

Contemporary Issues in Business, Management and Education 2013

The support of implementation of organic farming in the Slovak Republic in the context of sustainable development

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Abstract

Organic farming is a perspective way of farming which has a positive impact on the environment while addressing various economic and social aspects, contributing to the sustainable development of the rural areas as well as to the protection of all components of the environment.

Organic farming has been existing in Slovakia since 1991. More significant increase is evident from the accession into the EU when Slovakia adopted the commitment to increase the acreage of agricultural land for the implementation of organic farming. At the same time it was possible to draw farmers' subsidies for the establishment and functioning of organic production. This factor played an essential role in 2004 and between 2008–2009 when the most significant impact on the development of active farmers was evident. At the present (2013) there are 355 organic farmers in Slovakia, out of this amount 11 belong to the process of conversion. There is the highest share of organic farmers in Prešov region (24.42%) and Košice region (17.44%). The lowest amount of organic farms is evident in Bratislava (3.78%) and Trnava (5.81%) regions. From the focus of agricultural production point of view the animal organic production prevails the plant production. The main motivation behind the farmers' decision to change the conventional to organic production is still a financial incentive to compensate the loss of the income from reduced production and additional costs related to the implementation of organic farming. The motivating factor would definitely be the farmers' support from the part of the state in the forms of enhancement of the sales of organic products, improved counseling system and promotion.

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Selection and peer-review under responsibility of the Contemporary Issues in Business, Management and Education conference.

Keywords: organic farming; agriculture; EU support.

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1. Introduction

1.8 million farmers in 162 countries produce organically on more than 37 million hectares of farmland (FIBL, 2013). Organic farming can be defined as a balanced ecosystem of a permanent nature, which is based on local and renewable sources, where it is the duty of man to manage agricultural activities as a harmonious part of nature. Organic farming is an agricultural production system that maintains the health of soils, ecosystems and people (Domin, 2008). Organic agriculture combines tradition, innovation and scientific research to benefit the shared environment and promote fair relationships and a good quality of life for all elements involved (Green Marketing, 2009). For this reason, organic farming is an important component of agricultural systems in the more developed countries. It is one of the possibilities of solving structural policies and a number of current issues through the involvement of sustainable development (Rosochatecká, 2002).

Organic farming (Lehocká & Klimeková, 2004) is also in Slovakia a prospective management mode, which is one of the possible solutions to address the impact of agriculture on the environment but also economic and social aspects by creating a new market for organic products, including the creation of new jobs, contributing to the development of rural areas and the protection of all components of the environmental. Despite the good potential of organic farming in the SR, Slovak organic farming has several weaknesses related to insufficient implementation of legislative, institutional and economic instruments that limit its development.

The aim of the paper is to evaluate the implementation of support of organic farming in Slovakia in the context of sustainable development. The object of our investigation was to assess the areas defined in Figure 1, from the following points of view:

- *Development of organic farming in the period of 1991–2013 in terms of the number of farmers and occupation of farmland*
- *Development of a legislative and institutional support for organic farming*
- *Development and analysis of financial support for organic farming*
- *Social and psychological area*

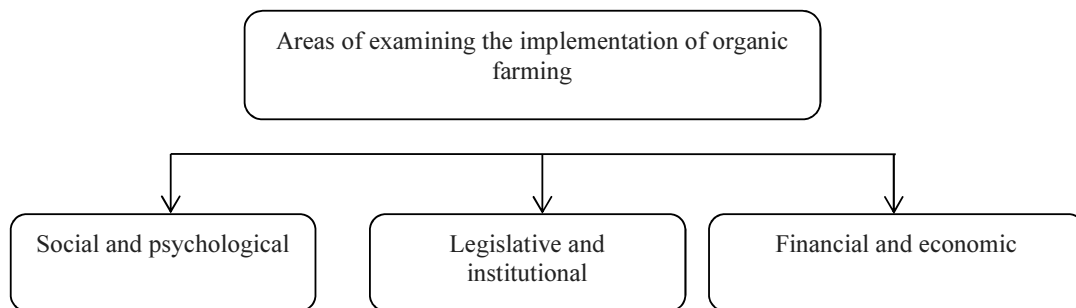


Fig. 1. Areas of examining the implementation of organic farming in Slovakia. *Source: Kobec, M., 2004*

The paper is elaborated on the basis of primary and secondary information sources. Primary sources were obtained by the method of questionnaire survey of organic farmers and the method of direct interview with the staff of the Agricultural Paying Agency and the Central and Testing Institute in Agriculture (CCTIA). 122 organic farmers representing 34.4% of all organic farmers according to database of the CCTIA for the year 2013 were interviewed by the telephone. The share of surveyed farmers represents the coverage for all regions of Slovakia. A legal form and size of the business was irrelevant for the survey. Secondary sources of information were sources of literature, internet resources and legislation on the matter.

