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THE ANALYSIS OF SOCIO-ECONOMIC CONDITIONS FOR ORGANIC PRODUCTION IN MONTENEGRO[1]

Miomir Jovanović, Aleksandra Despotović[2]

Summary

Food production and agriculture still play an important role in the economic development of Montenegro. The share of agriculture in total GDP of Montenegro was 8.4 % (2008) and share of Gross Value Added in total GDP was 6.9% (2007). One of the structural characteristics of Montenegrin food production is higher share of agriculture in gross domestic product in comparison to the food processing sector. This indicates a low level in finalization of agricultural products, as well as the emphasized sales of agro-food products through unregistered trade channels. The prevailing existence of extensive agriculture in Montenegro provides a good basis for development of organic agriculture. Development of the organic sector is therefore considered as an important and contributing factor for the overall economic development and rural poverty alleviation. The paper analyzes the socio economic situation of agricultural producers in Montenegro in terms of procedures for organic production.

Key words: *food production, organic, market, economic.*

JEL: *Q12, Q13*

Introduction

Montenegrin agricultural area is only 518 000 ha. Production is very diverse and the degree of utilization of agricultural area is very low. According to the most recent data of FIBL/IFOAM on certificated organic production at the global level, there were 37.2 million ha of organic farmland (including the area under conversion), (*Tomaš,*

1 This paper represents a part of the research on the project of the FAO, entitled Project: TCP/MNE/3201 "Organic agriculture in Montenegro: concerted support for small-scale growers in organic agriculture".

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Pejanović, Glavaš-Trbić, Njegovan, 2011)[3]. Production of safe food is a trend in the world, and the resultant existence of demand for agricultural products produced in this way (*Vlahović, Štrbac, 2007*)[4].

The economic crisis that occurred in nineties caused a significant reduction in consumption of artificial fertilizers and pesticides, thereby preserving the soil from contamination. Analysis of the application of scientific farming methods in agricultural production indicates that the use of artificial fertilizers and chemicals in Montenegro is about 4.5 times smaller than in surrounding countries and over 10 times smaller in relation to the EU average (*Despotović, 2002*)[5]. Mentioned parameters clearly indicate that Montenegro possesses favorable natural conditions for development of organic agriculture. There is a huge potential space in which one can organize organic production with a very short transitional period. For example: the total production of potato in Montenegro (2008) was 134.106 t. Only 80t was from organic agriculture or 0.05% of the total production[6]. At the same time, Montenegro has relatively large areas that could be used for organic agriculture, on one hand, and relatively small production quantities of organic products, on the other hand, in comparison with the neighbouring countries. Western European countries show a remarkable growth of this sector, with databases and statistics that regularly monitor t progress of this production. At the global level, the first recorded single-digit market growth rate of organic products was in 2009 (*Tomaš, Pejanović, Glavaš-Trbić, Njegovan, 2011*)[7]. Demand for organic food is a steadily increasing trend, together with the increased knowledge of consumers about the necessity of rich diversity of high quality food that is chemically and microbiologically safe (*Lazić, 2008*)[8].

Material and methods

In accordance with the set objectives and the research plan, visits were prepared after analyzing the available information obtained from the certification body "Monteorganica". After examining the available data it was concluded that the majority of reported farmers opted for implementation of organic agriculture in plant production.

Thus in the period 2006-2008, the number of registered producers of organic agriculture

3 Tomaš, M., Pejanović, R., Glavaš-Trbić, D., Njegovan, Z (2011): Ekonomika poljoprivrede, Organska poljoprivreda u podunavskom regionu, SI-1 412, UDK. 338.43:63, JU ISSN 0352-3462, pp. 220-228, Beograd.

4 Vlahović, B., Štrbac, M. (2007): Ekonomika poljoprivrede, Osnovne karakteristike tržišta i marketinga proizvoda organske poljoprivrede, vol. 54, br. 2, str. 131-147.

5 Despotović, A. (2002): Prirodni uslovi proizvodnje zdrave hrane u Crnoj Gori, Organska poljoprivreda, grupa autora, Podgorica.

