj.sr.gov.yu

significant market-oriented producers, with higher and continuous production it cannot be expected to yield a serious apple export. Ministry of agriculture, forestry and water economy of the Republic of Serbia has issued a regulation for utilization of export bonus funds, according to which export of agricultural and food processing products is stimulated as per the type of product. These funds are realized according to the percentage of export price for a particular product. Export bonuses for apples are fixed at 10 %. As an exception from Article 3 of this regulation, exporters of goods of the domestic origin to the region of signed member countries of the free trade agreement of the Central Europe - CEFTA are also entitled to use the funds stipulated in Article 2 of this regulation⁴.

Apart from internal factors, external factors are also equally important: measures of agrarian protectionism assuming economic policy which protects agricultural production of the developed countries. These include various subventions, customs limitations, bans, etc. In view of the process of ever more intensive integrations, foreign trade bond with the surrounding countries represents a significant contribution to improving total economical relations.

Regional Destination of Apple Export

The highest export of apples from this country is realized to the Russian Federation which absorbs over 40 % of our average export, amounting to 9,000 tones with a tendency of significant further increase (155.9 %) at annual basis (Table 1). Russian Federation represents the third biggest world importer, and its average import amounts to 589 thousand tones of apples⁵. The share of the Republic of Serbia in the total import of apples accounts for a modest share of 0.87 %, which points to the fact that there is a possibility of increased export to this market which is prospective for us. In 2006, Association of fruit producers from Serbia, under the name of *Fruitland* signed a contract for apple export to the Russian market. It consists of eight fruit societies from five towns – *Subotica*, *Smederevo*, *Topola*, *Čačak*, and *Arilje*. The subject of this contract is export of 2,500 tones apples in 2007. The society *Čačanska jabuka* encompasses 24 fruit producers, and has the export share to Russia of 1,500 tones apples. Association of fruit producers negotiates apple export to other countries too. It is necessary to have a closer cooperation with retail networks in Russia such as: “*Perekrjostak*”, “*Pjatorocka*”, “*Magnit*”, “*Kopejka*”, “*Diksi*”, “*Metro*”, “*Auchan*”, “*Globus*” and many others. The most important sorts being exported to the Russian Federation are *Idared* and *Greni Smit*.

Table 1. Apple export for the Republic of Serbia

Countries	Average value (t)	CV (%)	Structure of export (%)	Rate of change (%)
R. Federation	8.942	151,01	42,3	155,87
B & H	3.729	78,32	17,6	43,63
Poland	2.804	*	13,3	*
Hungary	2.486	*	11,8	*
Germany	768	*	3,6	*
Total	21.140	123,38	100,00	95,62

Source: Calculation by authors based on statistics of foreign trade of the R. of Serbia

* without continuity of the series in the analyzed period

In order to achieve export to the Russian market, possession of the FORM certificate on the goods' origin is necessary. In order to utilise privileges of the free trade regime, a pink FORM certificate is required, whereas the preferential regime demands a yellow FORM certificate. It is also necessary to have all standard documents, way bill, and others, as well as the Russian

⁴ *Official Gazette* RS No. 88/70, Law on confirming Regulation on change and implementation of Agreement on free trade in Central Europe – CEFTA 2006.

⁵ www.fao.org, FAO, 2007.

certificate of quality GOST R, irrespective of the fact that the company may already have any ISO or other standards. Whichever goods are exported to Russia, they must be provided with certificate testifying this standard. Besides the FORM certificate, the product must also have a label in Russian, as well as excise stamp, including the bank guarantee, which is compulsory⁶.

Inter-government agreement about free trade between Russia and Serbia in the field of liberalisation of the foreign trade regime, was signed on 28th August 2000. The subject of this Agreement is the expansion and stimulation of mutual trade-economical relations, employment increase, achievement of production and financial stability, providing conditions for loyal competence, as well as harmonisation of customs procedures and enforcement procedures of regulations of goods origin. The agreement envisages stage-like elimination of customs duties for the goods originating from either of the two contract countries, in period of five years. During this period, competent organs of both countries shall define the list of products to which a free trade regime shall not be applied.

Important importers from our country are Bosnia and Herzegovina which absorb over 17 %, followed by Poland with 13 %, then Hungary with almost 12 % and Germany with 3.6 % which makes up almost 89 % of the total export from the Republic of Serbia (see Table 1).