2. Development of organic farming in the period of 1991–2013 in terms of the number of farmers and occupation of farmland

History of organic farming in Slovak conditions began to develop 15 to 20 years later compared to more developed countries in Europe due to the fact that until 1989, intensive conventional farming was used exclusively (Vanková & Baláž, 2005). Slovak organic farming followed the tradition of European organic farming and organic crop production is currently one of the fastest growing segments of agriculture in Europe (Williams et al., 2011). It is evident from several studies, that the Slovak Republic has in terms of geography and soil quality a good potential for the development of organic farming (Kováč et al., 2008).

Table 1. Development of organic farming in Slovakia

Year	Area of agricultural land in ecological farming (in ha)	Share on total agricultural land area (in %)	Number of farms	Average area per farm (in ha)
2000	58 466	2.39	88	664.4
2001	58 706	2.4	81	724.8
2002	49 999	2.05	76	657.9
2003	54 479	2.20	88	640.9
2004	53 091	2.18	117	420.5
2005	93 591	4.93	205	456.5
2006	121 956	6.42	256	460.2
2007	123 918	6.52	280	444.2
2008	136 669	7.25	349	389.1
2009	146 762	7.5	458	392.4
2010	182 403,02	9.4	497	407.4
2011	180 261	9.3	364	NA

Source: CCTI

As it can be seen from the Picture no. 1, the number of farms and the acreage of farmed land between 1991–2010 is increasing. There is a significant increase since 2004, due the implementation of commitments of the Government of the SR under the Rural Development Plan for 2004–2006 and Rural Development Programme 2007–2013, which aimed to achieve the implementation of organic farming for at least 5% of the total agricultural land. Therefore it can be concluded that the regulatory stimulation by the State to introduce organic farming has helped the development of organic farming in Slovakia.

Table 2. The number of organic farmers by region as of 31.03.2013

Region	in organic farming	In organic farming and conversion	In conversion only (2010–2013)
Bratislava	14 (4.1%)	2	2
Trnava	20 (5.81%)	6	1
Nitra	33 (9.59%)	2	2
Trenčín	23 (6.69%)	7	
Banská Bystrica	63 (18.31%)	17	
Žilina	47 (13.66%)	11	1
Prešov	84 (24.42%)	20	1
Košice	60 (17.44%)	7	4
Total	344	72	11

Source: CCTI, 2013

At the present (2013), according to the data of CCTI, there are 355 organic farmers, of whom 344 (96.9%) are involved in organic farming. Out of this number there are at present 72 (20.9%) farmers included in organic farming as well as in the conversion. Only 11 farmers (3.1% of all organic farmers) are in the conversion period.

Table 2 indicates that the largest proportion of organic farmers is located in Prešov (24.42%) and Košice (17.44) regions. The lowest number of organic farmers is located in Bratislava (3.78%) and Trnava (5.81%) regions. This is apparent based from the natural conditions of the Slovak Republic, as in the regions of Prešov, Žilina, Banská Bystrica and Košice the vast majority of agricultural land represents permanent grassland land of low value (GCCA, 2013), and therefore it is easier for farmers to decide whether to produce within the system of organic farming particularly in livestock production (Table 4).

Table 3. Area of agricultural land in Slovakia in 2011

Regions	Agricultural land (ha)	Non-agricultural land (ha)	Share of agricultural to non-agricultural land (%)
Bratislava	92 118	113 150	44.88
Trnava	289 762	124 899	69.88
Trenčín	184 081	266 116	40.89
Nitra	467 248	167 131	73.65
Žilina	244 896	435 969	35.97
Banská Bystrica	414 669	530 768	43.86
Prešov	381 988	515 368	42.57
Košice	336 025	339 423	49.75

Source: Regional Statistics Database, 2012

The number of organic farmers is dependent on the agricultural land area (Table 3). Therefore, it can be concluded that the expanse of farmland, as well as the dominance of agriculture in the given region of Slovakia does not affect the number of organic farmers.

