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# COUNTRY STUDY MONTENEGRO

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## GENERAL CHARACTERISTICS

The Republic of Montenegro is situated in the Southeast of Europe, with the surface area of about 13.812 square kilometers. The total length of the land borders amounts 614 km. Neighboring countries are Serbia, Bosnia and Herzegovina, Albania and Croatia. The Adriatic Sea coastline is 293,5 kilometers long.

According to the last statistical data on population in year 2003 (in the middle of the year), at the territory of Montenegro live about 620.145 people. Population density, the average number being 45 inhabitants per km<sup>2</sup>, makes Montenegro one of the least densely populated countries in Europe. The capital city of Montenegro is Podgorica with population of 167.578 (2003), while at the old historical royal capital Cetinje live about 18.592 people.

According to statistical data on population in year 2003, Montenegro is a multiethnic, multireligious and multicultural country. The national and ethnic structure of country's population is: Montenegrins (43%), Serbs (32%), Bosnians (8%), Albanians (5%), Muslims (4%) and Croats (1%), and 19 other nationalities and ethnic groups.

Montenegrins are South Slovene group of people, and they speak Serbian language.

According to provisions of Berlin Congress (1878), Montenegro was fully recognized as an independent state on an international level. Up until year 1910, it was a Principedom, and since that year it became Kingdom of Montenegro. Montenegrin state and Kingdom was abolished in 1918, when it became annexed to Kingdom of Serbs, Croats and Slovenes, later on to become Kingdom of Yugoslavia. This act of annexing was conducted in an illegal manner when Petrovic-Njegos Dynasty was driven from a throne. Since 1945, Montenegro became National, and then Social Republic with state sovereignty and legitimacy of one of the six equal members of the Yugoslav Federal Republic. Introduction of democratic structures brings about the introduction of new and independent political parties and first parliamentary elections in 1990. In April 1991, Montenegro was declared a Republic and in 1992, Montenegro and Serbia jointly proclaimed the new Federal Republic of Yugoslavia. Belgrade chart, signed on 4<sup>th</sup> February 2003, proclaimed the State Union of Serbia and Montenegro, as a constituent part of the State Union comprises about 13,5% of total area, and about 6% of the total population of the Union lives in it.

The citizens of Montenegro on Referendum, that was held on May 21<sup>th</sup> 2006, decided that Montenegro become independent state. Parliament of Montenegro, on its session on June 03<sup>th</sup> 2006, proclaimed Republic of Montenegro as independent state.

Montenegro introduced Euro since 2002.

Territorially and administratively, Montenegro is divided in 21 municipalities that represent the basic units of local self-governance, politically and economically independent. Montenegro is divided in North, Central and South Region. These three Regions do not possess cultural nor political independence.

Climate in Montenegro severely interchanges between Mediterranean, sub-continental and continental climate on relatively small area. The climate is mostly dominated by close proximity of Adriatic Sea and relief intersected by deep and narrow river valleys and mountain chains amongst which narrow relief units, basins, karstic plateaus are positioned.

## AGRICULTURE IN NATIONAL ECONOMY: SOCIAL AND STRUCTURAL ASPECTS

According to the data of the Ministry from the year 2002, the value made by primary agriculture was about €230 million, which makes about 15 per cent of the Gross Domestic Product (GDP). Sixty per cent of that value is livestock production, while the rest is plant production. These data show the great economic significance of agriculture, which practically makes one-sixth of the Gross Domestic Product.

Despite its high share in the GDP, the importance of agriculture could not be considered from that viewpoint only. This is proved best by experiences of developed countries where agriculture makes just a few per cent of the total GDP. In EU-15 that share is less than 2 per cent. One might expect that, as a result of its decreasing share in general economy, agriculture is losing its importance. But, it is quite the opposite; the importance of agriculture is increasing.

In developed countries agriculture is an increasingly integrated system of food production, environmental protection and balanced regional development. The importance of economic functions of agriculture (its multiple role is described by the multifunctionality concept) is increasing. This particularly refers to wider European area. Because of its multiple role, agriculture is beneficiary of various and abundant support of the state. Although support in agriculture includes the elements of interest protectionism, all developed countries pay particular importance to that sector. Direct support to agriculture is now focused on support to rural development and food safety.

In Montenegro, the importance of agriculture is also reflected through its role of an important social buffer for negative changes in other branches and through its contribution in resolving of the poverty issue, which is the problem characteristic of transition.

All this shows that the importance of agriculture in Montenegro is significantly higher than the one reflected in its share in the GDP. When agro-industry is added to it, then practically one-fourth of GDP is made in the food production sector. A balanced development of a country like Montenegro needs a clear definition of the role of agriculture and support to its development, since without the development of agriculture there can be no sustainable regional and rural development.

Montenegro is one of the least economically developed countries. Its GDP per capita amounts to €2.473 (2004). General overview of the relatively unfavorable macroeconomic framework in Montenegro, during the period 2000-2004, shows imbalances that were manifested, during the last analyzed year, through foreign (trade deficit - €29 1 mill.); domestic, with emphasis on unemployment (the unemployment rate being 22,6%); and budgetary imbalances (deficit of €32,22 mill, that represents 2,18% of GDP)

Table 1. Macroeconomic indicators; 2000-2004 (*Economic Reform Agenda, MONSTAT, Secretariat for Development, Central Bank of Montenegro, The Ministry of Finance of the Republic of Montenegro, Montenegrin Employment Agency, Household Consumption Questionnaire, Federal Statistical Office, Belgrade*)

	Units	2000	2001	2002	2003	2004
Population	No.	612.496	614.791	617.085	618.233	620.706
GDP-real growth	%	3,1	-0,2	1,7	2,3	3,7
BDP per capita (current prices)	€	1.669	2.024	2.109	2.318	2.473
Inflation	%	24,8	28,0	9,4	6,7	4,3
Export of goods and services	mill. €	304	385	499	462	623
Import of goods and services	mill. €	427	776	818	710	914
Trade balances	mill. €	-123	-391	-334	-248	-291
Current account balance	mill. €	152	305	176	-102	-143
Total employment	No.	140.762	141.112	140.100	142.679	143.479
Unemployment rate	%	32,7	31,5	30,5	25,8	22,6
Annual interest rate	%	41,0	12,4	15,2	14,1	13,5
Government budget deficit as % of GDP	%	:	:	:	-3,3	-2,2
Food, beverages and tobacco expenditures	%	56,6	54,3	52,7	52,1	:

Nevertheless, we can conclude that the country is experiencing some positive trends significant for creating more stable macroeconomic environment. GDP-real growth rate, in year 2004, has reached 3,7 percent, showing the highest improvement level in the last five years. In the period under review the inflation rate was reduced from 24,8% (2000) to 4,3% (2004), and unemployment rate from 32,7% to 22,6%.

Food production and agriculture still play an important role in the economic development of the Republic of Montenegro. The share of agriculture, hunting and forestry in total GDP of Montenegro is 11,3% (2004). The share of food, beverages and tobacco in total household expenditures in Montenegro (average number for total number of households), is relatively high with trends of reducing from 56,6% (2000) to 52,1% (2003).

The place agriculture takes in the economy is hard to evaluate due to obvious flaws in the sector statistics. Discrepancy between share of agriculture in GDP and share of employed people in agriculture is evident, since statistics monitor movements of employees in agricultural enterprises, but not in agricultural households. Some tendencies of labor market movement and structure of active population are presented through data on share of active agricultural population in total number of active population. According to these data in period between registry 1961 and the last registry in 2003, the share of the active agricultural population in total number of active population has been reduced from 53,6% to 8,8%. These considerable changes in labor force structure, as well as large-scale migrations of population from rural to urban areas of Montenegro, are above all economically motivated.

According to latest available data from 2001, the share of population living in the countryside accounted for 38% of total population. Negative balance of migrations (around 1% in period between 1991 and 2001) and the growing index of age groups (from 38 to 58 years old in 2001) indicate moderate depopulation of rural areas, and simultaneous ageing (considerable out-migration of young people). Negative demographic and economic trends are more specific of distant rural areas. These areas mainly lack a well-developed transport, sewage and social infrastructure, which indicates that these areas lack basic prerequisites of social and economic development. Agriculture is the core primary (and sometimes the only) source of income and employment in rural areas. This is confirmed by the results of the survey on agricultural holdings. In the surveyed sample, 70% of overall income is generated from agriculture, while 46% of surveyed holdings created more than 75% of income from agriculture, and 22% of holdings generate all they income from agriculture.

Agriculture provides significant proportion of employment. Official statistical data most likely underestimate the real influence agriculture has on labor market. Montenegro lacks statistical monitoring systems to capture employment movement in agriculture.

Relatively low productivity of agriculture is also common characteristic of this sector. This problem is even more emphasized in structural and market conditions in which most of the Montenegrin households function. The situation is driven by a number of factors, one of them being the low technical level of agricultural production, causing the need for physical labor to increase. Results from the survey clearly illustrate this. They show that about 60% of households use tractors, implying that 100 ha of land are processed with 6,6 tractors. If we bear in mind that the surveyed sample is, to some extent above average - than this structure technical equipment, becomes even more unfavorable.

