

Environmentally Friendly Agriculture: Development Issues in Latvia

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Abstract

Organic farming as the method and organic food nowadays play more and more important role in supplying sustainable and environmentally friendly agricultural and food production. Organic production should combine environment friendly practices, support a high level of biodiversity, utilize natural processes and ensure appropriate animal welfare standards. The paper analyzes the development and issues of perspectives of organic farming in Latvia. Some findings on organic agriculture development are given, estimating the primary information on organic farming in Latvia regarding the trends of the organic farms' number, utilized organic agricultural land and share of organic land in the total agricultural land. Furthermore, the state policy and support for organic farming have been analyzed and compared with that of European Union (EU) and its Member States. The influence of Latvia's accession to the EU on the organic farming development is assessed. Some issues of further perspectives of development of Latvian organic agriculture are evaluated.

Keywords: organic farming, development, policy, support, Latvia.

Introduction

Research problem and relevance. The twenty-first century is called 'green' century and it sees increasingly serious environmental and natural resources problems, and all countries concerned, particularly in Europe (Willer & Kilcher, 2010), should take actions on the basis of sustainable development strategy, with priority given to food production. In connection with organic farming, sustainability must be understood as 'functional integrity', or the ability of a system to reproduce itself and thereby survive on a long-term scale (Alroe, 2008). The global development of organic agriculture as well as the practice and extension of alternative agriculture, or lower exterior input agriculture are the outcome of the search for the models of sustainable food production and consumption. The organic production also plays important role in the further entrepreneurship's development in the rural areas and the creation of value added products of agri-food chain. Furthermore, organic farming has particular advantages for small-scale farmers.

The newest definition of organic agriculture has been approved by General Assembly of International Federation of Organic Agriculture Movements¹ (IFOAM) in Vignola in June 2008: "Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved."

The organic agriculture or farming as environmentally friendly and sustainable production method has been encouraged on international (FAO, 2007) and regional (European), *inter alia* Latvia's level and has been recognised as important part of assurance of sustainable agricultural production (Commission of the European Communities, 2004). Thereto, European organic agriculture offers effective means of satisfying consumer's demand for healthy and safe foods and reducing the environmental pressure of agricultural production, whilst simultaneously addressing important animal welfare issues (Smith, Marsden, 2004; Tzouramani, 2008).

The aim of the research is to evaluate the development issues of organic farming in Latvia and to estimate their perspectives.

To achieve the set aim, the following **research objectives** have been established:

- to evaluate Latvia's policy and support for organic farming;
- to analyze development issues of organic agriculture;
- to estimate the further development potentialities of organic production.

To meet the objectives of the study, the following **materials** have been used: different sources of scientific publications, research papers, EU and Latvia's legislation, and the reports of international and

¹ http://www.ifoam.org/growing_organic/definitions/doa/index.html Association of Latvian Organic Agriculture (ALOA) is also a member.

EU institutions; unpublished data from Rural Support Service (RSS) and Food and Veterinary Service (FVS). The suitable qualitative and quantitative *research methods* have been used for various solutions in the process of study: analysis and synthesis; logical and abstractive construction; data grouping and comparing; linear regression analysis, etc.

Theoretical framework

The four principles of organic agriculture have been established and provided by IFOAM in 2005, which are the following: health, ecology, fairness and care, as can be seen in the Table 1. These principles are the roots or foundations from which organic agriculture grows and develops.

Table 1

The principles, statements and characteristics of organic agriculture

Principles	Statement of principle	Main characteristics or explanations
Health	Organic agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible	<ul style="list-style-type: none"> – The health of individuals and communities cannot be separated from the health of ecosystems; – Health is the wholeness and integrity of living systems; – Role of organic agriculture, whether in farming, processing, distribution, or consumption, is to sustain and enhance the health of ecosystems and organisms from the smallest in the soil to human beings.
Ecology	Organic agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them	<ul style="list-style-type: none"> – Should be based on living ecological systems and cycles; – Production is to be based on ecological processes and recycling; – Farming, pastoral and wild harvest systems should fit the cycles and ecological balances in nature; – Should protect and benefit the common environment including landscapes, climate, habitats, biodiversity, air and water.
Fairness	Organic agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities	<ul style="list-style-type: none"> – Ensures fairness for all stakeholders – farmers, workers, processors, distributors, traders and consumers; – Should provide everyone involved with a good quality of life, and contribute to food sovereignty and reduction of poverty; – Animals should be provided with the conditions and opportunities of life that accord with their physiology, natural behaviour and well-being; – Natural and environmental resources should be managed in a way that is socially and ecologically just and should be held in trust for future generations.
Care	Organic agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment	<ul style="list-style-type: none"> – Efficiency can be enhanced and productivity can be increased, but this should not be at the risk of jeopardizing health and well-being; – Precaution and responsibility are the key concerns in management, development and technology choices; – Should prevent significant risks by adopting appropriate technologies and rejecting unpredictable ones, such as genetic engineering; – Decisions should be taken through transparent and participatory processes.