Table 4. Number of organic farmers in terms of production

Region	Total	Plant production	Plant and animal production
Bratislava	16	12 (75%)	4 (26.67%)
Trnava	21	13 (61.9%)	8 (38.1%)
Nitra	35	31 (88.57%)	4 (11.43%)
Trenčín	23	4 (17.39%)	19 (79.17%)
Banská Bystrica	63	10 (15.87%)	53 (84.13%)
Žilina	48	4 (8.33%)	44 (91.67%)
Prešov	85	5 (5.88%)	80 (94.12%)
Košice	64	13 (20.14%)	51 (79.69%)
Total	355	92 (25.92%)	263 (74.08%)

Source: CCTI, 2013

Organic farmers can decide whether to implement plant or animal organic production. Farmers who implement organic animal production must also have organic plant production. Table 4 shows that in Bratislava, Trnava and Nitra regions organic plant production is predominant and organic animal production is represented in a smaller scale. By contrast, in Banská Bystrica, Trenčín, Žilina, Prešov and Košice regions organic animal production is predominant. As previously indicated, this fact stems primarily from natural conditions and the prevalence of permanent grassland, where the loss of income for organic production is not as striking. Organic farmers in animal production will reduce the cost of machinery, fertilizers, chemicals and the cost of labour in comparison with plant production will not increase significantly.

Table 5. Number of organic farmers by legal status as of 31.03.2013

Legal Status	Number of farmers (companies)	Share in %
Cooperative	75	21,13
Limited liability company	148	41,69
Joint-stock company	7	1,97
Individual farmers	123	34,65
Other	2	0,56
Total	355	100

Source: CCTI, own processing, 2013

As it can be seen from Table 5, the largest group of organic farmers as for the legal form are limited liability companies (41.69%) and individual farmers (34.65%). Less numerous group consists of cooperatives (21.13%). Other legal entities in organic farming occur to a small extent.

Table 6. Development of the number of active organic farmers in the years 1991–2013

	BA	TT	NR	BB	TN	ZA	PO	KE
1991	1					1	1	
1992								
1993								
1994								
1995								
1996							1	
1997		1			1		2	
1998			1			10	4	
1999				1			5	1
2000	1							
2001					1		1	
2002	1	1	1	2	1	1		
2003		1	1			1	1	
2004			3	4	4	3	10	6
2005	2	2	3	14	6	8	20	12
2006		2	3	3	3	6	9	13
2007		5	6	5		2	1	1
2008	4	7	8	12	1	8	10	1
2009	2		3	20	2	4	13	16
2010	1	1	3	2		1	5	
2011			1			1		
2012	3	1	2		2	1	3	4
2013						1		

Source: CCTI, own processing

The survey showed that most of the existing organic farmers founded their businesses in 2005 and subsequently in 2008 and 2009, which was the logical consequence resulting from the Rural Development Plan which expected an increase in funding during the conversion period and subsequent organic production.

3. Legislative and institutional area

Organic farming is applied in Slovakia since 1991 under the regulatory standard “Rules of organic farming valid for the territory of the Slovak Republic”. In 1995, the Ministry of Agriculture adopted the “Conception of organic farming in Slovakia”. This fundamental document determined the basic direction of organic farming until 2010, in order to create legal, organizational and economic conditions for the development of organic farming, under which it should reach its representing 4–6% of the total agricultural land in Slovakia until 2010. In the same year the Act No. 152/1995 Coll. was adopted, based on the requirements of the EU legislation in order to harmonize Slovak legislation with the EU legislation. This arrangement puts emphasis on ensuring conditions of safe food production in relation to the protection of consumers' health and to safeguard the rights of consumers. Approximation of the SR EU legislation on organic farming was finalized by the Act No. 415/2002 Coll., which amends Act No. 224/1998 Coll. on organic farming and organic food production. This fulfilled one of the basic tasks set out by the concept of development of organic agriculture for the period until 2010 (MASR, 2005). The Slovak Republic also confirmed that it is one of the countries that can meaningfully protect its nature, the environment, care for the health and quality nutrition of its population, and where the expansion of sustainable land management system gradually restores harmony between nature and man.