Part of the answer lies in the fact that the greater volume of labor force in agriculture is caused by reductions in industry employment. The main barrier to more efficient sector is the low level of development of agri-food sector and insufficiently developed system of vertical linkages in food supply chain, as well as the ineffective (atomized) system of distribution of agri-food products.

The agriculture sometimes plays the role of social buffer for the most sensitive part of the population. This is the most endangered part of the population like old age households that only practice subsistence production, working population that was directly influenced by transition, in the sense that they have lost the job in the industrial sector. Returning (activating) working force in agriculture, due to the closing up of some working places in the industry, is mostly emphasized in the peri-urban areas (Podgorica, Niksic, Danilovgrad, Bijelo Polje, Berane, Pljevlja).

Economic situation in rural areas is unfavorable. Most part of the rural areas disposes of poorly developed transport, social and economic infrastructure. If we illustrate this claim with the results of

the survey, we find that the food shops and elementary schools are located 3-4 km, and secondary schools 10 km from households, on average. The distance of the bus station is 2,5 km, and post office about 7,5 km. These average results are not so unfavorable if they do not prove to be so volatile. Thus, there are village areas, households, that supersede the distance from towns of 50 km. About one third of the surveyed households regards the distance as a great obstacle to development.

In general, quality of life in rural areas is at the low level and job opportunities are limited. In some areas, we may speak about serious social and economic degradation, which results in poverty. This is highly emphasized in areas distant from city centers; where intensive depopulation exist, in certain cases the villages are almost completely deserted. This resulted in closing of schools, shops or even village ambulant, impoverishment in general. In addition, economic situation, at least in remote rural areas, will continue to decline and out-migration will still be present, if more attractive life and economic surrounding was not provided.

One of the possible answers would be value added on agricultural products with self-processing or other additional activities. The share of the agricultural households who try to resolve the problem of low income in this manner is significant, but at the same time the market demands are limited.

Bearing in mind the current situation in agriculture, labor force is not optimally used. It is unrealistic to expect that agriculture in the future might create adequate number of jobs or incomes. Here we must emphasize that absorption of surplus of industrial workforce in agriculture, is not an economically sustainable concept. Returns to labor employed in agriculture might be efficient for only short period of time. It is inevitable that the conflict with strong competitiveness pressures in longer terms appears. As far as agriculture is concerned, it will be necessary to make efforts in restructuring of the sector in order to achieve greater economic efficiency, strengthening of competitiveness, along with food processing industry and improvement of food supply channels. However, it is necessary to create favorable economic surroundings for creating new job opportunities, in order to stimulate future economic growth of rural areas.

## **LAND USE AND PRODUCTION**

Montenegro does not have significant resources in arable agricultural land. As a result, it almost has no commercial production of crops that require larger areas, such as production of grains, maize, sugar beet, oilseeds. On the other hand, it has significant areas under pastures and hence the potential for livestock production and cattle-, sheep- and goat-breeding in particular.

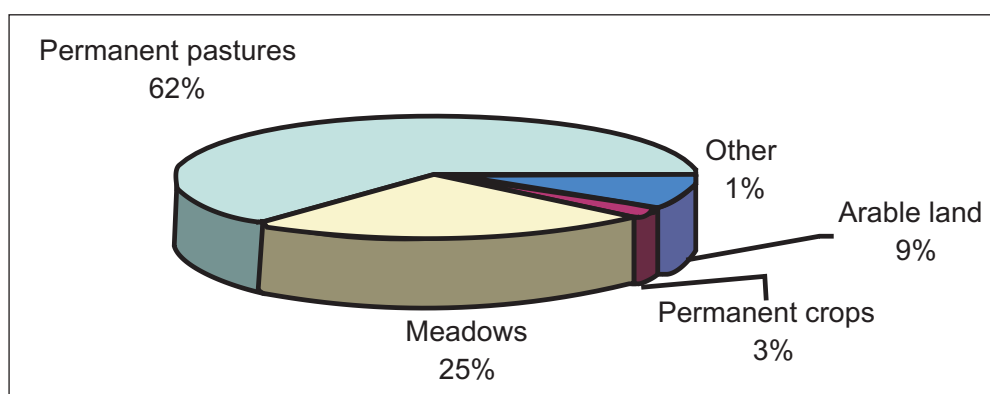
Despite the limited areas used in agricultural production, agriculture in Montenegro is quite diversified. Presence of a great number of agricultural branches is primarily the result of different natural preconditions for production. Thus, the coastal region is involved in olive-growing, growing of citrus and other subtropical fruit; the central part in production of early vegetables, fruit, grapes, egg, meat and milk production, while production in the northern region is dominated by production of potato, fruit-growing and extensive livestock breeding (cattle and sheep). This wide range in production can be an advantage, but since it cannot offer bigger quantities of products, it is at the same time a drawback. This drawback can be compensated by the fact that soil, in general, has not been overused and that level of use of fertilizers in Montenegro is still low (more than 10 times less than average in the EU) as well as that of plant protection products.

The strategic question is: is underutilization of natural resources economically rational and acceptable? How and what measures should be applied in order to use significant part of resources for rural development and development of the state in general, provided it is socially desirable?

Agricultural area in Montenegro covers 38% of total surface area (2003). Agricultural land resources, with total area of 518.067 ha or about 0,84 ha per capita, represent the important economic attribute to the country. According to this indicator Montenegro is amongst the first countries in Europe. Nevertheless, agricultural area is not adequately exploited. This is the consequence of the highly emphasized topography and geological composition that predetermines the dominance of low production value soil. Arable land, orchards and vineyards occupy only 58.262 ha or 12% of total agricultural area.

The share of the pastures and natural meadows in the structure of the agricultural land is the largest. These categories of most extensive land usage together form about 88% of total agricultural

area. There is no country in Europe with such a high percentage of permanent pastures in land structure. According to this indicator Montenegro is close to Ireland (73%), Great Britain and Slovenia (about 60%).



Source: Statistical Yearbook of Montenegro

Fig. 1. Agricultural land use, 2003

Natural conditions in Montenegro are suitable for diversified development of agriculture, and are at the same time extremely complex. Hilly-mountainous zone with distinctive relief and deficiency of lowland is a main limiting factor in agriculture development. The existing natural conditions, together with property relations, are the main reason why production in Montenegro is based on small-scale family households.

On the basis of common features like climatic conditions, agricultural production structure, arable land, yield size, cattle density etc., Montenegro can be conditionally divided into five characteristic regions, with adjoining municipalities. This regional division recognizes the main standpoints adopted in Green strategy of Montenegro 2000 in 1992. Similar regional division is developed in other documents dealing with agriculture development problematic.

Table 2. Municipalities in regions and agricultural area structure

Region	Municipality	Total		Agricultural land		Arable land, permanent crops and meadows	
		km <sup>2</sup>	%	ha	%	ha	%
Coastal	H.Novi, Kotor, Tivat, Budva, Bar, Ulcinj	1.591	11,5	50.815	9,8	19.353	10,3
Zetsko-bjelopavlički region	Podgorica, Danilovgrad	1.942	14,0	78.997	15,3	29.045	15,3
Karst	Cetinje, Niksic	2.975	21,5	74.320	14,3	15.867	8,3
Northern-mountainous	Kolasin, Mojkovac, Pljevlja, Zabljak, Savnik, Pluzine	4.462	32,5	184.528	35,6	63.054	33,2
Polimsko-ibarski region	Andrijevisa, Berane, B.Polje, Plav, Rozaje	2.842	20,5	129.804	25,0	62.374	32,9
Montenegro (total)		13.812	100,0	518.067	100,0	189.745	100,0

Due to intensive relief distinctions on a relatively small area, any of the above mentioned regions cannot be considered homogenous. The most heterogeneous ones are Northern-mountainous and Polimsko-ibarski region. Heterogeneous of the first region is caused by Pljevlja municipality, and of the second Plav and Rozaje. Distinctions between them are not clear or emphasized enough, and this fact makes the classification conditional.



**Coastal region** includes municipalities of Montenegrin coastline, from Debeli brijeg to River Bojana and comprises 11,5% of Montenegrin territory. The region disposes of 20 thousand ha of arable land, relatively fertile, consisting of deep alluvial-delluvial soil in lowlands and depressions and anthropogenized cambisols in terraces and lowlands. This region is especially suitable for fruit (subtropical fruits and olives) and field crop production, and hilly relief for beekeeping and small ruminants breeding.

**Zetsko-bjelopavlicki region** comprise areas of Podgorica and Danilovgrad municipalities or 14% of total Montenegrin territory. Main Montenegrin lowland regions are found here, and their altitude is up to 200 meters (Zeta, Malesija, Bjelopavlicka ravnica, Cemovsko polje, etc.). Cambisols are predominant in Cemovsko polje, along the Cijevna and Moraca banks and in Bjelopavlicka ravnica. In the area of Zeta and Malesija cambisols traverse into the zone of alluvial-delluvial soil. This region has optimal conditions for diversified crop, fruit and wine production (including fig, orange and kiwi) and for cattle breeding.