6 Ministarstvo poljoprivrede, šumarstva i vodoprivrede, 2010, www.upitnik.gov.me/ O/Pdf/C11.pdf

7 See footnote 3.

8 Lazić. B., Babović, J. (2002): Organska poljoprivreda, (TOM1), Institut za ratarstvo i povrtarstvo, Novi Sad.

in Montenegro amounted to 26, whereof 12 were certified, while the number of issued organic certification was 6 and the number of certificates for the transition period was 7[9]. As regards the regional aspect, we can conclude that these holdings are, predominantly, located in the mountainous area of Montenegro and the North Mountain and Polimlje-Ibar region. The main criteria in choosing the farms for the conduct of questionnaire surveys were: That the farm was registered with the certification body "Monteorganica"; That the farm possesses the certificate for transition period or organic certificate; that organic production principles were implemented in plant production; That the farm is located in the north - the mountainous and Polimlje-Ibar region;

Questionnaire surveys were conducted on seven farms in 2010 and their main goal was to evaluate conditions and opportunities for further development of organic production in respect to the actual situation of organic agriculture in Montenegro, as well as to present the advantages and disadvantages of the transition process from traditional to organic farming. The survey was implemented in the municipalities: Kolašin, Mojkovac, Pljevlja and Berane.

Results and discussion

The average number of male members in the surveyed households was three and female was 2.29, (Table 1).

Table 1. Average figures for the surveyed households wich have farms

Status	Number of households members	
	Men	Women
Total number of household members	3	2.29
Age (min-max)	1-80	12-65
Number of household members attending school (elementary, secondary)	0.86	0.43
Number of household members (working outside the farm)	1.14	1.14
Number of household members (who are engaged full time on the farm)	1.29	0.56
Number of household members (which are most of the time engaged outside the farm)	0.43	0.29
Number of unemployed household members	0.29	0.14
Pensioners	0.43	0.14
Other household members (children, unable to work, etc.)	0.29	0.14
Seasonal engagement of workforce on the farm	7.57	3.29

Source: Survey conducted by the author in 2010.

9 MONTEORGANICA, www.orgcg.org

The average age of the host farms was 60 years (Table 2).

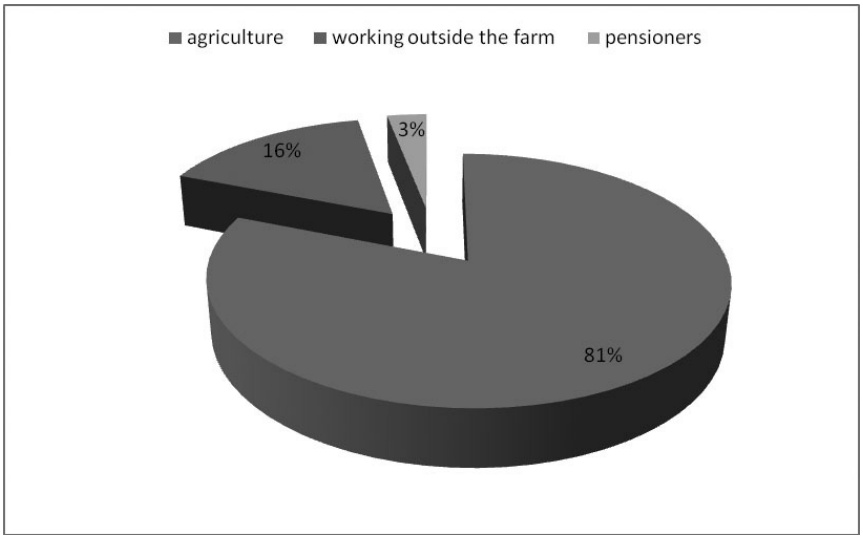
Table 2. The average age of the owners and their education

Age	60
The level of education of the host (select offered)	0 1 2 (1) 3 (4) 4 (4)

Note: (0) No education (1) Primary School, (2) High school, (3) craft (4) College, Faculty
Source: Survey conducted by the author in 2010.

