

Healthy and safety food origin from Serbia as the base of region's competitive advantage

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Abstract

The production of healthy and safety food can be realized by introduction of organic agriculture. Serbia has natural predispositions for its development: unpolluted agricultural areas, fragmented households in mountain regions with a rounded off cycle of plant and cattle production. The need to preserve certain natural values, from meadows and pastures with medical herbs, forest fruits and autochthonous sheep races, to protected animal species, is in line with the modern tendency of return to nature and natural resources. Thanks to the preserved ecosystem, it is possible for Serbia to increase its import by organic production and improve the socio-economic position of the rural environment and the country's economy. The development of ecotourism by offering healthy and safety food requires the revitalization of the existing rural settlements, forming of ecological villages and the securing of the return of the population, their education regarding the production of "health" food. The partnership and innovation in development, production, offer and introduction of healthy and safety food is very importance. By creating of national ecological mark, as the supplement to already well known national individual trade marks from food category or by developing of familiar trade mark of national specified healthy food products assortment with origin of Serbia, exporting process of high quality and price competitive healthy and safety food from Serbia will be strongly supported.

Key words: healthy and safety food, medical herbs, trademark, ecotourism, origin of Serbia

1. Introduction

In the recent years the world has seen a growing awareness of health and environmental issues. Humans are witnesses to the dramatic findings of the modern food science in relation to the harmful effect of certain food product ingredients to human health, even those that have been consumed for centuries.

Production of quality and safety food is one of the crucial problems of the modern civilization. Numerous investigations directed towards improvement of technological processes in food industry have been dedicated to that problem. Common FAO/WHO investigations in the period between 1980-1990 established that food contamination and food borne diseases are the most important problems of the humankind (FAO of the United Nations, Rome, Reports 1981-1989). Harmful substances can be found in the product itself, incorporated in the food product during the growing phase (e.g. heavy metals, biological residue), represent a consequence of the false handling (microbiological contamination), created during the processing or occur as a result of metabolic processes in the human organism subsequent to the consumption of food product.

Sustainability has become the keywords whenever discussing economic development, in relation to developing countries. Environmental protection became a major issue after the introduction of the concept of sustainable development. Clean and healthy environment are more important elements of competitive advantage for an economy based on natural resources. This healthy environment is an essential base for the agriculture sector but it equally applies to other sectors just as well (industries such as tourism, horticulture, fishing, etc.). It is a constantly growing number of concerned consumers, mainly in the industrialized countries in Western Europe, American, Japan and Australia that are the cause of this development. The international community is becoming more conscious of these issues, and Government policies in industrialized as well as developing countries are increasingly formulated to encourage organic and other forms of sustainable agriculture.

The production of healthy and safety food can be realized by introduction of organic agriculture. Serbia has natural predispositions for its development: unpolluted agricultural areas, fragmented households in mountain regions with a rounded off cycle of plant and cattle production. The need to preserve certain natural values, from meadows and pastures with medical herbs, forest fruits and autochthonous sheep races, to protected animal species, is in line with the modern tendency of return to nature and natural resources. Thanks to the preserved ecosystem, it is possible for Serbia to increase its import by organic production and improve the socio-economic position of the rural environment and the country's economy.

2. Usage of healthy and safety food

2.1 Organic farming and demand for healthy and safety food

The healthy and safety food production is possible to effect by introducing of organic agriculture. Organic agriculture is a holy way of farming, besides the production of high quality products. An important aim is the conversion of the natural resources such as fertilized soil, clean water and rich biodiversity. The successful management of agricultural resources has to satisfy ever changing human needs, while maintaining or enhancing the quality of the environment is an imperative of a stable food production.

Organic agriculture is an example of a worldwide growth industry. Organics have grown at a rate of nearly 20 percent per year for the last seven years and industry experts are forecasting continued growth. The world demand for organically produced food is growing rapidly in developed countries like Europe, Japan USA and Australia. According to the ITC,

UNCTAD/GAT, more than 130 countries produce certified organic foods (100 of them are from Asia and Africa).