**Karstic region** propagates across central regions (Cetinje and Niksic), or Starocrnogorski krs, up to Golija, Vojnik and Maganik. This region has a scarce quantity of arable land, which is mainly located in karsts, sinkholes and depressions, which are numerous but scattered. Although karstic region comprises 21% of the complete territory, arable land makes up only 8% of the region. This feature together with emphasized aridity, limits plant production (except for Niksic and Grahovsko polje) to crop and partially fruit production (up to 700-800 meters). The most significant agricultural sector in this region is livestock production, particularly goat and sheep production that benefit the most from karstic grasslands. Beef and beekeeping are also extensive in this region.



Fig. 2. Regions in Montenegro

**Northern-mountainous region** is territorially the largest region (32,5%) and it comprises all mountain municipalities of central and northern part of the Republic. This area is characterized by many plateaus, often with deeper soils, adequate for stubble corn, potato and brassicaceae production, as well as for the natural and artificial lawns. The largest percent of the territory are grasslands, proper for summer pasture of cattle. Generally, this region distinguishes with shorter vegetation period, longer lasting snow cover, sharp winters and frosts during the fall and spring time.

**Polimsko-ibarski region** comprises municipalities extending through the Lim and Ibar valleys (20,5% of the territory). Proportionally, this region has the largest share of arable land 32,9% or 62.000 ha of total arable land in Montenegro. Arable land consists of relatively fertile alluvial, delluvial and brown soils in the old river terraces, and lake sediments in lowlands and slightly hilly relief; and brown, mainly acid soils on moderately steep slopes of river valleys. All these traits, together with climatic conditions and abundance of springs and flowing waters that may be used for irrigation, make this region important for all three agricultural sectors, crop and vegetable production, fruit and livestock production.

Statistical data register no downfall in the production after the political changes in late 80s and at the beginning of 90s, characteristic of other countries in transition. During the period between 1992 and 2003 the growth of total production was evidenced, at an average annual rate of +2,8%. Major growth demonstrates crop production (annual growth rate +4,7%), while livestock production shows significantly smaller, but more stable growth of +0,8%.

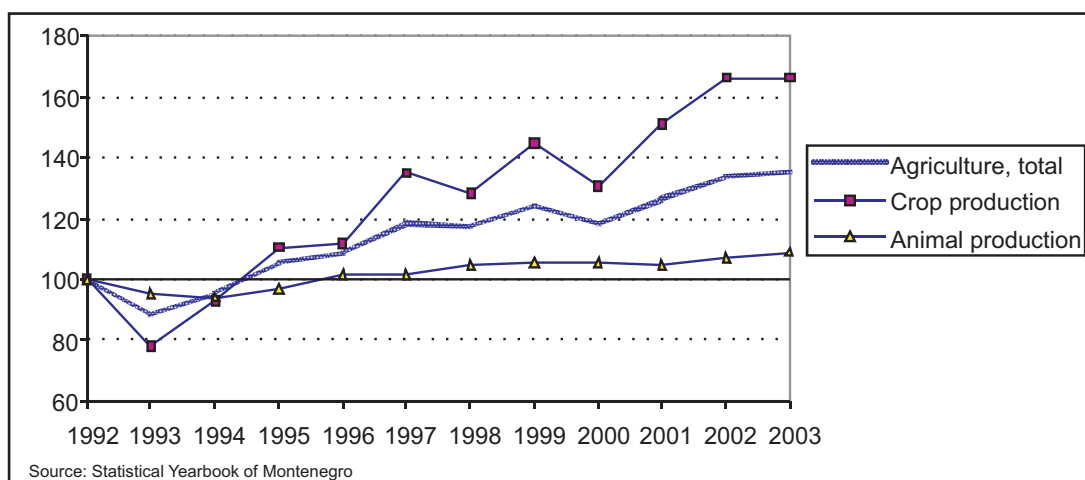


Fig. 3. Agricultural production volume indices

Crop production analysis show growing trends in all categories in period 1992-2003, along with significant oscillations. The fastest growth was realized in arable crop production, accelerating on an annual rate of +6,4%, while fruit and wine production increased in moderate rate (+2,0% and +2,7%).

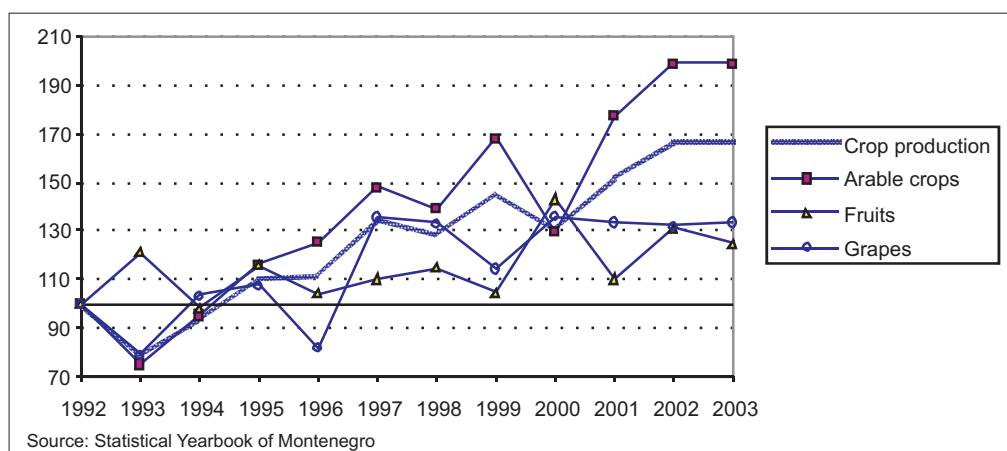


Fig. 4. Crop production volume indices



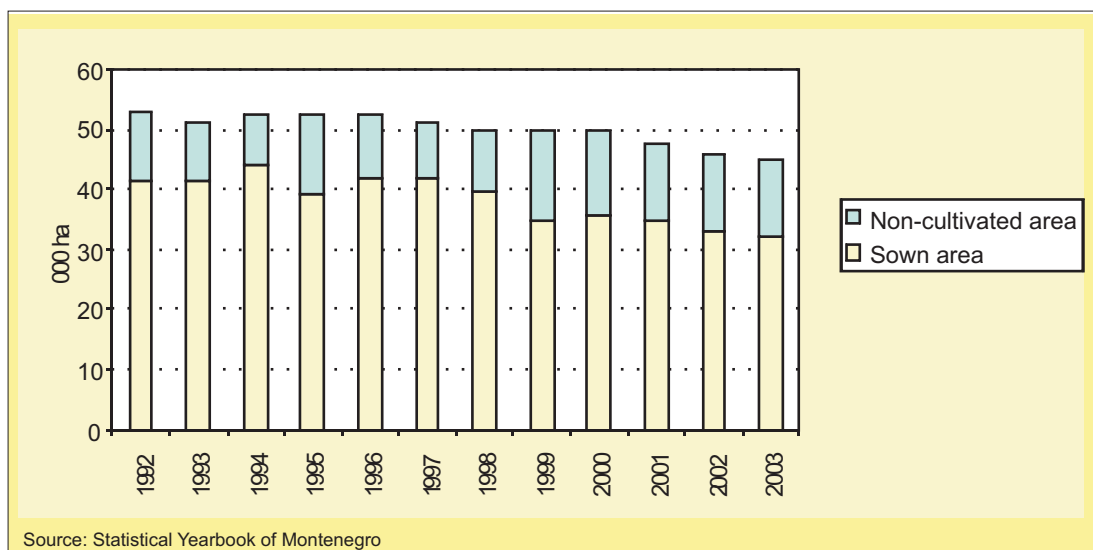


Fig. 5. Utilized arable land

Data stated in the 2004 Statistical Year-book show that of the total agricultural land of 518,067 ha and 180,862 ha of arable agricultural land. Agricultural companies and cooperatives own 9,319 ha (1.8 %) of total agricultural and 7,040 ha (3.7%) of arable land. Private holdings own 65% of total and 96.3% of arable land. The difference of 33%, which consists of pastures, does not have the clear ownership status, but it does not prevent the farmers to use that land for grazing their livestock.

In case these data are put in the ratio of total agricultural land in private ownership (337,205 ha) and number of holdings (60,070) it results in average size of a holding of a bit above 5 ha. Considerably smaller holding size is often presented. There are also other parameters that do not provide a real picture of the structure of agriculture - the exact number of farms that would fit the European definition of agricultural holding is not known.

There are plenty of indicators showing that, as a whole, workforce is not the greatest obstacle to faster development of agriculture in Montenegro. According to the assessment of the Ministry of Agriculture, for each new initiative, project or credit arrangement, adequate number of candidates apply and they voice readiness to work in agriculture as family business.

The workforce problem does exist in remote rural areas of Montenegro, but it cannot be solved by appeals for frontal return - it can be solved by well designed rural development policy where young people would find their chance to work in agriculture or other agriculture-related activities, even on other economic sectors.

Agriculture is an important absorber of unfavorable social situation - it provides subsistence for many families. It has been particularly noticeable in the last fifteen years of transition, when Montenegro's economy faced numerous difficulties. It shall remain being an important factor in poverty reduction in rural areas in future and it shall inevitably have a social dimension. However, experiences of developed countries show that primary agriculture cannot absorb significant workforce and that such approach would in fact block the normal economic development of agriculture. New jobs in rural areas are the precondition for any significant development of agriculture, too. Both are possible only with developmental function of the state. Influence of the market on its own cannot provide conditions for normal economic development of agriculture and rural areas, which make most of the total area of the state.