Four farmers had college or university degree. Regarding the participation of income sources at the surveyed farms, the incomes from agriculture dominate with around 81% (Graph 1).

Graph 1. Participation of individual sources in total household income



Source: Survey conducted by the author in 2010.

Analysis of the structure of agricultural land in private ownership, average per farm, indicate a relatively substantial area with20.1 ha of arable land, 12.4 hectares of meadows and pastures and around 1.6 ha of orchards and vineyards, while the forests take around3 ha. Relatively large areas of agricultural land owned by the surveyed households are result of the fact that this land is jointly owned by a larger number of household members and has not been divided among them yet. At the same time, around 20 ha of land are rented (Table 3).

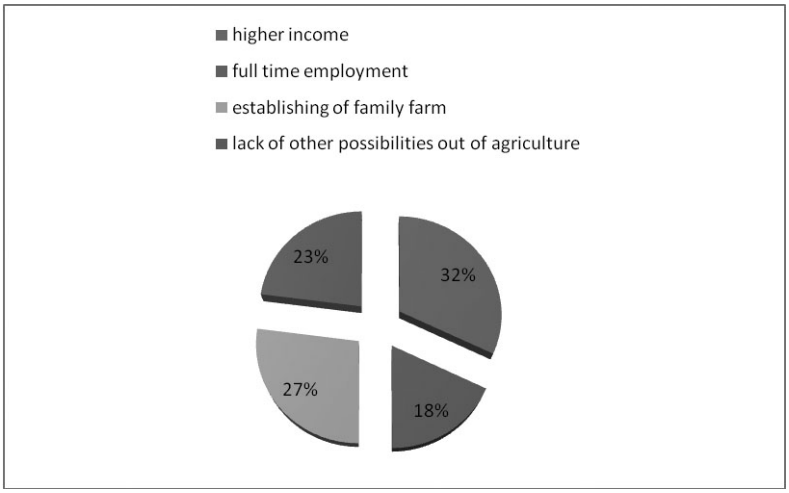
Table 3. The structure and size of agricultural land on farms

(1)	Agricultural land	Privately owned (ha)
	- Arable land (ha)	20.1
	- Meadows and pastures (ha)	12.4
	- Orchards and vineyards (ha)	1.6
(2)	**Forests (ha)**	3.0
(3)	**Land rent (ha)**	20.0

Source: Survey conducted by the author in 2010.

In 2010, there were 12 ha under the grain crop with average production of 35.7 t / h. About 90% of this production was market oriented. The average area under potato was around 2.5 ha with average production of around 4t/ha. Also, over 90% of the stated production had a commercial character. Only 14% of vegetable production at the surveyed households was market-oriented, while 86% of it had the character of natural production. Areas that were under fruits and vegetables amounted, in average, to around2.25 ha and the yields amounted to around 12t/ha. The assessment of main goals has shown that the majority of farmers are engaged in the agricultural production in order to achieve higher incomes (4.86), while the lowest percent was awarded to the lack of other opportunities outside the agriculture (Graph 2).

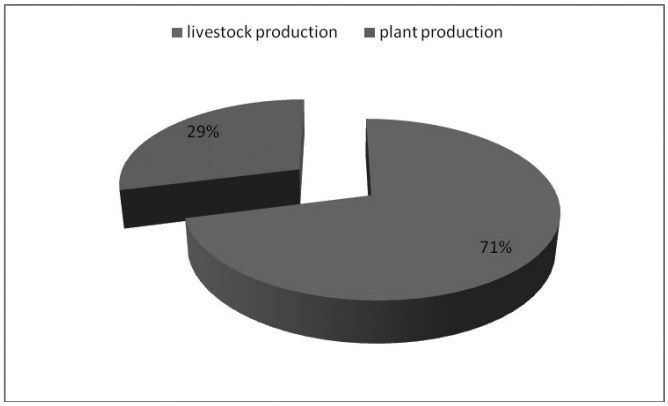
Graph 2. The primary goals in agricultural production