Apple is marketed in 25 countries some of which are signed members of CEFTA agreement – free trade zone of Eastern Europe – *Central European Free Trade Agreement*. Countries to which apples are exported are: Bosnia and Herzegovina with the highest export share, i.e. 89.4 % (provided that only member countries are taken into account), Croatia with slightly over 9 %, Montenegro with 3 %, whereas Albania and Moldavia have the share less than 1 %. We have not exported to the Republic of Macedonia. Within the structure of total apple export from Serbia, CEFTA member countries have the share of slightly less than 20 %. Export to this market records a rising trend at the average rate of 36.99 % per year, which should be the trend to be sought for in the future. The size of this market is surely an advantage, as it has over 30 million people. The above Agreement assumes no further loads on import and export of agrarian products, nor any additional quantitative limitations. In this manner a more intensified export from the Republic of Serbia is expected, as well as increased competence. In addition, vicinity of the market, consumers' habits, and similarity of mentality add to our comparative advantages. These advantages should be kept in mind when designing export strategy for this market. Trade in agricultural products within CEFTA Agreement is much less liberal than that of industrial products. CEFTA Agreement requires a partial cancellation of agricultural tariffs among its member countries. Unlike industrial products, this Agreement does not stipulate the deadline of full trade liberalisation for agricultural products. In any case, establishing a free trade zone, as one of the principal CEFTA goals, will be accomplished until the end of 2010, provided minimum 90 % total trade is fully liberalized, which allows the possibility that a part of trade in agricultural products remains non-liberalized.

Out of five EU countries (*Germany, Great Britain, Holland, Belgium, and Spain*) importing the largest quantities of apples, only Germany imported from the Republic of Serbia continuously from 2003 to 2007 in the amount of 768 tones per year. Average apple import of the European Union amounts to 2.9 tones⁷. One third of export from our country is absorbed by the member countries of this group. Highest export is realized to: Poland, Hungary, Germany, Rumunia, and Austria. The market of the European Union has very high requirements in terms of quality, hence there is a strong competition which sets increasing standards of participation at this market. A serious presence at this market requires up-to-date harvest, storage, packing, and transport of apples. In addition, a good quality product requires proper marketing policy too. Ecological design in terms of packing ("*green thinking*") has become an imperative in the EU

⁶ Novosel, I., „Rusija kvalitetu veruje”, *Serbian Export Observer*, 2007.

⁷ www.fao.org, FAO, 2007.

notwithstanding higher expenses. European market requires, first of all, a nice packing design with environment-friendly materials.

The best selling sorts in the European Union are: *Fuji*, *Pink lady*, *Red Chif*, *Golden Delicious*, and our production assortment should get altered accordingly. As the standards for food quality get stricter in the countries of the European Union, apple exporters must introduce standards of HACCP, GLOBAL, GAP, BRC, as well as ISO 22000. HACCP (*Hazard Analysis Critical Control Point System*), which is an analysis of danger and determination of critical control points of production, provides producers with a secure health-safe food by means of thorough control of the production process, from its start to the end.

Starting from 2009, European Union will allow sale of fruit and vegetable of irregular shapes, which will mitigate the present sale ban on the goods which used to be sold in minced or chopped form. Over 20 years ago, irregular-shaped fruit and vegetables were banned, and such products were processed. Standards for „nice fruit” were mitigated, hence the producers from less developed countries were given chance to launch apples on this market. „Defense against low-quality sorts and high import can be accomplished by government institutions by introducing quality control on border crossings. Accepting the EU code of regulations no. 85/2004 assumes elimination of products from the north of Europe (Poland, Czech Republic, Hungary), due to a low content of dry substance, which justifies exclusion of such goods from consumer turnover”⁸.

International markets have their own characteristics that are important to take into consideration when deciding upon them. Those characteristics relate, above all, to geographical location, country’s level of development and customers’ habits. In order to have a successful presence on the market it is of vital importance to consider foreign customers’ demands. Being well informed about foreign environments and markets provides the following *benefits*⁹:

- transparency over foreign markets;
- familiarization with foreign markets and getting accustomed to them;
- examination of foreign market prospects;
- systematic selection of foreign markets;
- investigation into foreign customers’ segments etc.

The application of marketing activities encompasses two different groups of variables: *variables related to marketing mix* – product, price, promotion and distribution - the factors over which a marketing activity organizer has a good control; *variables that make a marketing environment* – political, legal, legislative, social, economic, competition-related and technological – the factors over which a marketing activity organizer does not have a significant control. The latter ones affect customers’ needs and thus have an impact on marketing decisions related to marketing mix variables¹⁰.

Export of apples from the Republic of Serbia can be improved by introducing the following *measures*:

- Applying a marketing concept, using transparency of the local brand and applying measures that ensure high quality. It is necessary to combine all marketing mix instruments (product, price, distribution and promotion).
- Improving the quality of apples planting good quality varieties such as “*Red Jonaprince*”, “*Gala*”, “*Pink lady*”, “*Braeburn*”, “*Fuji*”, etc., as well as by introducing new clones.