It can be said that agriculture in Montenegro is a combination of tradition and contemporary. Production is still, to a great extent, traditional. It is understandable that results reflect that situation. Low inputs, fertilizers and plant protection products above all, result in low yields per production unit in plant and livestock production. It is realistic to expect that such traditional ways would go on for a long time.

Nevertheless, penetration of modern ways of organization in food production, in holdings and in processing industry is becoming stronger. As a rule, modernization is faster in areas closer to bigger

urban centers. Difference between these two ways can be clearly seen in specific agricultural branches. Thus, in vegetable production we have producers that apply very modern production approach, but there are also many of those who produce in a traditional way, above all, to meet the needs of their own household. In milk production, there are farmers who have quite high yield per head and to them, that production is a family business, but vast majority of those involved in milk production does that in order to meet the needs of their family and surplus, if any, is placed on the market. Looking at the whole, sheep and goat breeding are branches where production is, to a great extent, traditional, but they are at the same time market-oriented, even more so than some other branches.

One of characteristics of the traditional agriculture is high rate of households with old inhabitants and high rate of female workforce that does much of the work in a household.

For many reasons, there is a great number of pensioners and hobbyists who are active in agriculture. In some sectors, such as bee-keeping, vine-growing, fruit-growing, etc. pensioners are often the leaders in introduction of new production methods and technologies.

These facts cannot and must not be ignored in designing the new agricultural policy concept. There is no doubt that incentives policy should follow modernization, increase in productivity and support commercial production. That modernization is a general condition for prosperity of the rural population and it is important to do that abiding by the principles of sustainable development.

## AGRICULTURAL POLICIES AND THE STRATEGIES FOR ITS DEVELOPMENT

There is a number of documents that make the wider framework for development of agriculture: Montenegro Ecological State, the Spatial Plan of Montenegro, the Millennium Developmental Aims, Regional Development Strategy. Documents related to tourism development also have an important influence on agriculture (Master Plan of Tourism Development and Strategy of Tourism Development in the Northern Region of Montenegro)

More detailed guidelines for development of agriculture can be found in the: Economic Reforms Agenda (2003 and 2005) and Strategy of Development and Poverty Reduction (2003). Elements of these two documents which relate to development of agriculture are presented.

The common characteristics of the documents stated above is that they place the development of agriculture among the **first priorities of general economic development of Montenegro**. The Economic Reforms Agenda and the Strategy of Development and Poverty Reduction are making the strong case for the need for **considerably higher budgetary support to that development**. The documents clearly show the need to make new definition of agricultural development and are already defining a part of the process of reforms in the agricultural policy.

Montenegro has adopted strategy of agriculture with title "Montenegro's agriculture and EU Food Production and Rural Development Strategy".

The concept of development of sustainable agriculture is a logical and conceptual elaboration of decisions already accepted as regards development of the state and economy of Montenegro. Its primary objective is to define the role of agriculture in development of a country and modernization of the state apparatus for the purpose of realization of the strategic commitment of sustainable development and integration of Montenegro into the international community. The concept is reasonable only if the widest possible consensus regarding its adoption is achieved.

The concept of agricultural policy takes over the European conception of the role of agriculture. Setting of main and operational objectives in eco-social development of agriculture starts from:

- commitment that Montenegro, as an ecological and tourist country, is to build the concept of sustainable development;
- achieved level of economic and social development of Montenegro;
- the fact that primary agriculture and processing industry make an inseparable entity;
- the premise that agriculture is the basis for development of rural economy;
- the need to join regional, European and international integration processes,
- maximal acknowledgement of the principle of multifunctionality of agriculture.

Eco-social and market stems from the multiple role of agriculture **multifunctionality**, which in Montenegro, reflects in the following:

- *Function of sustainable rural development:*
  - Investing into agriculture also means investing into rural development, since without agriculture it is not possible to protect rural areas from depopulation. It particularly refers to Montenegro, taking into account the natural and other conditions for agriculture.
  - Development of sustainable agriculture enables influence on balancing of differences in development of specific areas;
- *Ecological function*
  - Optimal and sustainable management over agricultural land, as an unrenovable natural resource is a guarantee to preservation of the potential of development of environment in the fullest sense;
  - Spatial management and creating the desired landscape.
- *Economic function*
  - Food production is an economic activity where economic principles applied are the same as in other activities. The concept of sustainable agriculture does not deny the economic function, it supplements it. Agriculture is the main source of income or important source of extra income for more than 60,000 households in Montenegro;
  - Agriculture is the basis for development of food industry, it supports development of many other sectors (industry of production inputs, equipment, mechanization, packaging, transportation, many services, etc.).
  - Significant new added value can be generated by utilization of large areas of available meadows and pastures that are currently underutilized;
- *Function of support to tourism development*
  - Complementarity of agriculture and tourism is of particular importance for Montenegro. A wide range of high quality domestic products enriches the tourism offer. Through affirmation of the national cuisine and specific products of Montenegro tourism can be a powerful generator of development of agriculture;
  - Agriculture offers opportunities for recreation, relaxation and development of specific sporting activities;
- *Social function*
  - Agriculture and related activities provide employment to significant share of population, which reduces the pressure on jobs in other sectors,
  - Opportunity to produce food at one's own holding reduces social tensions,
  - Development of agriculture also contributes to struggle against poverty in rural areas;
- *Sustenance function*
  - Security in providing food of the standard quality and at reasonable price for consumers is the strategic interest of all countries;
- *National-cultural function*
  - Multifunctionality also implies carrying on the tradition and cultural heritage in rural areas;

## Main objectives

Realization of main objectives of eco-social concept of agricultural policy makes possible the solving of developmental, structural and general problems of rural and agricultural development:

- I. Management of resources in the manner sustainable in the long term, together with promotion of agriculture that is, to the greatest extent, coordinated with environmental protection (sustainable resource management);
- II. Ensuring stable and acceptable supply of food safe in terms of quality and price (food safety);
- III. Ensuring adequate standard of living for rural population and a comprehensive rural development together with preservation of traditional values of rural areas (adequate standard of living and rural development);
- IV. Lasting increase in competitiveness of food producers in the local and foreign market (increase in competitiveness).

## **Operative objectives**

Operative objectives are elaboration of the main objectives. They are required for easier understanding of the concept and definition of measures.

- I. Lasting increase in competitiveness of food producers in the local and foreign market:
- II. Management of resources in the manner sustainable on long term, together with promotion of agriculture that is, to the greatest extent, coordinated with environmental protection.
- III. Ensuring adequate standard of living for rural population and a comprehensive rural development together with preservation of traditional values of rural areas:
- IV. Ensuring stable and acceptable supply of food safe in terms of quality and price.

## **Concept and Aims of the Policy**

**Agricultural** policy in the past was closely related to the general political concept and role of agriculture in this concept. Prior to 90s emphasis in government support was on social (some kind of state) sector (represented by larger collective farms), administrative price system and strong trade protection. In political turbulences and especially in period of economic sanctions in the 90's, the country was forced to control many sectors, using further price and import controls.

Over the period 1999-2000, a great turn-over in former policy happened and principles of liberalization were introduced. Since the middle of 2001, all agro-food prices are formed on free basis. Compared to the conditions in other countries in region, liberalization started early in most of the sectors and caused specific negative effects as regards ability and development of some sectors, like milk production.

Agricultural policy after 1991 was significantly production oriented. Besides incentives in food production, growth of total agricultural production and quality improvement of the products; programs of budget support were aimed at increasing income of farmers and stimulating rural population to do agriculture.

Major component of agricultural policy represented recovering of and making viable specific sectors (production of early vegetables, Mediterranean fruits etc.), whose volume, compared to previous period, significantly declined due to economic sanctions and loss of markets. In addition, building of basic market infrastructure and establishing stronger connections between primary production and processing, had an important role in measures realized through budget support.

It was also envisaged to give stronger budget support to less productive sectors and productions in less favored areas. This is the main reason why numerous programs in sheep, goat and cattle production were introduced, along with program of olive production development in the north of Montenegro, program of old-age grants and young farmers insurance, and why more investments in infrastructure were made. Very significant role played programs of institutional support for agriculture through financing of expert services and foundation of new laboratories, building capacities of inspection service, as well as training and specializing of agronomists and veterinary employees.

## **Agriculture budget**

The most important governmental support for agricultural development was realized through agriculture budget. Agro-budget comprises a set of incentive measures in form of irredeemable payments deriving from the total budget of Montenegro and envisaged for agricultural development. Agro-budget incorporates budget lines (programs), so that all necessary elements (aims, agencies for implementation, timelines, results, cost structure, description) are elaborated in detail. Agro-budget is implemented at the Government level, and published in Official Paper of the Republic of Montenegro.

Budget review by years indicates changes in height and structure of the budget and the purpose of the incentive measures. These measures in previous years were meant for direct payments (milk subsidies, premiums for plant and livestock production, etc.); and in the last few years the number of programs of general interest that stimulate agriculture as a whole and which are not sector oriented (work of expert services and laboratories, investment in rural infrastructure, expert training, promotion of agro-food products), has enlarged.