More and more people are turning to organic food as a more reliable and safer way to feed themselves and their family. Artificial ingredients used to make a product low fat or low in calories are starting to be questioned. Most consumers now recognize the fact that non-organic foods can contain pesticides, chemical fertilizers and herbicides. One of the main factors is a strong and increasing consumer awareness of health and environmental issues, including a growing resistance amongst consumers towards food products made with genetically modified organisms (GMOs) and GM farming.

Another important factor is increasingly aggressive targeting marketing and promotion by the retail sector. Advertising and promotion play an increasing role in the organic food trade. The intensity of such activities has increased considerably in recent years, as the conventional food sector has become more interested in organic food. Producer, retailers, organizations and local communities around the country to share information with consumers on what organic stands for and what organic products are available carried out special activities.

Organic farming management relies on developing biological diversity in the field. Some of the essential characteristic of organic systems include: design and implementation of an "organic system plan" that describes the practices used in producing crops and livestock products; a detailed record keeping system that tracks all products from the field to point of sale; and maintenance of buffer zone to prevent inadvertent contamination by synthetic farm chemicals from adjacent conventional fields. Certified Organic farmers are not allowed to use synthetic pesticides or fertilizers. All kind of agricultural products are produced organically, including produce, grains, meat, dairy, eggs, fibres such as cotton, flowers, and processed food products. Since organic foods are free from chemical contaminants, the demand for these products should steadily increase in the new millennium.

National organic program (NOP) of USDA, fully implemented by 21 October 2002, determines four organic product categories: *100 percent organic* (product contains only organically produced ingredients), *organic* (product containing 95 percent organically produced ingredients) and *made with organic ingredients* (product containing more than 70 percent organic ingredients). Up to three of the organically produced ingredients can be specified on the principal display panel of packaging. *Processed products containing less than 70 percent organically produced ingredients* cannot use the term organic in the principal display panel, but the ingredients organically produced can be specified on the ingredients statement on information panel.

The need to preserve certain natural values, ranging from the medical herb fields, forest harvests to endangered animal species, is in harmony with modern tendencies of going back to nature and natural resources. A smaller area of agricultural lands in rural areas does not constitute an obstacle to the development of organic cultivation. Organic cultivation is nothing new to Serbia. The country has always been practising the traditional ways of using indigenous technologies (e.g. rural parts of country) and inputs mostly in line with modern organic farming principles. An agriculturist, due to a harsh financial situation in the recent past did not have an opportunity to implement intensive agricultural means, and thus had moderately used fertilizers and pesticides. The per capita consumption of fertilizers and pesticides in Serbia is far below that of developed countries. This means, it is very easy for Serbian farmers to embrace organic farming in its sense. During the period of last seven years, Serbia's network of ecological organizations for development of healthy foods has been spreading out. Many farmers today show interest in organic cultivation. Several of them have begun switching to this traditional method of cultivation as a means to produce safe

foodstuffs and preserve the environment. The concept of sustainable farming has caught on in Serbia.

2.2 Organic agricultural land and farms in Europe and U.S.

In later years we have seen a tendency for groups of customers paying more for food products of certain origin, taste, design or other qualities. Consumers in many Western European countries now have easy and convenient access to organic food and spend more than € 20 per capita per year on organic food; in countries such as Germany, Austria, Sweden and Denmark this figure is above € 40 and in Switzerland.

The producers of food are continuously exposed for competition. To some degree producers have adapted to new markets by either introducing new products for a new group of customers or by making changes in existing products to satisfy the customer preference. There are an increasing number of farmers working with market innovations outside the traditional channels. Possibilities for success might depend on factors as culture, price, suitable (organic agricultural) land, total agricultural land, government support for organic agriculture and more.