A key moment for the development of organic farming itself was Slovakia's accession to the EU. It was necessary to adapt the internal market, which required legislative and organizational changes that would allow the inclusion of organic farming in the EU. At that time the Act No. 421/2004 Coll. on organic farming was adopted necessarily amending the Council Regulation (EEC) No. 2092/1991 on organic production of agricultural products and indications referring there to on agricultural products and foodstuffs. In 2005, the Action plan for the development of organic agriculture in the Slovak Republic until 2010 was adopted, setting out the objectives and priorities for its further development. The Action plan, based on the needs of multisectoral framework, provides inter spheres of government's priorities for control components and non-governmental organizations active in this field. The global objective of the Action plan was to increase the efficiency in the sector of agricultural production and the quality of life of the rural population, which was to be achieved by meeting specific objectives: to empower farming and increase its competitiveness, support activities with higher added value and expand the organic food market, improve information base and promote organic farming, better vocational guidance, training and research in organic farming, complete the institutional framework of organic farming.

1 January 2009, the Council Regulation (EC) No. 834/2007 on organic production and labelling of organic products and repealing Regulation (EEC) No. 2092/91 entered into force.

In accordance with Art. 3 of the regulation the ecological production will follow the below objectives:

a) creating a sustainable agricultural management system that:

- Respects the natural systems and cycles, maintain and enhance the health of soil, water, plants and animals and the balance between them;
- Contributes to a high level of biological diversity;
- Responsibly uses energy and natural resources, such as water, soil, organic matter and air;
- Observes high standards of animal welfare, and particularly respecting species-specific behavioural needs;

b) aims to produce high quality products;

c) focuses on the production of a wide variety of foods and products that meet consumer demands for goods manufactured practices that do not harm the environment, human health, plant and animal health.

As it is apparent from the regulation (paragraph 3 of Council Regulation (EC) No. 834/2007), governing the sector of organic production, the legal framework should ensure fair competition and the proper functioning of the internal market with organic products, as well as maintain and satisfy consumer confidence in products labelled as organic. The legal framework should further aim at providing conditions under which this sector can progress in line with production and market development. Detailed rules for the implementation of the regulation are amended by the Regulation (EC) No. 889/2008 laying down detailed rules for the implementation of Council Regulation (EC) No. 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control, as amended.

In regards with changes in European legislation in Slovakia the Law No. 189/2009 Coll. on organic production of agricultural products was adopted, as amended (hereinafter referred to as “the Act”), which in its scope provides:

- a) Some rules for organic production according to specific rules;
- b) execution of state administration in the field of organic farming. During the performance of state administration in the field of organic farming the Ministry of Agriculture and Rural Development and the Central Control and Testing Institute of Agriculture (hereinafter CCTI) act in accordance with § 2 of the Act;
- c) the rights and obligations of persons engaged in ecological agricultural production;
- d) registration of operators and control authorities - since 10.03.2004 the inspection is carried out by the Naturalis SK, Ltd. company, which followed the activities of the Naturalis Association;
- e) details of the performance of the control of organic farming,
- f) labelling products of organic farming,
- g) penalties for infringement of obligations stipulated by this law.

The legislative framework for organic farming in the SR is set in accordance with European legislation, which does not differ from other EU countries with developed organic farming. The questionnaire survey showed that the level and quality of legislation in the field of organic farming is good and understandable. In terms of legislative changes reduction of state bureaucracy would be appreciated by farmers (e.g. farmers must regularly submit different written reports, statistics for Agricultural Paying Agency and CCTI).

The institutional framework of organic farming is constituted by:

- a) EU authorities;
- b) government bodies: the Ministry of Agriculture and Rural Development (§ 3 of the Act No. 189/2009 Coll.) and the Central Control and Testing Institute of Agriculture (§4of the Act No. 189/2009 Coll.);
- c) inspection and certification organization in organic farming Sk – Naturalis, Ltd.;
- d) consultancy: Agroinštitút Nitra, state enterprise – Centrum of agriculture consultancy. From the view of typology of financing of agricultural consultancy (Szovics, 2001), the advisory system for organic farming in the SR is primarily financed by the government as a service, paid by taxpayers . Advisory system is further financed by EU funds, as well as international organizations, non-governmental organizations and personal user resources (Berglund & Dworak, 2010);
- e) independent agricultural consultants;
- f) scientific research and departmental institutions;
- g) third Sector - voluntary association of organic farmers (e.g. Ekotrend - Association of organic farming , etc.).

Research shows that in countries where organic farming is well underpinned by institutional policy, there is a constant market growth and expansion of organic production (FIBL, 2013). Institutional roofing in the conditions of Slovakia creates a framework for standards for organic farmers that are controlled by the CCTI. The questionnaire survey showed that there are no institutions, which would significantly promote the development and maintenance of organic farming in Slovakia. Farmers receive information regarding organic production by self-studying or experience from other organic farmers from the neighbourhood, to a small extent from abroad.