Planned budget lines are used for budget analysis, and not data on their realization. Regarding the fact that budget lines in the last few years were very precisely defined, there were little deviation in realizations of predicted measures.

### Share of Agriculture in Total Budget

Total agro-budget was conditioned with numerous factors like initiation of new programs, level of international support, changing currency from Dinar to German Mark, and later on Euro as an official means of payment in Montenegro.

Budget appropriations in real terms, shows growing tendencies at an annual level in the last seven years. However, the growth was not stable. Decline in budget support in real terms happened in 2002 and 2005 compared to previous years, which led to some difficulties during the realization of individual programs.

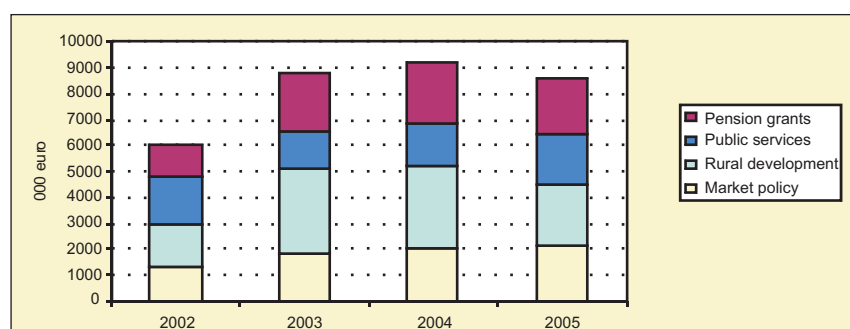


Fig. 6. Agro-budget by basic groups of measures

Besides the growing tendencies in the last few years, its share in the total budget of Montenegro has significantly reduced. Real growth of total budget in 2001 was considerably larger compared to growth of agro-budget. In 2005, share of agro-budget in total budget accounted for 1,8% while in the period 1999-2001 it was about 3%.

### Agro-budget Structure by Sectors

Agro-budget structure by sectors in period under review has significantly changed. Share of the programs of general importance increases from year to year on the account of programs by sectors. Significant changes in budget structures occurred in 2002, when some of the measures came to an end: milk premiums, some input subsidies in crop production, investments in the building of Distributive center for fruits and vegetables and similar. On the other hand, new budget lines were introduced, like old-age grants for farmers and young farmers insurance.

Table 3. Agrobudget structure in 2001 and 2004

Sector	2001			2004		
	Number of programs	Total (000€)	Share (%)	Number of programs	Total (000 €)	Share (%)
Livestock	9	2.888	41,8	10	1.520	16,5
Veterinary	13	536	7,8	13	914	9,9
Bee-keeping	3	67	1,0	4	57	0,6
Fisheries	3	41	0,6	6	97	1,1
Crop production	17	1.299	18,8	15	855	9,3
Total by sectors	45	4.831	70,0	48	3.443	37,4
Programs of general significance	12	2.075	30,0	14	3.457	37,6
Old-age grants for farmers	-	-	-	1	2.300	25,0
Total programs of general significance	12	2.075	30,0	15	5.757	62,6
Total	57	6.906	100,0	63	9.200	100,0



Changes in agro-budget structures since 2002 were mainly influenced by old-age grants for farmers. In budget 2004, for example, these grants accounted for 25% of the total budget. The largest share amongst the programs had the program of improvement of market position of Montenegrin agriculture products with 19,6%, followed by rural infrastructure that accounted for 7,6% of total budget. Other programs, taken individually had a considerably smaller share.

### **Compliance of Agro-budget with WTO standards**

World Trade Organization (WTO) comprises programs of support that may cause disturbances in international trade and those that do not. The first group of programs includes support for producers in prices or subvention of inputs in production. Supports that do not cause disturbances in international trade, are most often financing of the following agricultural activities: education, research, extension services, quality product control, investments in rural infrastructure, marketing and promoting activities, farmer's insurance, social programs and so on. According to WTO, agricultural support is usually divided in several boxes

- Amber box - subventions that cause trade disturbances (market price support or input subventions),
- Blue box - policy that limits production to specific level, typical for direct payments in frame of Common Agricultural policy of the EU, which relate to payments for defined areas or specific number of cattle, or 85% of primary production.
- Green box - maximum allowed support that does not influence international trade, and therefore is not liable to limitations.

In order to develop ACC/4 document for separate accession of Montenegro to WTO, Office for accession to WTO of Serbia and Montenegro provided a budget analysis for 2004.

According to this scheme, 14 programs amounting EUR 1,8 million (20%) belong to a yellow box, and seven of them comprise elements belonging to a green box. These seven programs account for EUR 1,1 million, which drops the value of the programs disturbing trade to EUR 600 thousand (less than 7% of total costs).

Agreement on agriculture allows member countries (developed countries) to spend about five percent of total value of production of goods or groups of goods without dispute (so-called de minimis). It is estimated that these expenses, even if seven programs with elements of green box are included, may be brought under de minimis clausal. When the document ACC/4 was elaborated, support superceded the level of 5% only with tobacco.

## **BASIC INSTITUTIONS PROVIDING TRAINING IN AGRICULTURE AND RURAL DEVELOPMENT**

### **Biotechnical Institute**

Biotechnical Institute in Podgorica is a member of the University of Montenegro and conducts educational, reaserch-scientific and expert service activities in the field of agriculture, forestry and veterinary.

Educational activity of Biotechnical Institute is a new part of the Institute activities. Since year 2005, within the Institute, Study program for Agriculture started with two departments: Plant and Livestock production.

Research-scientific is realized through organization of fundamental and applied research in the filed of fruit production, vineyard production, field crops production, plant protection, livestock production, agro economy, veterinary, forestry, fresh water fisheries and protection of the environment.

Expert activity of the Institute is carried out through extension services (consulting and projecting) and a wide range of laboratory services to third parties; organization of specialist trainings, fairs, expositions, etc.

Organizationally the Institute consists of ten scientific research centers: Center for agro economy, Center for Land and Melioration, Center for Forestry, Center for Plant Protection, Center for Crop field

and Vegetable production, Center for Livestock production, Center for Veterinary, Center for Vineyard production and Fruit production, Center for Subtropical fruits and Center for Continental fruit growing, accompanying laboratories, two experimental holdings and three services financed by the Ministry of Agriculture: Livestock selection service, dairy laboratory and Extension service in plant production and phytosanitary service - in foundation.

**Cattle Breeding Service** is a unique service for the complete territory of Montenegro, and is founded in Biotechnical Institute. It comprises 6 regional centers that cover all municipalities in the Republic. Selection service works on several activities: labeling of heads, Birth control, so-called "Z" control, Dairy control, so-called "A" control, Program of artificial insemination of cows (selection of seed and control of the implementation), Selection of bulls for propagation, Selection of quality heifers for breeding, Expositions of heifers, Realization of the projects and incentive measures financed from Agriculture budget (development premiums, fattening of calves, program young farmers and so on.), giving expert advices and directions to farmers.

**Republic Extension Service in Plant production**, started working in 2003. Service covers the complete territory of Montenegro and is organized in five centers: Bar, Bijelo Polje, Berane, Niksic and Podgorica. Aims of the service are improvement of plant production in yield and quality of products. The basic working method is giving expert advices, recommendations and directions to farmers in field, as well as organizing educative round tables with plant production thematic.

**Dairy laboratory** functions within the Biotechnical Institute and is aimed at improving the quality of milk products in Montenegro. New laboratory has a corresponding capacity for milk and product analysis for current needs of producers and processors in Montenegro.

## High-school Education

High school education in Montenegro can be gained in six schools on agriculture, food processing and veterinary. Only one of them is vocational (high-school in Bar) while most of them are mixed schools. These vocational schools exist in Podgorica, Berane, Andrijevica and Savnik up to now. These schools educate agricultural technicians of different profiles (field crops technical, fruit production technician, vineyard production, vegetable production, livestock production, veterinary, milk production, tobacco production, meat production, bakery technician, etc.).

There are no open jobs on labor market of agriculture, and knowledge gained in high school is properly adapted to market demands.

Table 4. Outline of the Agricultural High schools in Montenegro

School	Voaction of level IV	Voactions of level III
Mixed high school Andrijevica	Agricultural technician	Agricultural producer
	Fruit-vineyard technician	Agricultural tractor driver
	Crop and vegetable technician	Buther
	Livestock technician	Baker
	Food processing technician	Milk producer
	Veterinary technician	Tobacco producer
Agricultural high school Bar	Agricultural technician	Agricultural producer
	Fruit-vineyard technician	Agricultural tractor driver
	Livestock technician	
	Food processing technician	Baker
	Veterinary technician	
High school «Vukadin Vukadinović» Berane	Agricultural technician Veterinary technician	Agricultural producer
Chemical-technological high school «Spasoje Raspopović» Podgorica		Milk producer*
Mixed high school Šavnik	Livestock technician	
Mixed high school »25 maj« Tuzi	Agricultural technician	Agricultural producer

\* Milk producer is a new educational program that started this school year

Number of students in specialized high schools, especially agricultural sciences is in decline. Reform of high school education is in progress and new programs are being developed, and the old ones are being reformed.