⁸ www.poljoprivrednilist.htm

⁹ Ve z j a k, D., *Izvozni marketing*, Beograd, 1983.

¹⁰ D i b b, S. et al., *Marketing*, Evropsko izdanje, Zagreb, 1995.

- Building new cold storages and reconstructing old ones with CA (*controlled atmosphere*), with ULO (*ultra low level of oxygen*), ULE (*ultra low level of ethylene*) or RAPID CA (*rapid controlled atmosphere*) type of chambers.
- Creating a recognizable brand.
- Introducing standardization, health safety and application of international systems of standards, ISO 9000 and 14000, as well as HACCP food safety system.
- Participating in international agricultural fairs and other marketing events.
- Offering help to cooperative societies, clusters and other forms of organization that apply up-to-date production methods in growing apples. It is important for apple producers to team up so as to present themselves and market their produce. For instance, only 20% of apple producers in Italy are not members of cooperative societies.
- Ensuring the apple meets prescribed requirements related to quality, packaging, certification and price.

Marketing Mix Instruments in Exporting Apples

Apple quality is the most important prerequisite for applying a successful marketing mix strategy. A well-conceived product is an important prerequisite on the market, which means it is suited to customers' demands, taste, habits, purpose, tradition and spending power. More attention should be paid to the fruit quality, packaging and packing as it is evident that customers' taste changes. A good quality apple packed in attractive and environmentally friendly packaging is more appealing to customers. It is necessary to introduce new production technologies as well as to use modern cold storages for keeping fresh fruit. "A large good quality apple is requested on the markets of Europe and North America; its dimensions being 70-85 mm and its weight 14-250 g depending on the variety; in Japan the dimensions are 80-90 mm and the weight exceeds 250 g (up to 500 g) due to the Japanese habit of not peeling the apple, cutting it in segments and serving to family members¹¹. Besides quality (firm, juicy and crispy apples), what is also highly valued on the market is packaging, which serves a function other than just preserving the fruit – it has to be aesthetically appealing to promote the product, and it also needs to meet the environmental criterion. Norms determining apple quality were introduced on 1st August 2005 based on a EU resolution issued on 15th January 2004 (Law CE 85/2004). A new law has been prepared emphasising new quality norms identical to those in the USA, Japan, and New Zealand. Its overarching goal is to regulate the quality of mesocarp, define the size precisely according to the fruit diameter, amount of dry matter in Brix, amount of pesticides, as well as fruit quality in organoleptic sense. Dimensions and weight of fruit belonging to I and II class are almost the same as with other varieties. Class I has no variations in terms of variety and ripeness, and the fruit must not to be bruised. Class II allows for aberration of 5-10% in standards. Fruit firmness at the time of harvesting and selling is prescribed by law and is between 4.5-9 kg/cm². Minimal values of dry matter are determined for all quality categories. Extra quality needs to have minimum 11.5 Brix, class I has 10.5 Brix, whereas class II has at least 9.5 Brix¹².

"The apple produced according to the principles of organic farming does not contain any artificially synthesized matter or pesticides. It provides greater nutrition value than the apple produced in the conventional way. Research conducted in Germany has shown that organic products have a significantly higher level of oligo-minerals, especially potassium and iron, as well as more magnesium, phosphor and Vitamin C. Research in America has brought about similar findings as it has shown that those products have 63% more potassium, 73% more iron

¹¹ Gvozdenović, D. et al., *Jabuka*, Novi Sad, 1998.

¹² www.poljoprivrednilist.htm

and 125% more calcium than those produced in the conventional way”¹³. It is necessary to introduce an integral concept of production and application of suitable standards that are in existence in Europe. As for producing apples for consumption, chemical protection needs to be reduced to the level that ensures it does not affect the fruit in a negative way. If the fruit is to be processed, protection against diseases and pests can be reduced as the economic threshold for tolerating quality deterioration is significantly lower¹⁴.

As the demand for organic products increases, they are sold more not only in special shops and markets, but they have found their way into supermarkets and chains that give discounts for retail prices. Apples are exported while packed in wooden, cardboard or plastic packaging and are sorted in one or two layers depending on quality. The problem is, as many producers claim, lack of good quality and uniform packaging, which is also one of the requirements of foreign buyers.

The price of the apple is directly related to the fruit quality and the packaging. Besides that, there are other factors that contribute to the price as well: ratio between offer and demand, Customs and tax policies and transportation costs. For instance, long vehicle transportation from Serbia to Russia costs between 4,000 and 5,000 euros.