As regards the livestock production, the producers primarily intend production for their own purposes. Thus the average number of heads in 2008 was 2.7 animals per household, with the number of animals under the age categories of cattle (up to 12 months) was, on average, only one head, while the average number of older categories of cattle (over 12

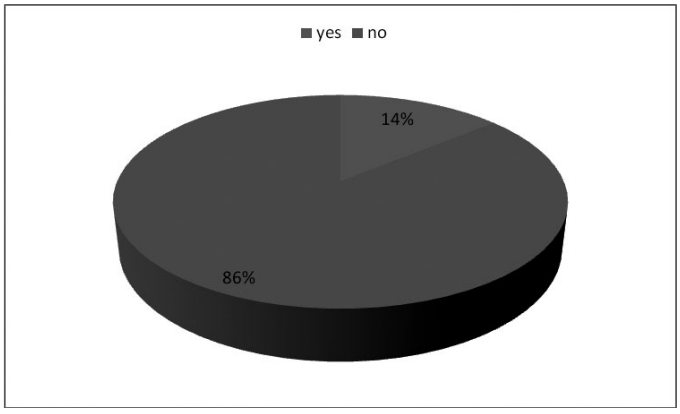
months) was 1.7 animal per farm. The average number of sheep in 2008 was 43 and the average number of pigs was 2 animals per farm. The average annual milk production was around 4560 kg per head. Additional activities on farms included production of fruits and vegetables, mainly for their own needs, which was conducted by 57% of the surveyed owners of households, while the meat and milk production was conducted by 29% of households and the same percent of farmers who use agricultural machinery. Regarding the question which areas of production can achieve higher incomes, 71% of household owners indicated the plant production and only 29% indicated the livestock production (Graph 3).

Graph 3. The source of income



The economic position was satisfactory for 29% of respondents, which is the percentage of households that declared their economic position as good, while42% considered their position as poor. The major barriers for development of agricultural production, according to the respondents are: poor bulk purchasing (100%), lack of credit funds (43%), lack of competitiveness (29%) and poor collection of receivables (14%). On the question of whether they use mineral fertilizer, 86% of respondents answered yes, while 14% answered no (Graph 4).

Graph 4. The structure of surveyed households by use of mineral fertilizer



In terms of sufficiency of information about the concept, rules and organization of organic production- 86% of respondents said that they had enough information and only 14% answered with number around 57% of respondents considered that they need additional education about the concept, rules and organization of organic production and 43% of them deem it as not necessary.

Relating to the structure of training, most of respondents opted for combined model-theoretical and practical, and only 14.5% for the practical. On the question of whether organic production could be considered as a better option for elimination of market risk in milk production, the answer was divided-by 50%.

From the respondent's point of view, it takes three to four years, in average, to convert from traditional to organic production.

The highest grade of 4.6 (proposed grades from 0-5, from the generally unimportant to very important) was given to almost all conditions necessary for the process of converting from traditional to organic agriculture: higher market prices, better information/marketing, better technical advisory support, better administrative control, better opportunities for loans, personal marketing etc….

In terms of interest for construction of processing facilities in their respective villages, 57% of respondents expressed their interest, while 29% were not interested and 14% had no answer.