## HISTORY AND DEVELOPMENT OF ORGANIC AGRICULTURE

Special concern for development and concretizing the concept Montenegro - Ecologic state is develop of sustainable agriculture and accordant to thet organic agriculture.

So far activities in development of organic agriculture have been share in two period:

- 2001-2004 (starting serious activities)
- 2004-2005 (important / key decision)

That first period (2001-04) in development of organic agriculture in Montenegro is finished. The aim of this stage was:

- to inform and to interest producers and consumers about all advantages and disadvantages of such way of production,
- to educate agronomists (local experts),
- to inquire market,
- to identify eventual problems.

Information and education of producers and consumers was done permanently, during five last years, through activities such as round table discussions, tribunes, publishing of numerous newspapers articles, publishing handbook about organic agriculture, leaflets, pamphlets, participating in agricultural TV shows.

We try to increase interest of producers through pilot projects in which we implement producers individually, and also through the projects such as "children's bio-garden". Thru organisation of experimental gardens we convince producers that technology of organic agriculture is not complicated and that helps them to exceed the fear from "unknown", that is mostly the biggest barrier for acceptance of new ideas. Also we encountered with opinion that organic agriculture is "nostalgic come back to the past".

Numerous lectures and experience from experimental parcels convinced producers that organic agriculture technologies are modern trends in agriculture production and that science is meritorious for development of such way of production. Work on experimental parcels helps us to convince producers in that. Work with children thru organisation of "bio-gardens" as a part of school program was very interesting. We notice that work with children can have long-term positive effects. The children showed that they have more influence on their parents then adults.

During last period special attention was dedicated to education of local experts and creation of team that will realize idea about organic agriculture development in Montenegro, with help of world experts. So, the group of young agronomists from Montenegro was sand to Italy (Institute CIHAM-Vallenzano) on 3, 6 or 9 month courses, and certain number of agronomists attend courses in Serbia and Montenegro and took part on scientific meetings in our country and abroad. We deem that it is necessary to proceed with continually local experts knowledge innovation.

During last period we perform inquiry about possibility of organic product placement. As result of that inquiry the Directory of organic product producers and sellers was created and published. Although in the moment of the Directory publishing we didn't have certificated products, we met numerous producers, sellers and ,specially, consumers that were very interested in producing, selling and baying such products. Four important hotels on Adriatic coast were intrested for organic products, also we met 23 producers that already used organic agriculture technologies on their farms.

The market inquiry also showed that:

- *conventional production on smal farms is not profitable (the most of farms in Montenegro are smal),*
- *low income of domestic population is limitation factor for organic food consumption,*
- *with placemet organic products thru the tourist capacitance producers can reach up to 4 time higher prices.*

The problem that exist in all segments of promotion and establishing of organic agriculture in Montenegro is how to motivate producers to use such way of production. First we tried to motivate our producers according to Dutch experiance where the basic motive of Dutch producers for conversion from conventional to organic production is enviromental maintaining. Unfortunately it was wrong. All pilot projects were steered on National parks area and on area with unpoluted nature, with exellant conditions for implementation of organic agriculture. So it is uderstandible that our lecturies about Montenegro- ecologic state, development of eco-agri-tourism and spcialy enviromental maintaining didn't motivate our producers because they don't have problems with nature polution, enviromental maintaining..., they live in healthy enviromental.

But our inquiry showed that the best motives for conversion on organic agriculture in Montenegro are reliable placemant of products and higher prices.

## **DEVELOPMENT OF ORGANIC AGRICULTURE IN FIGURES**

There is no accurate evidence about number of certificated amounts of products and number of certificated husbandries in Montenegro. Until now the certification activities were organised by international certification bodies that don't give report about their activities to any of Governmental institution. Since 2006. Ministry of Agriculture established the Decree by which Government want to solve this problem and to make accurate database about certificated products and farms in Montenegro.

The current available data are:

- 2004/05 Biosuiss certificated 13 farms
- 1. Vegetable - onion, potato, kale, carrot, bean, pease, red beet, pepper
- 2. Fruits - plum, apple, pear, walnut
- 3. Dairy products - kaymak (cream), cheese
- 4. Meet (beef and lamb)
- 5. Cereal - Corn, Barley, Buckwheat
- 6. Product of honey

2004/05 Ceres i BCS certificated IN-SPE (company for collecting, processing and marketing of medical plants and honey)

- 34 kind of medical plants (pack like tea)
- 8 kind of mix medical plants (pack like tea)
- 8 tincture, cosmetic products, Product of honey

## **Organic Agriculture Organizations**

1. Biotechnical Institute  
Adress: Kralja Nikole bb  
81000 Podgorica  
telephone: +381 81 268 442  
contact: Natasa Mirecki
2. Republic Extension Service in plant production  
Kralja Nikole bb  
81000 Podgorica  
telephone: +381 81 206 710  
contact: Veselin Vuletic
3. Cattle Breeding Service  
Kralja Nikole bb  
81000 Podgorica  
telephone: +381 81 268 337  
contact: Ranko Bogavac
4. NGO Gea  
Adress: trg Nikole Kovacevica 3  
81000 Podgorica

telephone: +381 69 507 393

e-mail: geaorg@cg.yu

5. The association of Agricultural Producers:

- o "Proizvodnja Zdrave Hrane", Nikšić community (it has about 70 members);  
contact: Andrija Mickovic, tel: + 381 69 540 062
- o "Morača", Podgorica community (it is composed by 13 members and has been certified by Bio-Inspecta, a Swiss certification body);  
contact Slavko Danilovic, tel: +381 67 553 617

6. Bio-shoop

"IN SPE" d.o.o., Bar community, (bio shop)

Adress: Jovana Tomasevica 32, Bar

Tel-fax: +381 85 316 397

Contact: Vesna Orlandix, director

mail: orlando@cg.yu

## STANDARDS AND CERTIFICATION, STATE REGULATIONS

Major interest of consumers and producers in organic agriculture pointed to the need for establishing one of main preconditions for development of this production method - legislation.

The Law on organic agriculture (No. 01-1006/2) was enacted in July 2004. This law provides a legal framework for the development of organic farming in Montenegro, according to EU Regulation 2092/91. This law regulates production of products by organic agriculture methods, control of production, processing, transport, storing, certification and labelling of organic agriculture products. After the control, the certificate is issued by the authorized legal person and the product is labelled with "Organic agriculture product".



Bylaws, (Rulebooks) were enacted in 2005. These rulebooks regulate specific aspects of organic agriculture and they are designed in the way that enables their regular innovation and coordination with European and international standards. The following rulebooks have been adopted:

- Rulebook on methods of organic plant production and collecting of forest fruit and medicinal herbs
- Rulebook on methods in organic livestock production
- Rulebook on processing, transport and storing of organic agriculture products
- Rulebook on more detailed conditions that need to be met by persons that control organic agriculture
- Rulebook on forms and contents of the form of the application for inclusion of producers into organic agriculture and for registering into the organic agriculture producers register
- Rulebook on contents of registers on ways in which organic agriculture methods are applied
- Rulebook on contents and keeping of the register of organic agriculture producers.



## **STATE SUPPORT, POLICY INITIATIVES**

In 2004, the Ministry of Agriculture, Forestry and Water Management of the Republic of Montenegro (MAFWM of Montenegro), Department of Development, taking in account the growing number of interested producers and consumers and awareness of sustainable ecotourism development, decided to support and promote the development of organic agriculture in order to add value to the already environment friendly agriculture production and therefore raise the income of the farming households. Furthermore, it considers the development of the rural areas as necessary to prevent depopulation and it is providing small enterprises with a micro credit program. Some first initiatives were supported in 2004 by the MAFWM of Montenegro and the Secretary for Development in the regions of the Moraca.

Since June 2005, the Ministry has had a Sector for organic agriculture, which:

- Proposes and innovates legislation
- Monitors implementation of the law
- Keeps the registry of producers in organic agriculture
- Issues licences for work and controls activities of the certification body
- Keeps the registry on activities of foreign certification bodies
- Adopts and implements the program of development of organic agriculture
- Coordinates the projects of foreign donors and promotes organic agriculture
- Communicates with IFOAM, EU and FAO Office for organic agriculture
- Promotes organic agriculture
- Publishes manuals, bulletins and other printed vocational and promotional materials.

The Government of Montenegro, in order to reach the success of its initiatives and the development of organic agriculture, has already decided to build up a national certification body and provide extension services on organic farming. In the budget for agriculture for 2005, the Ministry of Agriculture has rear marked funds for establishing of the national Agency for control and certification of organic agriculture products. Inspectors of the Monteorganica acquired good training, but it is just one segment of the certification system. MAFWM is planning to organise other trainings that are need to be organized, particularly those specialized in institutional establishing of organic agriculture in Montenegro. Practical activities would also be important. Assistance is expected from FAO (UN Food and Agriculture Organization) under the technical cooperation programme in order to establish and develop professional capacity of the national certification body and expert services for purpose of development of organic farming. Namely, at the end of July, a FAO expert for organic agriculture visited Montenegro in order to assess, together with representatives of the Ministry of Agriculture and the Secretariat for Development, the capacity of Montenegro and identify problems related to development of organic agriculture

During 2006. The Republic Ministry of Agriculture, Forestry and Water Management (MAFWM) supported organic agriculture by financing the certification of organic production and promoting the organic products. Generally, the contribution of organic production to the development of Montenegro as: long-term soil fertility preservation, maintaining of biodiversity, protection of natural resources in general, production of food with highly nutritive value, general contribution to rural development and increased valorization of products and processing and support to development of ecotourism.