Consultancy in this area is provided by Agroinštitút Nitra, state enterprise and also by independent consultants who are not methodically coordinated. In accordance with § 39 paragraph. 1 point. a) Government Regulation no. 499/2008 Coll. on the conditions for granting support under the Rural Development Program, farmers are required to complete a training course focused on proper implementation and realization of organic farming measures of the Rural Development Programme 2007–2013, focusing primarily on formal counselling issues related to organic farming with a little focus on development and innovation in this area. The support of organic farming in relation to consumers is also missing in Slovakia.

In Slovakia, not every chain store has cash register software able to differentiate between selling organic and non-organic product, so it is not possible to prove that the demand for organic products is growing, although it has been proved by individual surveys. Primary producers and manufacturers miss the feedback on whether the consumers are interested in organic products, or whether their consumption is increasing. It would be essential to adopt the legislation in this respect.

4. Financial support of organic farming

The development of organic agriculture in the period 1991–2013 is determined in addition to legislative rules by the amount and structure of financial support, which is mainly influenced by the EU financial support. During 2000–2006 there was the SAPARD programme, with the priority no. 2 – sustainable rural development and one of the measures were Agricultural production methods designed to protect the environment and maintain the countryside. The measure only contributed to the financial commitments by a share of 1.29% compared with 4.29% planned (MASR, 2013).

After Slovakia joined the European Union Slovak farmers were able to use financial support from the EU in the form of direct or project payments. Within the framework of the Rural Development Programme 2004–2006, organic farming was classified under the Priority 2 Protection and improvement of the rural environment, measure 5 Agri-environmental support. Rural Development Plan 2004–2006 was financed by the Guarantee Section of the European Agricultural Guidance and Guarantee Fund (EAGGF) and it was developed in parallel with Sectoral Operational Programme Agriculture and Rural Development 2004–2006.

The main indicator for the field of organic farming was the area of agricultural land on which organic farming is implemented, with the target of achieving 5% of the area. The target value of the acreage on 31/12/2007 was 5.3% of agricultural land registered in the LPIS (10 650 ha). According to data of CCTI the acreage of cultivated land under organic farming increased between 2004 and 2007 from 2.18% to 6.14%. In this period 144 project oriented on organic farming were implemented for farmers before conversion (31.90 thousand hectares) and 273 projects (78.76 thousand hectares) for farmers after conversion.

Table 7. Subsidies from the Rural Development Plan 2004–2006

	Subsidies during the conversion period (two years), in SKK / ha	Subsidies after the conversion, in SKK / ha
Arable land	6000	3000
Orchards and vineyards	4000	2000
Vegetables, medicinal, aromatic plants and root	10 000	5000
Permanent grassland	4000	2000

Source: Final report of ex-post evaluation of Rural Development Plan 2004–2006, (1 euro – 30, 1260 SKK)

For the period 2007–2013 the Rural Development Programme was adopted. Organic farming is supported by Axis 2 “Improving the environment and the countryside”. Axis 2 aims to improve biodiversity in rural areas and farming systems and forestry with high natural value, maintaining and improving the quality of groundwater and surface water, maintaining and improving the quality of agricultural and forest land, mitigating the effects of climate change. Ecological production support is implemented under the measure “Agri-environmental payments” and the sub-measure “Organic farming”. The total contribution of the measure Agri-environmental payments is set at 341 130 543 EUR for the whole programming period, which represents more than 13% of the total contribution of the European Agricultural Fund for Rural Development for the programming period 2007–2013. The amount of the support is determined as a compensation for loss of revenue from reduced production and additional costs resulting from the conditions of this sub-measure of EU and national legislation.

Table 8. Levels of subsidies from Rural Development Programme 2007–2013

	Subsidies during the conversion period (2 years), in SKK / ha	Subsidies after the conversion, (5 year commitment) in SKK / ha
Arable land	6571	4600
Orchards and vineyards	21265	15950
Vegetables, medical, aromatic plants and root	28884	20219
Permanent grassland	4139	2897

Source: Final report of ex-post evaluation of Rural Development Plan 2004–2006, (1 euro – 30, 1260 SKK)

Payments under organic farming are by the government regulation No. 499/2008 Coll. on the conditions for granting support under the Rural Development Programme, as amended (hereinafter referred to as government regulation) classified under § 35 et seq. Support for inclusion in agri-environmental measure. Each farmer who has fulfilled the conditions laid down in the Regulation (EC) no. 834/2007 of 28 June 2007 on organic production and labelling of organic products and § 44 of the Government is entitled to apply for agri-environment payments for organic farming.

