

**ORGANIC PRODUCTION IN FUNCTION OF  
ENVIRONMENT PROTECTION IN SERBIA  
– CONDITION AND REGULATIONS–**

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**Abstract.** Organic agriculture is based on application of assigned methods of organic production. It gains more significance, because it brings a man closer to nature, from which he parted, it represents almost full harmony with environment preservation demands, and finally, it enables the population to feed on the products based on the natural processes, using organic and mineral materials. Products based on organic production are increasingly sought, especially in highly developed states. Their placement is certain, because the demand highly surpasses the supply. For that reason they get better prices than the conventional production goods.

Republic of Serbia has very good conditions for founding this kind of production. The environment is preserved, especially in mountainous areas, which take 71,5% of Central part of the Republic (51,7% of whole Republic). Artificial fertilizers are much less used in these areas, as is agro-mechanization, which pollutes the environment. Most of these areas have high quality water, clean air and are far from the roads and other sources of environment pollution.

Organic production is processing by very high criteria, regulated by special decrees. Same goes for the environment preservation decrees. These decrees exist in Serbia as well, and are well coordinated with European Union legislation.

This paperwork reviews the state of environment, organic production and regulatory rules in these two parts of Republic of Serbia.

**Key words:** environment, organic production, mountainous areas, rural development.

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## **Environment in Serbia**

### Basic about regulatory rules

The environment protection legislature in Republic of Serbia has been significantly adjusted to similar legislature in EU. During 2004, several laws in this field have been brought, which on consummate and current conditions adjusted manner – regulate this very significant problem. Naturally, there is also upcoming regulatory precisions in specific parts (water, air, soil,..), as well as creation of appropriate programs on particularly levels, sublegal acts legislature, and their efficient implementation is also upcoming. Nowhere, like when is environment protection at stake, the maxim “Work local – think global” is not more used. Therefore, each human activity is connected to life environment, mostly spoil it, but also sometimes improves it. Environment Protection Law<sup>3</sup> represents the basic regulation in this field. It replaced the former Law, except those air, natural wealth and noise protection determinations. In domain of this kind of protection, the former Law<sup>4</sup> determinations have exerted. The sentences in this Law have been adjusted to similar regulations in EU, as well as with international conventions in this area. Its orientation is that population in Serbia live and progress in healthy environment, which is one of the basic human rights, besides the balance of economy development and environment relation. It considers and also obligates, that environment protection aspect is involved in every development policy, either it is about economy sector, or individual activity. In the following way, the prevention and precaution principles are actualized, as one of more principles the Law is based on. Also are significant the principles “pollutant pays” and “user pays”, because they implies compensation for environment pollution, from which the activities for its improvement is financed, or in other words, who uses natural sources – pays the real price. It is well known that the system of environment protection is very complex, while requires measures and activities, which by will: manage by environment in a sustainable manner; preservation of natural balance, variety and quality of natural values and keep conditions for living creatures survival; decrease the environment pollution; do the sanitation of all forms of environment pollutions; permanent control accomplishment of environment state and carry out regulations and measurements, which by it is protected in a sustainable way (1).

By Law clauses, all subjects are obliged to protect and improve the environment, starting from State level, till individuals. Of course the way of control and analysis of trans-boundary influences on environment has been regulated. The obligation is to get important documents of national significance, with function to protect the environment. National program of environment protection has special role, because it represents long-lasting document (at least for 10 years), and organizes planning of environment protection and that protection management. The program is realized by action and sanitation plans. Beside the basic law of environment protec-

tion, at the same time, three more significant laws for this “social concern”<sup>5</sup> have been brought, as well as numerous sub-legal acts, among which we point out to four decrees<sup>6</sup>, which directly influence on environment preservation. The preservation and improvement of environment, and especially healing of its specific elements, require significant financial resources. They are provided also out of incomes charged from pollutants, or users.

#### Characteristics of environment state

Serbian environment state is different by specific parts of territory. Its state is more favourable in non-populated than in populated areas, than in rural areas toward urban, and further more, more favourable in areas without big environment pollutants (energetic and bigger industrial objects – refineries, melting-houses and similar), than in areas where those pollutants are present, etc.