The objective of the further support would be to strengthen the reputation of Montenegro as an ecological state, development of organic agriculture through support to extension services and certification system, increase in income of producers and development of the market of organic products.

## **TRAINING (INSTITUTIONS PROVIDING TRAINING IN ORGANIC FARMING, LEVEL OF COURSES, TYPE OF COURSES, CURRICULA)**

In the last three years, the producers and consumers have been permanently informed. Training and educations of producers and consumers are organized by NGOs. Providing continuous information to procedures regarding the fact that organic agriculture is a modern trend in agricultural production and that science has lately done much in upgrading this production method, which significantly contributed to moving away from traditional production, is of great importance for development of organic agriculture.

For the purpose of education of national experts, under the program of assistance from the Italian Government, the Ministry sent a number of young agronomists to Italy (Institute CIHAM Valenzano) where they took several-month courses, while a number of agronomists attended the courses organized in the country and took part in seminars in the country and abroad. Continuous updating of expertise of domestic experts is still necessary.

In cooperation with the UNDP Office, NGO Gea and Ministry of Agriculture organized training for organic agriculture inspectors. The first part of the training took place in Podgorica, at the end of August 2005. The trainees were representatives of the certification body „Monteorganica“, The Agricultural Inspectorate, the Extension Service for Plant Production, the Cattle Breeding Service.

The training was provided by consultants of the Sweden Consulting Company GROLINK AB. The objective of the training was to upgrade the knowledge and promote organic agricultural production among various stakeholders. The specific objective was familiarization of trainees with the certification process in organic agriculture, with particular stress on inspection. The trainees got information on elementary inspection activities in the field and the role in the certification agency. The training also covered systems of organic agriculture production acceptable for agricultural conditions in Montenegro, such as organic production of forest fruit and medicinal herbs.

Four of eighteen trainees were selected for the promoted training in Bosnia. The second training took place at the end of September in Mostar. The trainees were given practical knowledge on inspection activities, inspection control in farms, internal structures and practical activities of the certification agency and about visits to organic farmers.

The trainees acquired solid knowledge and understood the requests of organic inspection. In the forthcoming period, most of them are able to use the acquired knowledge in their everyday activities, either as advisors or as agricultural inspectors. Thus, the Extension Service for Plant Production has organized a series of lectures on organic agriculture and informed producers of the Law on organic agriculture and standards in organic production.

Inspectors acquired good training, but it is just one segment of the certification system. Other trainings need to be organized particularly those specialized in institutional establishing of organic agriculture in Montenegro. Practical activities would also be important.

## **ADVISORY SERVICE**

Advisory activities will be provided by two departments of Biotechnical institute: Republic Extension Service in plant production and Cattle Breeding Service (extension service in livestock). But, that very important segment for development of organic agriculture, besides several courses on Institute CIHAM Bari and trainings that were held by experts of (German Development Cooperation), is not established yet. The main problem is lack of employees in mentioned departments, and the fact that their main activities are connected with conventional agriculture. So, they are not able to provide advices for conventional and organic farmers in same time.

## **RESEARCH (OVERVIEW OF MAIN INSTITUTIONS CARRYING OUT RESEARCH, LIST OF MAIN PUBLICATIONS)**

Conditions should be provided so the Biotechnical Institute (Institute of Agriculture) in its name and in its main research program is the creator of the future development of agriculture and rural areas. Researches in the field of agriculture, processing industry, rural development and agricultural policy that can be used in practice and that are aimed at resolving the development issues, with special emphasis on economic analysis and rural development should be strengthened. Developmental needs of agriculture should be the basic criterion in recruiting new staff for the Institute.

Reorganization and modernization of activities of the Institute should be supported and its international cooperation strengthened.

The main feature of organic farming is establishing of the production methodology that suits the specific conditions of a country. Since there have been no practical experiences in our country so far, last year scientific and demonstration trials were launched in order to collect experience and to

identify specific production methods for our agro-environmental conditions. The researches are undertaken under the scientific and technological projects of the Biotechnical Institute from Podgorica.

## CHALLENGES AND OUTLOOK

Regarding the level of intensity of agriculture, it cannot be considered a significant polluter of the environment. Montenegrin area is still well-preserved from air, water and land pollution, except from narrow municipality areas of Pljevlja, Podgorica, Niksic, Bijelo Polje and Berane, where the level of pollution is influenced by industrial factors, like hydro-plants, exploitation of mineral raw materials, communal sewage, etc. However, besides few industrial centers located in five municipalities, there are still areas untouched by civilization, which implies that the great part of Montenegrin territory is ecologically clean.

Montenegro is rich in plant and animal biodiversity. 7% of national territory is protected with special forms of legal protection, which is above the European average (6%). 19% of the territory is planned to be protected, which may lead to the conclusion that 26% of preserved nature in Montenegro is of special social importance.

Agricultural lands and water resources are well preserved from the industrial pollution and thus provide for the production of healthy (organic) foods, particularly meat (poultry, lamb, goat, veal/beef); then milk and dairy produce; honey; fish; vegetables (tomato, pepper, cucumber, and other); fruits (plum, apple, grapes, citrus fruits, olive); high quality wines (Vranac, Krstac, and others); as well as naturally pure potable water of superior quality (tested to the highest world's standards). Growing on the Montenegrin soil are some specific herbs such as "forest fruits" (blueberries, edible mushrooms) and wild medicinal herbs, especially sage (*Salvia officinalis*), whose exceptional properties are known throughout the world.

All the abovementioned shows that organic agriculture is now truly at a crossroads and is facing many new challenges:

- Low level of agriculture intensification (fertilisers, pesticides)
- Traditional agriculture preserving natural resources (good image in EU)
- Existing fund and programs supporting organic agriculture
- EU structural funds will be directed to agriculture and environment
- Political will to cooperate with NGO, research and education institutes, producer associations
- Large Protected areas (7% of the country territory) conditions for ecotourism, rural and agro-tourism
- Big market chains interested to buy organic food
- Expand the consumer base
- improved and easier access to information
- continue focus on quality
- address the negative price perception
- Control issues and ensure organic integrity
- additional product demands
- facilitate free flow of certified goods

### Outlooks:

- a) continuous development of producers competitive on local and international markets;
- b) providing stable and acceptable offers for "safe food" according to quality and prices;
- c) providing acceptable life standard for rural inhabitants and whole rural development, including maintaining of traditional rural values of certain area;
- d) managing of resources on long term and sustainable way, development of agriculture by activities that are maximum harmonised with activities of environmental maintaining. Particular aim is emphasize on organic agriculture promotion and agro-biodiversity protection.

## FOREIGN TRADE OF AGRICULTURAL AND ORGANIC PRODUCTS

Montenegro is a net importer of food products. High dependency on food imports lies in the fact that the share of agricultural products in total import exceeds three times their share in export. Agro-commodity trade is in continuous growth. Increment of export and import causes deficit to grow also.

Table 5. Share of Agro-food Products in Gross Import/export in Montenegro; 2000-2004 (*Ministry of Agriculture, Central Bank of Montenegro*).

	Total (mil \$)					Production of Agro food (mil \$)					% of Agro food products (%)				
	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004
Import	419,6	496,9	594,3	629,9	869,6	75,0	89,1	123,1	117,8	203,0	17,92	17,9	20,7	18,7	23,3
Export	157,5	183,3	258,5	270,5	452,0	6,3	12,9	15,8	23,7	56,5	4,0	7,1	6,1	8,7	12,5
Deficit	262,1	313,6	335,8	359,4	417,6	68,7	76,2	107,3	94,1	146,4	26,2	24,3	32,0	26,2	35,0

Taking 2004 as the first representative year regarding availability of complete data on commodity trade of Montenegro with other countries (including Serbia), total exchange of agro-food products (groups 01 to 24 of combined nomenclature of custom tariffs) was € 259,5 million, and deficit € 146,5 million. Deficit was evident in all product groups except tobacco (tariff 24). Import-export coverage of aggregate was at the level of 28%.

The breakdown of the total import structure is valued at € 203 million in 2004, major tariff groups being group 22 - Beverages (15,2%), 04 - Milk (9,6%), 02 - Meat (9,5%), 16 - Processed meat (6,4%) and group 19 Preparation of cereals (7,3%). Among main agro-food products the most significant share have group 20 - Preserved fruit and vegetables (5,8%), 17 - Sugar and products (5,4%) and group 15 - Fats and oils (5,2%). These eight groups of products account for 65% of the overall import.