The summary report for the project measures Rural Development Programme 2007–2013 on 31.12.2012 shows that to support the agri-environmental measures, including organic farming 158,037,424 euros have been used (101% of total expenditure provided for Rural Development Programme 2007–2013 for the measure).

For the next programming period 2014–2020 there will be amendments of the rules in the provision of direct payments in Slovakia. Direct payments will consist of a basic payment and ecological payments (30% of the national envelope). In order to receive the payment the organic farmers will need to implement practices that are beneficial to the environment and climate – crop rotations, maintenance of permanent grassland and allocate 5% of the land area of ecological interest – limits, buffer zones, unused land. This measure is established so that the EU citizens can clearly see that farmers operate beneficially to all, protecting the environment and contributing to the commitments against the negative impacts of climate change. Significant funds allocation for the support of rural development will be available for Slovakia also in the future. We will still be able to use it to support investments in agricultural and food businesses, disadvantaged areas, ecological agriculture, community development and local communities, advisory services and training, as well as agro-environmental measures (Chrenek, 2013).

5. Social and psychological area

For each farmer the transition from conventional to organic agricultural production is a substantial interference in business activities. As reported by Lacko-Bartošová, 2005 the more specialized the agricultural company is, the more complex and longer the conversion is to achieve the necessary, sustainable parameters. Conversion aims to eliminate the influence of negative impacts of previous agricultural activities on agricultural land, landscape and environment and implement management practices which respect to the principles of organic farming. Decision whether to switch to the organic farming is conditioned by the fact that during the two-year conversion farmer must comply with all conditions of the EU and Slovak legislation on organic farming, but the production during the conversion period must not be marketed and labelled as a product of organic farming. Compared to conventional farmers, organic farmers have lower input costs and higher labour costs, total costs are on average 10–25% lower. Organic farms usually also have lower yields. With lower costs and lower yields organic farmers have in the average same profits as conventional farmers, in some cases higher in others cases lower (Konečný, 2004). Based on the stated above the situation of organic farmers in Slovak conditions is more difficult because organic production does not get on the market and chain stores. As a consequence, processors buy food produced at conventional prices, not taking into account the cost of production of organic farmers.

When deciding for the transition to organic farming the motivation of the farmer regarding conversion plays an important role. The questionnaire survey showed that the main motivation of farmers surveyed (88%) is a financial benefit derived from increased funding from direct payments. Some farmers also decided for organic production because of the availability of land in areas with limited inputs. 18.8% of farmers indicated that their motivation is the protection of the environment, a reduced cost of fertilizers, chemicals and other equipment (e.g. tank, sprayer, fertilizer artificial fertilizers, etc.). On the other hand, organic farmers were demotivated by the fact that in many cases it is difficult to find customers and they are forced to sell their production to conventional processors or dealers and for the same purchase price as a conventional farmer. 3.3% of respondents indicated that the reason for the conversion is the possibility to offer their organic products abroad. The farmers therefore did not reflect in any way the quality of the conditions of organic farming in Slovakia. As it is clear from the research of Hinková & Dibarborová, 2007 95% of organic products produced in the Slovak Republic are exported to other countries.

6. Conclusion

Organic farming is a concept of sustainable agriculture, which also adds value in terms of improving the quality of life and development. Slovakia has ideal natural conditions for this type of farming, but the motivation factors impeding the development of conventional farming prevent farmers from their transition to organic production. The research results showed that the greatest motivation for farmers remains a financial incentive, based on the financial framework of the EU for organic agriculture. Therefore, in the next programming period 2014–2020, funding for organic farming will play an important role in the development of this type of agriculture in the conditions of Slovakia. On the other hand, it is also essential that Slovakia strengthens the state support for the marketing of organic products, better consultancy and the improvement of the promotion of organic farming.

Acknowledgements

This paper has been published with the support of the Jean Monnet Centre of Excellence project „EU land policy- the pathway towards sustainable Europe“ No. 2013-2883/001-001 and results of the project Leonardo da Vinci: Training on European standards for ecological agricultural production EcoJob-AP grant agreement: BG/06/B/F/PP – 166012, pilot project.

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