In 2001, the EU outpaced the United States in number of certified farms and acres in organic. The EU had more than 143,000 farms (more than 4.4 million hectares) under organic production, while the United States had only 6,949 farms (with just under one million hectares) farmed organically. Organic agricultural land and farms in Europe were shown on Table 1.

Table 1 Organic agricultural land and farms in Europe, 2005

Country	Hectares		Farms	
	Organic	% organic	Organic	% organic
Austria	360,369	12.99	20,310	11.90
France	560,838	2.03	11,402	2.01
Germany	807,406	4.74	17,020	4.38
Italy	1,067,102	8.40	44,733	2.59
Serbia/Montenegro	5,910	0.01		
Slovak Republic	90,206	4.80	196	0.29
Switzerland	117,117	10.94	6,420	10.09
UK	619,852	3.90	4,285	1.49

Sources:

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It is interesting to compare the US organic agriculture (0.16% of all farmland was certified in 1997) with the situation in EU. Certified organic land in the EU rose from 2.1 million hectares in 1997 to 5.1 million hectares in 2003, about 4 percent of total agricultural area. U.S. organic lands increased from 549,406 hectares in 1997 to 889,734 hectares in 2003, about 0.24 percent of all agricultural lands. Thus, in 2003, the EU had over five times the amount of organic farmland as the U.S., while the U.S. had three times as much total agricultural land.

European governments (including countries not in the EU, such as Switzerland) support organic agriculture through green payments (payments to farmers for providing

environmental services) for converting to and continuing organic farming. The economic rationale for these subsidies is that organic production provides benefits that accrue to society and that farmers lack incentives to consider social benefits when making production decisions. In such cases, payments can more closely align each farmer’s private costs and benefits with societal costs and benefits. EU green payments partly compensate new or transitioning organic farmers for any increase in costs or decline in yields in moving from conventional to organic production, which takes 3 years to complete.

Table 2 EU agri-environmental support and organic farming for some country, 2001

Country	Organic land supported under agri-environmental programs ¹		Share of organic land in policy support programs	Public support of organic land under 1992 CAP reform	Average support premium for organic land	
	1992 CAP reform	Agenda 2000			1992 CAP reform	Agenda 2000
	Hectares		Percent	Thousand euros	Euros/hectare	
Austria	36,193	210,833	89	67,905	211	286
France	54,727	82,508	33	23,951	196	188
Germany	278,884	254,715	84	84,477	154	163
Italy	351,113	101,134	37	158,898	361	318
UK	285,633	122,330	60	27,591	42	45

Sources:

Various sources, cited in [Market-Led Versus Government-Facilitated Growth: Development of the U.S. and EU Organic Agricultural Sectors](#), by Carolyn Dimitri and Lydia Oberholtzer, WRS-05-05, USDA, Economic Research Service, August 2005

¹Organic support falls under EC Regulation 2078/92, the agric-environmental program of the 1992 Common Agricultural Policy reform. After 1999, organic farming support was part of Rural Development Regulation 1257/97, under Agenda 2000.

2.3 Marketing and business opportunities for organic food

In many ways, development of the EU and U.S. organic markets has followed a similar path. The organic sectors were supply driven and farmers introduced organic products. More recently, consumers have been the driving market force in both regions.

Studies indicate that most European consumers have shifted from buying organic food for altruistic reasons to more self-interested reasons, such as food safety and health. Ranking behind these are taste, nature conservation, and animal welfare. During the last decade the organic market in Europe has increased enormously, more than doubling its market value from \$ 5.2 billion in 1997 (ITC 1999) to \$ 13.7 billion in 2004 (Willer and Yuseffi 2006). The German market alone is the biggest national organic market in Europe (with \$ 4.2 billion in 2004).