Import of individual products according to groups represents best the needs of Montenegrin processing sector and preferences of domestic consumers. Within group 22 - Beverages, import of mineral and aerated water is prevailing (€ 20,9 million). The most important importing products in group 04 - Milk, were fresh milk (€ 7,9 million), cheese (€ 5,6 million), yogurt (€ 2,2 million) and milk powder (€ 1,1 million). In group 02 - Meat, the major importing product was pig meat (€ 13,9 million), followed by poultry (€ 2,5 million) and beef meat (€ 1,8 million). Most of the imported products in group 20 - Preserved fruit and vegetables, were juices (€ 6,8 million).

Export value of agro-food products in year 2004 amounted to EUR 57 million. Almost 3/4 of this value goes to two groups of products - Beverages (39,2%) and Tobacco (33,8%). Amongst beverages, the most important exporting products are wine (€ 11,4 million) and beer (€ 8,4 million). Other relevant exporting products are ice-cream (€ 3,8 million) from group 21 (Miscellaneous food products); mushroom (€ 1,6 million) from group 07 (Vegetables); smoked meat products (€ 1,3 million) from group 02 (Meat); chewing gums and toffees (€ 1,3 million) from group 17 (Sugar); and grape, peaches, tangerines and bilberries (€ 0,9 million) from group 08 (Fruits).

Table 6. Export/Import of Agro-food Products according to Tariff groups in 2004 (*Custom service of the Republic of Montenegro, processed by the Ministry of Agriculture, Forestry and Water management of the Republic of Montenegro*)

Tariff	Import		Export		Deficit	Import-export
	Value (€)	(%)	Value (€)	(%)	(€)	coverage(%)
01 Live animals	1.929.076	0,9	86.187	0,1	-1.842.890	4,4
02 Meat and offal	19.229.423	9,5	1.685.805	2,9	-17.543.618	8,7
03 Fish	2.067.949	1,0	589.028	1,0	-1.478.921	28,5
04 Dairy produce, eggs, honey	19.546.002	9,7	55.473	0,0	-19.490.528	0,2
05 Products of animal origin	283.123	0,1	30.161	0,0	-252.962	10,6
06 Live plants and floricultural products	629.103	0,3	17.387	0,0	-611.716	2,7
07 Vegetables	2.093.579	1,0	1.742.326	3,1	-351.253	83,2
08 Fruit	4.200.462	2,0	1.318.152	2,3	-2.882.309	31,4
09 Coffee, tea, spices	11.780.119	5,9	150.787	0,1	-11.629.333	1,3
10 Cereals	9.812.151	4,9	582.580	1,1	-9.229.571	5,9
11 Products of the milling industry	9.118.202	4,5	282.104	0,5	-8.836.098	3,1
12 Oilseeds and oleaginous fruits	894.039	0,4	280.312	0,5	-613.727	31,4
13 Rubber and resin	62.993	0,0	317	0,0	-62.676	0,5
14 Vegetable plaiting materials.	44.207	0,0	900	0,0	-43.307	2,0
15 Fats and Oils	10.434.629	5,2	181.514	0,5	-10.253.114	1,7
16 Meat preparations	13.037.719	6,4	504.103	0,8	-12.533.616	3,8
17 Sugar and products	10.892.351	5,4	1.511.663	2,6	-9.380.687	13,8
18 Cocoa	7.237.842	3,6	224.634	0,6	-7.013.208	3,1
19 Preparations of cereals, flour or starch	14.730.908	7,3	1.139.559	2,2	-13.591.349	7,7
20 Preserved fruits and vegetables	11.742.799	5,8	171.994	0,3	-11.570.804	1,4
21 Miscellaneous food products	11.133.088	5,5	4.053.635	7,3	-7.079.453	36,4
22 Beverages, spirits and vinegar	30.865.267	15,2	22.199.699	39,2	-8.665.568	71,9
23 Animal feed	3.998.929	1,9	611.220	1,0	-3.387.708	15,2
24 Tobacco	7.244.456	3,5	19.105.072	33,9	11.860.616	263,7
Total	203.008.412	100,0	56.524.612	100,0	146.483.800	27,8



Positive balance in foreign trade of agro-food products Montenegro has only with tobacco (+€ 11,9 million), export amounting three times the import. Above average is the import-export balance of vegetables (83,2%), beverages (71,9%), various food products (36,4%), fruits (31,4%) and fish (28,5%). With other groups of products export-import balance is much lower and with most of the groups it does not surpass 10%. Milk group has the lowest balance (0,2%) and the largest deficit was created (-19,5 million €) within this group.

As far as the exporting/importing destinations are concerned, Montenegro's most important market is Serbia reaching 66,3% of the total foreign trade of agro-food products. Serbia participated in the total imports with 56,6%, and in export with 87,3%. Trade with EU countries amounted to 23,5% of total agro-commodity trade. EU members are important partners especially in import (29,4%), while their share in export is moderate (2,4%). Relatively great share in export has Bosnia and Herzegovina (6,8%), and import of the group Other countries exceeds (7,4%).

Positive trends with foreign markets occurred only in trade of agro-food products with Albania and Russia, due to the fact that the export volume with those countries was very low. Import/export coverage was relatively high in trade with Bosnia and Herzegovina (83%). The rate of export/import coverage with Serbia was 42,9%, while with the other EU countries it was only 2,3%.

Table 7. Export-import of Agro-food Products according to Destinations in 2004 (*Custom service of the Republic of Montenegro, processed by the Ministry of Agriculture, Forestry and Water management of the Republic of Montenegro*)

Country	Export		Import		Import-export coverage (%)
	Value (€)	(%)	Value (€)	(%)	
EU-15 (old members)	775.472	1,4	39.898.538	19,7	1,9
EU-10 (new members)	573.649	1,0	19.823.174	9,8	2,9
Albania	841.625	1,5	240.112	0,1	350,5
B I H	3.829.822	6,8	4.595.446	2,3	83,3
Bulgaria	6.855	0,0	275.730	0,1	2,5
Croatia	425.293	0,8	5.715.854	2,8	7,4
Macedonia	223.306	0,4	2.345.658	1,2	9,5
Rumunia	30	0,0	190.630	0,1	0,0
Serbia	49.354.529	87,3	114.959.780	56,6	42,9
Russia	72.466	0,1	-	-	-
Other countries	421.565	0,7	14.963.490	7,4	2,8
Total	56.524.612	100,0	203.008.412	100,0	27,8

General conclusion is that Montenegro is highly dependant on import with significant dispersion of imported product assortments. Analysis of the foreign market exchange send a clear signal to domestic agro-food producers to work on the restructuring of the production and to create conditions for eliminating deficits with products eligible to increase the production. Relatively small number of exported products emphasizes the problem of competitiveness of domestic products, considering the quality, price competitiveness and potential quantities that may be distributed outside the Republic.

## TRADE OF ORGANIC PRODUCTS

For the decision on organic agriculture the economical motive is very important, e.g. safe and favorable marketing of products. Very often it is hard to achieve economical profit on the small farms if the work is intensive agriculture. However, small farms are ideal for development of organic agriculture, and organic products have higher prices and are deficient on the market. Opportunity for marketing of organic agriculture product through so-called "invisible export" should be particularly emphasized. Products that are being marketed by tourism could increase own value up to four times, since they are always marketed as the final product.

In order for the organic agricultural production to gain its practical evaluation it is necessary to obtain readiness of producers to convert to this production method. Researches conducted at the

private food producers, among which 68,75% live in the village, and 32,25% live in suburbs, indicate readiness of producers to change their orientation towards production of organic food, but under the following conditions:

1. higher price of organic products
2. favorable conditions of credits for organic agriculture
3. state guarantee for improved purchase of organic products

When setting out the above conditions they were all unanimous regardless the education level, economy size. Structure of questioned people was mainly of elementary school education 75%, and rest of them was with high school diploma. That is why it is necessary to engage university educated experts, whose role is seen by them as the huge one 85%. It is necessary to include more means of public information for affirmation of this production, since majority of questioned people 68,75 is not satisfied with previous knowledge acquiring through media. It is important to mention that questioned people were unanimous about support of the legal regulations, which would regulate the system of organic food production. Majority 83% considers that reward system for the producers of organic food should be introduced. Such attitude of the questioned people indicates that it is necessary to work more on their motivation and provision of experts' advices that would help them to choose redirecting towards production of organic food. There is great interest 94% for various education methods: lectures, seminars, etc.

Therefore, considering above-mentioned conditions it is necessary to use measures of agricultural policy in order to stimulate producers towards reorientation from the traditional to production of organic food. Results of this poll indicate that economical reasons have key role for the decision about reorientation from traditional to production of organic food. However, in development countries, such as Netherlands, the main motive for accepting the organic agriculture is care for environment.

Considering the natural conditions, organic agricultural production in Montenegro has perspective, but it is necessary to obtain legal regulation on the state level, which would define control of all production phases, storage, processing, packaging, issuing of certificates as a base for achieving the healthy food mark as well as marketing of such on domestic and foreign market. This would provide creation of product which is of rare and exclusive origin, and which would make the Montenegrin offer specific and highly profitable.

The analysis on possible marketing of products of organic agriculture show that consumers want to consume products of organic agriculture and that major hotels are interested in these products, too. Moreover, the low income of local population might be a factor of limitation for purchase of products of organic agriculture that are more expensive, but, marketing through tourism sector might result in four time higher prices and thus exports could be made 'at the doorstep'.

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