In the same way, the state of some environment elements: soil, water potentials, air, biodiversity, is different. The influence of various natural and antropogenic factors on them is also different. On soil quality, in large extension, influences the erosion degree of specific area, and especially human activities on the land. On air quality mostly influence local pollutants, also is present the pollution influence of straiter and wider environment, spread by air streaming. The same is with surface waters. Appropriate measurements, analysis and other activities give indicators which show environment state in specific period for specific parts of the territory, or total republic territory. Appropriate state body is obliged also for reporting to Republic of Serbia's Assembly<sup>1</sup> about environment state in the republic. These reports are very comprehensive. They are based on numerous measurements, information from terrain and many other resources, international documents and reports, as well as on domestic regulatory rules. The Report of Environment Protection Agency, delivered to National Assembly of RS for 2003. and 2004<sup>2</sup>, among others, points out to:

1) 87% of controlled soil fulfills wanted conditions (without dangerous and harmful substances), while 13% contains dangerous and harmful substances in different degrees, which could be treat as soil “with increased risk or potentially dangerous for high-valuable food production”. The production on these soils should be based

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<sup>1</sup> Agency for environment protection of Republic of Serbia

<sup>2</sup> Report about environment state in Republic of Serbia for 2003. and 2004, Belgrade, 2005, got from Agency for Environment Protection, on CD, in the beginning of 2007.

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in a way to decrease the risks. In one of the reports<sup>1</sup> writes that there are individual cases of soil pollution, as consequence of low pesticide usage, but at least for now, in Serbia's environment, do not exist any seriously pollution caused by agriculture. Taking mentioned into consideration, the general evaluation is that ecological state of soil for realization of qualitative agricultural production in Serbia is very good. It is especially referred to mountainous areas, which implicates major part of the Republic, and are convenient for production of high-valuable agricultural and food product, especially for starting the organic production, important for healthy environment preservation,

2) Serious air pollutants are also present in Serbia; on air state affect trans-boundary influences, too. Among them, the most important are thermal power stations (Obrenovac, Kostolac), refineries (especially in Pančevo), and melting-houses (installations in Bor). Those and some other installations too, as well as car-traffic, let out into air significant dose of harmful substances and pollute it. It affects very unfavourable on all living creatures health, but also leads to glass-house effects increment,

3) The ecological state of waters differs with surface and underground waters. The water regime also affects on it, or in other words, hydrological situation in specific year, so for example, the state was more favourable in 2004. (beside increased economic activity) than in 2003, which was very arid. In bigger rivers, water quality indicators in 2003. and 2004. have showed lower water category than required. The most advantageous situation was with the river Drina. The significance of underground waters is remarkable<sup>2</sup>. Their quality is uneven, too. There are some with high quality, and some whose utilization requires previous processing. Generally reviewed, the evaluation is that situation with underground waters is not satisfying. Water, as environment element, can be restrictive factor for high-quality agricultural production. Situation is naturally more favourable in mountainous regions. For that kind of production, the area of whole Western Serbia is suitable, especially areas in Zlatibor district (4).

4) Serbia ranks among European countries with the greatest floristic diversity and flora consistency per surface unit. Serbian flora consists of 3662 taxons - rank of species and subspecies, grouped in 141 families and 766 rows. The wealth of flora is specially developed in the high-mountainous areas of Serbia. Unfortunately, some of the species (about 600 vegetative and 270 animal) fall into jeopardized

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<sup>1</sup> „Review of environment state in Serbia, 2002.“, prepared by Committee for environment policy of EU, on Serbian language published by Ministry for natural wealth and environment protection, 2003.

<sup>2</sup> According to the Report, these waters suborn around 90% of water needs for households and industries in Serbia, and in Vojvodina it is „strictly aspect of water supply“.

category, mostly with woodland ecosystems. The measurements in our legislative regulatory rules are undertaken, with a view to preserve jeopardized species biodiversity, as well as international regulations (conventions) about biodiversity preservation, regulated according to international rules (5). But there is opinion that protection measurements in Serbia are not enough. In jeopardized species/kinds appertain some domestic animals, which unfavorably reflect on agricultural production potentials, especially organic production, as increased form of future production. Some of them have disappeared irreversibly<sup>1</sup>. During last few years, the Government of Republic of Serbia has stimulated by financial support, genetic subsistence of domestic animal species<sup>14</sup>. Similar financial support was given for preservation and sustainable usage of vegetative genetic resources for food and agriculture<sup>2</sup>;

5) Low values of natural radio nuclides activities in environment, as well as artificial radio nuclides – mainly appeared after Chernobyl pollution (1986), have been determined by measurements,

6) In Serbia big problem represents still insufficiently solved problem of communal, but also dangerous (especially medical waste) storage. It is common characteristic as for urban, as well as for rural settlement. No less is problem which results from unsatisfying water waste solution. Sewage systems and systems for those waters refinement are low developed. In waste domain, as well as in other activity forms which unfavourably influence on environment, sometimes are necessary repressive measurements, represented in existing regulatory rules. Continuous education on all levels of schooling, ages and organization is considered.