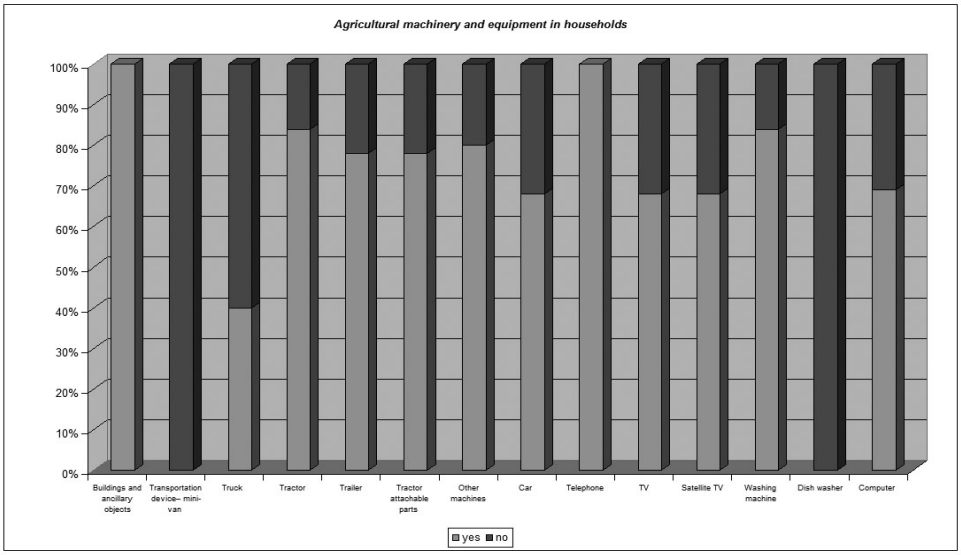
The surveyed farms mostly invested into machinery (100%), while the investments into basic and additional facilities were made by only 20% of respondents. 57% of respondents is of the opinion that knowledge on organic agriculture that is available through (newspapers, radio, TV, etc.) is at a low level. 14% of respondents thought that the mentioned level is sufficient, while 29% had no answer.

As regards the potential sale channel for organic products, the most common channel is retail-sale (86%), while the use of other channels (specialty shops, etc.) is relatively low (14%). This indicates that there is an insufficient level of sale channel dispersion and thereby a emphasized risk for placement of products.

Indicators of living standards for the households in the surveyed area

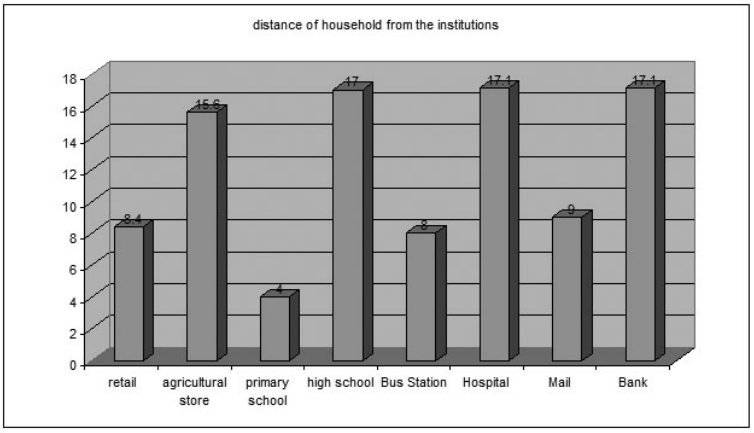
The obtained results of the survey provide a clear picture of the position of surveyed households in terms of conditions for agricultural production and placement of their products. The general conclusion is that, except the means of transportation and machinery for vessels, there is an evident lack of other machinery and equipment (Graph 5).

Graph 5. Agricultural Machinery and Equipment in the analyzed households



In terms of distances of individual holdings from the relevant institutions and thus of conditions and quality of life in the analyzed area, it was noticed that primary schools are rather close to the households, but other institutions-secondary schools and colleges, hospitals and banks are rather far away (Graph 6).

Graph 6. Distance of households from the institutions (km)



Conclusion

In the past few years, the organic agriculture sector of Montenegro established the legal framework and created the necessary institutional support. However, when it comes to the development of products, it can be concluded that they are still at an early stage of development (fruit, vegetables, livestock products, etc.).

Monitoring the development of organic agriculture sector in Montenegro is a complex task, given the heterogeneity of production and the unreliability of data and difficulties in obtaining high-quality statistical information on foreign trade, consumption and processing.

Based on the presented survey results, the slow development of local markets and lack of affordable credit facilities represent a significant constraint to the further growth and sustainability of this sector. Many farmers do not have enough information on placement opportunities and support available for their products. Therefore, a key objective, in the field of organic agriculture, should be development of this sector at the local level through incentives for this type of production and support for the development of local markets with emphasis on environmental protection. This would contribute to better connectivity between potentially interested parties in the field of production, processing and trade of organic products, creating competitive agricultural products of high quality, which would be complementary to European brands.