Similarly, U.S. consumers 20 or more years ago bought organic food because of their concern for the environment. According to The US Organic Food Market (Nov.2000) the organic market increased from \$ 6.5 in 1999 to \$ 7.8 billion in 2000, a 20 percent increase, and was expected to reach \$ 20 billion by 2005. According Organic Consumer Trends 2001 (May 2000) retails sales of organic products have grown at compounded growth of 22,74 percent over ten years and by 24,72 percent in the last three years. In 2002, according to national surveys, two-thirds of U.S. consumers cited health and nutrition as a reason for

buying organic, followed by taste, food safety, and the environment. In 2003, U.S. organic food sales were distributed almost evenly between natural product/health food stores (47 percent) and conventional retail stores (44 percent), with direct sales and exports accounting for 9 percent.

2.3.1 Distribution channels

Traditionally, organic food products have been sold outside the conventional distribution system through alternative channels, e.g. farm gate sales, open-air markets, specialized grocery shops and natural products retailers. Likewise, most processing and packaging was done by small and medium-size companies rather than by major food manufacturers.

Some companies have developed organic product lines in addition to their conventional products, whereas others have built up their organic business from scratch.

Fresh organic produce (fruit and vegetables) still remains the single biggest product group traded. It is domestic production. Organic fresh produce importers/distributors are responsible for importation, warehousing and distribution of the product. They supply retailers, wholesalers and the food service industry; though the latter sector is small for organic produce. Most of them tend to focus on regional markets.

2.3.2 Market in EU and U.S.

Organic agriculture is an example of a worldwide growth industry that agricultural producers are responding to that can be a profitable, sustainable business for those producers interested in going through the certification process necessary to enter this market. They forecasted that overall; the everyday use of organic products of all kinds will be both accepted and routine by the year 2025.

According to an industry source, about 80 percent of organic production currently comes from family farms, a far higher proportion than in a case of conventional farming. Organic growers have also traditionally carried out more direct marketing of their product, e.g. farm-gate sale, farmers' markets and sales to local stores and restaurants.

According to the Natural Food Merchandiser (NFM, June 2006), American shoppers spent more than \$51 billion on natural and organic products in 2005. The market overview article pointed to several trends in the organic and natural food industry, including increased sales of natural products by 9.1 percent across all retail and direct to consumer sales channels. Organic food sales grew 15.7 percent overall, and the fastest growing segment of organic food products is in the organic fresh meat and seafood sales, which grew by more than 67.4 percent in 2005 to \$114 million. Additionally, growth of more than 30 percent occurred in the organic nutrition bars, beer and wine and foodservice segments of the market. Organic pet products grew 37.5 percent to reach a \$65 million market (NFM, June 2006).

Today in Europe markets for organic food are at different level of development like emerging, growing and maturing. Western Europe markets are in growing or mature phase, but in mean while, in central, Eastern and Southern countries the markets are emerging. The fact is, based on European countries experience, that in emerging organic markets limited access to organic food and lacks of consumer awareness are the major barriers to market development.

Although the organic market is growing in both the EU and the U.S., there are some problems with the flow of products to market. In Europe, the organic dairy and livestock industries have grown rapidly over the last decade, and in some cases have outpaced the capacity of the market and distribution channels.

Consumers in both regions offer similar reasons for why they do not purchase organic food. In Europe, the main factors include high prices, poor product distribution, little obvious difference in quality, lack of information on the nature of organic products, and doubts about the organic integrity of the items. In the U.S., according to consumer surveys, price leads the list of barriers to purchasing organic products, followed by availability of organic products. Despite these factors, retail sales are growing rapidly in both regions.

2.4 What the Serbian companies should do to enter the market

Republic of Serbia has excellent natural predispositions for its development: unpolluted agricultural areas, fragmented households in mountain regions with a rounded off cycle of plant and cattle production. Therefore, safety and healthy food, with a mark ``made in Serbia``, has a prerequisite to become original and hardly imitated export chance for the country. Regarding report about environmental predicament in the country, done by Secretary of science and environmental protection of Republic of Serbia in 2002, a 651.868 ha of total agricultural land in Serbia could be used for organic agriculture (the land-soil is not polluted by pesticides, hard metals etc.). But during 2004, only 6.000 ha of this suitable land was under organic food production, another 9.000 ha has been in a course of preparation for organic farming, what was in that time, 0.3 percentage of total agricultural land.