### **Organic production in Serbia**

#### ***Basic data about regulatory rules***

Organic production more and more gets on its significance. In developed countries, in Europe especially, agricultural surfaces on which organic production is done, again and again is getting widen.

While organic production is developed in specific and permanently controlled conditions, its base requires special engagement of agricultural producers, significant financial resources, but also means the production decrement from parcels meant

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<sup>1</sup> Two sorts of pork (shishka and shumadinka), Kolubara's beef sort, some sorts of sheep and poultry (according to the Report).

<sup>2</sup> Regulated by Regulation of program determination of allocation/ utilization of instigated assets for preservation and sustainable plant genetic resources for food and agricultural utilization, for the year 2006. ("Official Gazette of RS", Nr. 23/2006.)

for organic production, in transitional period or conversion period, which lasts at least two years. The assets are necessary for financing the organizations, authorized for this production examination condition, production control, getting appropriate certificates, which guarantee that the product is made using regulated methods of organic production, and can be marked by specific regulated mark.

Legal and sublegal regulatory rules of organic production for FRY had been brought in 2000 (The Law)<sup>1</sup>, and in 2002. (sublegal regulations – eight rulebooks), which unfortunately did not take part in practice. During 2006 in Serbia was brought special Law of organic production and organic products<sup>2</sup>, modernized and adjusted to EU regulations. The attempt to remove some imperfections in previous Law has been done.

This Law specifically point out to sources for development support and organic production improvement. Right to use those sources has registered agricultural households, but the Government closely regulates conditions and allocation of source usage. For the first time, in 2006, the instigated assets have been directed from the budget<sup>3</sup> to development and promotion of organic production, according to rural improvement resources.

If we observe goals which should be achieved by Law application, we could conclude that each of them were in direct or indirect relation to principles and protection strategy of environment.

The Law arranges all significant problems important for organic production: the production of agricultural and other products by organic production methods, their processing, storage, transport, marking, declaration, circulation, organic products' certificates and re-certificates issuance, etc.

Organic production is based on natural processes, organic and mineral substances are used in that production, and reproductive material, as: seeds, planting material, eggs, progeny, semen for animal insemination (except precisely mentioned exceptions), is also produced by organic production methods. In this production, the need of synthetic-chemical origin means has been involved, and genetic modified organisms and their derivatives, too. The exclusion of artificial fertilizers and protective chemical means in this production significantly protects the environment, especially agricultural soil. It also implies precisely register of organic products producers.

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<sup>1</sup> The Law of organic agriculture (“Official note of FRY“, Nr. 28/2000).

<sup>2</sup>“Official Gazette of RS”, Nr. 62/06.

<sup>3</sup> Decree of allocation and instigated assets usage for rural improvement in 2006, “Official Gazette of RS”, Nr. 11/2006.

For this register management in charge is authorized Ministry for agriculture.

Basic conditions for starting the organic production are: space isolation of land parcels, cattle farms and processing capacities from pollution sources; unpolluted soil, in which, the content of harmful substances has to be below maximum permitted; valid quality water for irrigation and minimum air pollution of area on which organic production is based on.

In organic production, i.e. organic production method falls under collected quantities of uncultivated flora and wild fauna from natural habitat. We have to take into account that this matter is regulated by environment protection regulations. Never the less, by Law are postulated following conditions: habitats should not be treat by non-allowed means at least 3 years before collection, how natural environment stability and vegetative/animal survival in the collection zone should not be disturbed.

Organic production (vegetative and livestock) methods regulates the Minister authorized for agriculture.

Organic products are specially packed (natural material packaging) and special storehouse (in particular rooms). Organic product must be followed by receipt (certificate, re-certificate – issued by authorized organization for 1 year term), marked with “Organic product” and declared in a proper way.

For imported organic product also is procedure of authorized organization declaration, to get re-certificate for such product along with needed documentation. For imported organic product marking and declaration, there are the same rules as for domestic organic products.