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ANALIZA SOCIO EKONOMSKIH USLOVA ZA BAVLJENJE ORGANSKOM PROIZVODNJOM U CRNOJ GORI

Miomir Jovanović, Aleksandra Despotović[10]

Rezime

Proizvodnja hrane i poljoprivreda i dalje imaju važnu ulogu u ekonomskom razvoju Crne Gore. Udio poljoprivrede u ukupnom BDP-u Crne Gore je bilo 8,4% (2008), a učešće bruto dodate vrijednosti u ukupnom BDP-u, nešto manje od 7% (2007). Jedna od strukturnih karakteristika crnogorske proizvodnje hrane je viši udio poljoprivrede u BDP-u, u odnosu na prehrambenu industriju. Ovo ukazuje na nizak stepen finalizacije poljoprivrednih proizvoda, dok je i dalje značajno učešće trgovine poljoprivredno-prehrambenim proizvodima preko neregistrovanih kanala prodaje. Naglasak na ekstenzivnu poljoprivredu predstavljaju dobru osnovu za razvoj organske poljoprivrede. Otuda, razvoj organske poljoprivrede predstavlja važan faktor ukupnog ekonomskog razvoja i smanjenja siromaštva na ruralnom području.U radu se analizira socio-ekonomski položaj proizvođača hrane s aspekta bavljenja organskom poljoprivredom.

Ključne riječi*: proizvodnja hrane, organska, tržište, ekonomski.*

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ECONOMICS OF AGRICULTURE

CONTENT:

1. Bubić Jasenka, Hajnrih Jasmina
THE ANALYSES BUSINESS PERFORMANCES OF AGRICULTURAL ENTERPRISES IN VOJVODINA DURING THE CURRENT CRISIS 183

2. Ivanović Sanjin, Todorović Saša, Nastić Lana
IMPACT OF ENERGY PRICES ON INCOME OF LABOUR ON FIELD CROP OPERATIONS 195

3. Jovanović Miomir, Despotović Aleksandra
THE ANALYSIS OF SOCIO-ECONOMIC CONDITIONS FOR ORGANIC PRODUCTION IN MONTENEGRO 207

4. Kovačević Bojana, Gajić Tamara, Penić Mirjana
JOB SATISFACTION AMONG THE EMPLOYEES IN NOVI SAD'S TOURIST AGENCIES 217

5. Mihailović Branko, Tepavac Rajko, Kovačević Maja
APPLICATION OF FACTOR ANALYSIS IN EVALUATION OF THE CONSULTING DEVELOPMENT IN SERBIA 229

6. Antevski Miroslav, Petrović Pero, Vesić Dobrica
DEVELOPMENT PERSPECTIVES IN AGRICULTURE AND RURAL AREAS IN SERBIA IN THE EU INTEGRATION PROCESS 243

7. Ene Corina
CONSUMER PROTECTION IN BULGARIA: EU CHALLENGES . . 253

8. Golja Tea, Dolenc Sanja, Vladimir Marinkovic
HOW TO MAKE AGRICULTURE PRODUCTION IN PROTECTIVE AREAS PROFITABLE?- PROJECT IDEA ON THE EXAMPLE OF REPUBLIC OF CROATIA - 267

9. Spasojević Saša, Vojnović Boško, Nikolić Aleksandra
THE INFLUENCE OF BUSINESS INFORMATION SYSTEMS ON SERBIAN COMPANIES' BUSINESS PERFORMANCES 285

10. Veselinović Petar, Mićić Vladimir, Miletić Dalibor
SERBIA – ZONE OF POVERTY AND SOCIAL EXCLUSION 305

11. Zheliazkov George, Zaimova Darina
ECONOMIC VALUE OF BIODIVERSITY AS A PRODUCTION RESOURCE 319

12. Ranđelović Novica, Stefanović Vidoje, Azemović Nedžad
SUVA PLANINA AS DEVELOPMENT AREA OF RURAL TOURISM 333

13. **In Memoriam**
AKADEMIK PROF. DR BRANKO BAJČETIĆ 345