There have been land certifications (legislated by Larry Ledhard, a Canadian expert in the field of healthy foods), of almost the entire area of Žagubica and Petrovac on Mlava River, which reach across almost over 100,000 hectares, and it was done by the strict international standards. The area entirely fits the regulations and requirements for healthy food production. Southern Serbia also has certifications for production of healthy foods; such are several brands of brandy liquors, forest harvests, sheep, cheese and honey.

Experience from EU countries show that the greatest and initial contribution to development of organic agriculture, thus directly connecting to healthy and safety food, starts with the government. Serbia should look at the EU countries not only as a potential future market for organic products, but also consider it as a possible partner in various forms of cooperation within farming, processing, certification and marketing of organic products. The companies from Serbia should work very closely, to the extent possible, with other producers in the export country through a cooperative or other group relationship.

The considerable amount of work is necessary to build up an organic export trade. At country level a good agricultural supply base with appropriate national or international certification is necessary. The producer/exporter has to offer a range of highly organic food products that meet the requirements of the market. Exporters will find that a careful selection of market segments and distribution channels is important. A strong and reliable relationship with importer or distributor is under the must in building up of profits.

The producer/exporter must make sure that the organic certifications will be recognized and accepted national Organic program and that exports goods meet all legal and market requirements (hygiene, weight, size, ripeness, colour, packing and other technical specifications)

Government stimulates organic agricultural production with subventions. However, while waiting on the government's help, all of the market players should rethink their philosophies about their ways of doing business and contribute to the creation of new, hard-to-imitate sources of competitive advantage.

3. Results and discussion

The offering of healthy and safety foods from Serbia is possible to achieve through technological and marketing innovation. Without integration of marketing, technology, finances, human and other resources, of a large number of partners in a chain, there is no organized organic cultivation, and production of healthy and safety foods. Mission is to encourage an ecologically and socially responsible agriculture, which reflected humankind's obligation to protect the health of the plant for future generations. Promotes the environmental and economic benefits of certified organic food production to farmer, processors, retailers etc.

The key partners should be the agricultural households, companies of the processing sector, mediators, companies as buyers, individual consumers, scientific institutes, and other institutions and organizations from outside the economic sector, and especially from the tourism sector.

With the integrated model, consisted of the model of open innovation and the concept of alliance marketing, it is possible to achieve the effect where consumers will not recognize the real values of healthy and safety foods and therefore not look for them, or the effect where the buyers will look for the that foods but not be able to purchase it due to its supply shortage on the market.

Serbian companies for the offer of healthy and safety foods effectively use, other than just their own competencies, the available comparative advantages of national heritage, natural resources, and traditional knowledge in creating new needs and demands of consumers. Our methods rely on indigenous knowledge as the basis for food production and ecosystem management, incorporating modern agro ecology for increasing sustainable productivity and for new marketing strategies. Alongside with this, conditions for repositioning of Republic of Serbia in this international market are emerging.

Food products encounter for about one third of the total exports of Serbia. It is interesting that these exports are mostly consisted of raw, while Serbia mostly imports finalized products and this stands against common economical sense. To increase exports, it is necessary to provide products of higher level of finalization.

Basic raw, as a product of healthy and safety foods, that Serbia offers through technological and marketing model should be grains (especially wheat), berry-fruits and fruit products, honey products, dairy and meat, and aromatic plants and forest harvests. Some wild medical and aromatic plants, forest harvests a wild fruits for the ecological areas represent a significant natural heritage of Serbia. Medical plants are being increasingly used in food industry as a raw for additive production. It is also used in other industries such as in production of chemicals and pharmaceuticals. Thus far improvement points out the need for new products such as fresh fruit juices, extracts, medical wines, active components and others.