A greater price is achieved if the fruit is labeled for high quality and production method, such as *integral product* or *eco concept*. What poses a great problem in exporting apples is strong competition as there is a low level of export stimulations. In Serbia, for example, the apple “Idared” costs 0.35-0.40 euros, whereas the same apple in Poland costs 0.13-0.19 euros (2007). Such a difference in export price, among other things, is the result of the subsidy policy.

Distribution of apples should be organized in a way that leads to increased sales and reduced costs as transportation and storing require a greater number of participants on the way between the producer and buyer. The cooperation among producers and wholesalers is significant as it secures acquisition of goods that meet customers’ needs. Selling is done through wholesale, cooperatives, brokers, farm-gate sale, direct sale to those who process fruit, along-the-road sale, ‘pick yourself’ sale and the like. When one wants to enter an international market it is important to know wholesalers, i.e. the distribution system on particular markets so as to deliver the goods as efficiently as possible to the buyer. “An example of a well-structured fruit and vegetable sale is found in the Netherlands, the country that has very well-organized agricultural production.

The country is known as well for its auction sale of fruit, vegetables and plants in Geldermalsen, the most famous market in the north-west of Europe. Class I high quality apple is sold bearing the mark BALANCE, whereas it has been accepted to label the best I class fruit Prestige (Top fruit). The label STER is for class II. Such labeled fruit makes the buyers’ choice easier to make, and the quality is guaranteed”¹⁵.

Promotion of fruit for the international market has to be recognizable for the customer get the sense that it is close to him. Even a high quality product needs to be adequately promoted. Promotion needs to be aimed at improving sales; fairs, tasting, exhibitions and the like are suitable ways of promotion for getting familiar with the market. Some hold the view that the promotion of the apple through media is rather expensive.

A case in point is advertising on a Moscow television since 1 min of such advertising costs around 25,000 dollars¹⁶. With the aim to promote this fruit it is vital to highlight its significance in the daily diet. It is also worth mentioning the dietary and therapeutic value of this fruit. It is

¹³ www.pks.privreda u Srbiji organska proizvodnja.htm

¹⁴ www.poljoberza.net

¹⁵ Gvozdenović, D. et al., *Jabuka*, Novi Sad, 1998.

¹⁶ Novosel, I., „Rusija kvalitetu veruje”, *Serbian Export Observer*, 2007.

the best type of promotion for the apple when it is of top quality, nicely displayed on a shop shelf and the market stall, or ordered attractively.

Conclusion

The average amount of apples exported from the Republic of Serbia is 21,000 t with the rising tendency of 95.62% annually. In 2007, the amount of exported apples was far greater than ever before – 70,000 t, twice as much as in the year before. There is only 10% of the total amount produced that Serbia exports. Average export amounts to 6.2 million dollars. Exporting apples should be an incentive in increasing production and an imperative to developing fruit production in the future.

The largest amount of apples is exported to Russia, approximately 42%, but other significant foreign trade partners are Bosnia and Herzegovina, Poland, Hungary and Germany, that buy almost 89% of the total amount of apples exported from Serbia.

It goes without saying how important it is to implement and apply international standard systems, ISO 9000 and 14000, GLOBAL GAP and HACCP production systems. It is also significant to raise quality by planting good quality varieties such as “*Red Jonaprince*”, “*Gala*”, “*Pink Lady*”, “*Breaburn*”, “*Fuji*”, etc., as well as by introducing their clones.

The lack of marketing concepts in production and export, the government’s support and agricultural protection measures represent limiting factors in improving the export of apples from our country.

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Prezent și perspective privind exportul de mere din Republica Serbia

Rezumat

Având în vedere aria de răspândire a producției de mere și semnificația sa economică, merele sunt extrem de importante pentru producătorii de fructe continentale din Serbia. Acest tip de fructe este clasat drept cel mai răspândit și cel mai util din punct de vedere economic. În cadrul unei arii totale plantate cu pomi fructiferi, merele reprezintă 27%, ocupând locul al doilea după prune. Din producția internă totală, 10% este exportată. Exportul mediu ajunge la 6.2 milioane de dolari. Exportul de mere ar trebui să devină forța conductoare în creșterea producției și reprezintă un imperativ în producția de fructe pe viitor. Articolul aduce în discuție exportul de mere din Republica Serbia. Scopul acestui studiu este de a analiza destinația regională a exportului, precum și măsurile necesare intensificării exportului pe piața internațională. Absența conceptului de marketing în producție și export, rolul pregnant al guvernului și efectul măsurilor de protecție agrară din țările dezvoltate reprezintă limite ale intensificării exportului de mere din această țară.