In regulations control of organic production there are high authorization of organic production inspectors: the control of every aspect significant for organic production's regulations observation; the prohibition of these products production, until all negligence were cleared away; contemporary work prohibition for authorized organization; bringing criminal and other charges, etc. Specific authorities are given to market inspector too: to control marks usage for marking organic and conversion period products, to prohibit the circulation and export of marked products, if do not fulfills organic production conditions etc. Putting in force the Law also requires some sublegal regulations (rulebooks), brought by authorized agricultural Minister. In our country, only two<sup>12</sup>, (out of ten) such regulations have been brought.

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<sup>12</sup>Rulebook of packaging, storage and transport of organic products (“Official Gazette of RS”, No. 96/2006.) and Rulebook about conditions that should be fulfilled by legal estate who issues the certificate, i.e. re-certificate for organic products (“Official Gazette of RS”, No. 81/2006.)

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### ***Organic production state evaluation in Serbia***

Present state in organic production field in Serbia could be described as chaotic. As we could conclude, getting sublegal regulations overdue. There is no appropriate evidence of authorized organizations for this production certification. The information from Ministry of Agriculture and Serbian Chamber of Economy show that foreign organizations are involved in those activities and issue certificates to some producers. There is also no precisely information about number of producers in this field, their associations, surfaces on which organic production is based, organic production size, these products foreign trade. In Serbia almost do not exists organic products market. Some specific evidence about this production, organic products' export and import, by statistics do not exists, and that could be one of the tasks for Statistical Institute of the Republic.

Although exists good conditions for this production starting, there are still substantially limitations. They derives from insufficient institutional organization, than insufficient producers' informing about possibilities and significance of this production, need to invest some assets, which for big number of producers are not capable,.. Many efforts are necessary to approach, in organized way, to foundation, improvement and spreading of this production, which is significant for domestic agricultural production, producers, consumers, but also for environment improvement. Basically, organic production represents the base of sustainable agricultural production.

### **Conclusions**

Republic of Serbia, like as other countries has assertive problems concerning preservation and protection of environment. They ensue out of inadequate organization, still insufficient perception of environment preservation significance, and lack of assets to intensively solve junk, liquid waste problems, than precautions for erosion protection undertake, and other protection precautions significant for environment. Due to mechanization and chemical resources in agricultural production retardation in Serbia, slower industrialization, geographic position and natural characteristics, Serbia still represents satisfactory environment for production of high-valuable agricultural and food products, especially in its mountainous regions. It implies organic production too, as very requested, but perspective one. Unfortunately, state in this field is still static, as in institutional way, as well as in practical organization and acting. There are only initiations, which can, due to unregulations difficulties (certifications, sublegal regulations, appropriate evidences, etc.) to be despondent, which would inflict Serbia's agricultural development, a great loss. There from follows that authorized bodies persistently accomplish their domain



propositions, which is very important not only in economic, but in social and ecological aspect.

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## ОРГАНСКА ПРОИЗВОДЊА У ФУНКЦИЈИ ЗАСТИТЕ ЗИВОТНЕ СРЕДИНЕ У СРБИЈИ – СТАЊЕ И РЕГУЛАТИВА

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### Резиме

Органска пољопривреда је базирана на примени одређених метода органске производње. Она добија све више на значају, тиме што приближава човека природи, од које се одрдио, чини такође скоро потпуну хармонију са захтевима о очувању животне средине и на крају, омогућава становништву да се храни производима који су настали природним процесима, користећи органске и минералне материје. Тражња производа који су базирани на органској производњи у сталном је порасту, нарочито у високо развијеним земљама. Њихов пласман је сигуран, зато што је тражња умногоме већа од понуде. Из тог разлога, ови производи имају већу цену од уобичајених производа.

Република Србија има веома добре услове за успостављање овог начина производње. Животна средина је очувана, нарочито у планинским регијама, која заузима 71,5% централног дела Републике Србије (51,7% читаве територије републике). Вештачка ђубрива су много мање коришћена у овим регијама, као и агро-механизација, која загађује околину. Већина ових области имају воду високог квалитета, чист ваздух и удаљени су од ауто путева и других извора загађења животне средине.

Органска производња се спроводи по веома високим критеријумима, регулисана је посебним одлукама. Ова регулатива постоји и у Србији такође и добро је координисана са правном регулативом ЕУ.

Овај рад даје преглед стања животне средине, органске производње и регулативе у ова два дела Републике Србије.

**Кључне речи:** Животна средина, органска производња, планинско подручје, рурални развој.

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