Organic food supports the development of a community ecotourism business in the rural regions. The most important segment of ecotourism in undeveloped areas in Serbia is the farm tourism. Tourist interested in agricultural activities can be involved in everyday works activities. This type of rural tourism depends on: the level of income that household get from the agricultural production and the existence of tourism resources.

Training in organic agriculture is also provided. The program focuses on the potential of organic product as a strategy for improving income and fostering forest regeneration and biodiversity conservation in the region. Technical assistance for the development of organic product into a commercially viable crop is obtained through an alliance arrangement. The fundamental strategy is to provide quality information to farmers and social organizations to help them to be the principal actors in sitting the policies and practices of agriculture in their regions.

One of the strategies in brand development of healthy and safety foods is the national ecological sign as a part of existing nationally known and respectable individual food products. The other strategy consists of development of familiar brand of nationally specific assortment of healthy and safety foods with a “made in Serbia” label on it. In institutionalizing kinds of brands, and important role-play Agency for branding, that can stimulate development by propagating national companies to have a unique label attached to them (kind of like giving them a certain “right to” in return for meeting previously established standards). By underlining the geographical origins, precisely the “made in Serbia” label, would have multiple positive effects on the image of the brands, as well as on the image of nationally specific assortment of healthy and safety foods.

According to the research of the Agency for foreign investment and promotion of exports, carried out during the month of July 2005 around 75 percent of all the agriculturists in Serbia expressed a high correlation between the country’s image and foreign investment, while 32 percent advocated that high quality is an advantage of Serbian products in the international market. Research shows that customer’s value brands based on quality; healthy and safety foods need a constant quality and relatively stable price. An optimal strategy of building up a brand of healthy and safety foods for Serbia is the strategy of familiar name of the brand that would enhance the process of European integrations by using comparative advantages of the country, national heritage and traditional knowledge.

4. Conclusion and outlook

Research shows that customer’s value brands based on quality; healthy and safety foods need a constant quality and relatively stable price. Normally the organic consumer may accept premiums maximum of up to 25%. Customer’s important demands in the future are for fresh produce and bulk-packed organic raw material or ingredients for further processing and packaging, re-packing like fresh fruit and vegetable, dried fruit and nuts, edible seeds, processed fruit and vegetables processed in different forms including dehydrated, concentrates and pulp/puree, canned and frozen fruit and vegetables. An optimal strategy of building up a brand of healthy and safety foods for Serbia is the strategy of familiar name of the brand that would enhance the process of European integrations by using comparative advantages of the country, national heritage and traditional knowledge. Traditionally it is small and medium-sized companies that have been involved in processing and manufacturing organic food products (pioneers).

References

1. Delener, N., *Strategic Planning and Multinational Trading Blocs*, ISBN: 1567202748 Quorum Books, International Series on Technology Policy and Innovation, 1999.
2. Milanovic-Golubovic, V., Kostic-Nikolic, S., *Natural resource-the source of comparative advantage of a country*, (GBATA International Conference), Taiwan, 2007, ISBN: 1-932917-03-9, 514-521
3. Kostic-Nikolic, S., Milanovic-Golubovic, V.,: *National heritage as a challenge for technological and marketing innovation*, (GBATA International Conference), ISBN: 1-932917-02-0, 477-483, Moscow, Russia, 2006
4. Strategies of tourism development of Serbia, First phase of the report, Ministry of trade, Belgrade 2003.
5. Ayala, H., Ecoresort: a “Green” Master plan for the International Resort Industry, *International Journal of Hospitality Management*, 14, 351-374, 1995
6. Elsen van. T., *Organic farming as a challenge for the integration of agriculture and nature development*, IFOAM, Germany, 76-85, 2000
7. Kortbech-Olesen, R., *The United States market for organic food and beverages*, 2002, International Trade Centre, United Nations Conference on Trade and Development
8. The Food and Drug Administration (FDA)-www.fda.gov
9. Knickle, K. Organic farming, good agricultural practices (GAP), and biodiversity-some key issues, IFOAM Germany, 143-153, 2000