Source: author's summarization from IOFAM, 2005

In line with the above principles, Vaarst (2010, p. 44) has emphasized that “Global organic food systems in accordance with the organic principles of Health, Ecology, Fairness and Care have the potential to contribute significantly to future food security and sovereignty relying on integrated, robust, resilient, productive and ecologically intensified systems, which are owned by the people practicing these methods in their daily life.”

Many authors stressed that the sustainable and multifunctional agricultural production produces en-

vironmental, social and cultural non-commodity outputs, where organic farming plays important role (FAO, 2008; Hole et al., 2005; Knickel et al., 2006; Nigli et al., 2008).

Notwithstanding the rapid development of organic farming, the ongoing threat has been observed due to ‘conventionalisation’, which has been summarised by Reed (2005) as follows: organic standards would be lowered with the entry of large-scale businesses, which would appropriate the profits to be made in organic farming and undermine existing organic

farmers. ‘Conventionalised’ organic farming would be conducted in a more intensive, industrialised fashion, reducing any existing differences between the conventional and organic sectors. Hence, it could be concluded that conventionalisation among producers would be reflected in increases in farm size, changes in the use of marketing channels, and less commitment to organic values and principles.

The growth in the organic sector in the EU has been influenced by common regulation for organic farming in the EU introduced in 1991 by the European Commission (EC) Regulation (Padel, 2008), the inclusion of organic farming in the agri-environmental programmes of the Common Agricultural Policy (CAP) in 1993 (Lampkin, et al., 1999), and by the growth in consumer demand for organic food (Lohr, 2001). In June 2004 EC (Commission of the European Communities, 2004) published the European Action Plan for Organic Food and Farming. The plan outlines a range of policy measures to support the development of the organic sector in order to meet consumer demands in a market-oriented way and to deliver public goods such as environment protection and animal welfare. The measures included revision of the Regulation defining organic food, support for organic farming through the rural development programme and a consumer promotion campaign (Wilder, Kilcher, 2010).

The new European Council (The Council of the European Union, 2007) Regulation 834/2007 for organic production (in force since 2009 and replacing the EU organic Regulation (EEC) 2092/91) sets the following general objectives for organic production:

1. To establish a sustainable management system for agriculture that:

- respects nature’s systems and cycles and sustains and enhances the health of soil, water, plants and animals and the balance between them;
- contributes to a high level of biological diversity;
- makes responsible use of energy and the natural resources, such as water, soil, organic matter and air;
- respects high animal welfare standards and in particular meets animals’ species-specific behavioural needs;

2. To aim at producing products of high quality;

3. To aim at producing a wide variety of foods and other agricultural products that respond to consumers’ demand for goods produced by the use of processes that do not harm the environment, human health, plant health or animal health and welfare.

However, Stolze with co-authors (2000) stressed that in comparison to IFOAM Basic Standards,

EU regulation of organic farming failed to cover many production areas: animal husbandry and pollution control, soil and water conservation, storage and transportation of products, packaging and social justice etc.

In July 2004, European Commission presented a new proposal for a Council Regulation on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) for the programming period 2007-2013, which has been agreed upon in June 2005. The explanatory memorandum of the new Rural Development Programme (RDP) presented by the European Commission mentions that after a period of reforms of the First Pillar of the CAP, the focus now will be on the reform of rural development policy. However, this does not mean a paradigm shift but rather a consolidation and administrative simplification making rural development policy more efficient and coherent (Haring et al., 2005).

Regardless of EU legislation and recommendations requirement for the Member States to develop their own national Action Plan for Organic Food and Farming (Commission of the European Communities, 2004), based on the EU statement, the Latvia still has failed to produce such a document. Moreover, there were no policy (strategic) documents regarding organic farming and food till 2003 (Zemkopibas ministrija, 2003). The latest document regarding organic agriculture is Rural Development Plan (RDP) 2007-2013, where the support measures for organic farming are determined (Zemkopibas ministrija, 2009).

Considering all EU countries in order of presence or absence of national Action Plan for organic agriculture and food, there are some (e.g., Romania, Malta, Poland, Hungary), *inter alia* Latvia, which have not approved the Action Plan (Schmid et. al., 2008).

Research results

Development of organic agriculture

The history of Latvia’s organic agriculture started in 1990, when there were only three organic farmers in the country, but rapid development of organic farming began after 2001, when the Law “On Agriculture” defined the organic farming and state assigned subsidies for this farming method and an inspection system according to EU Regulation 2092/91 has been in force since 2001. As shown in Figure 1 after Latvia’s accession to the EU in 2004 the number of organic farms, area of utilized agricultural land under organic farming, as well as share of organic land in Latvia’s total utilized agricultural area (UAA) has increased more than four times.

However, the number of farms dealing with organic agriculture continued to grow in 2007, alt-

though the pace decreased. In comparison with 2006, in year 2007 the total number of organic farms did not increase significantly, only by 0.4%. In the period from 2007 to 2008 the growth of number of organic

farms and agricultural land slowed down. In 2008, as compared to the previous year, the total number of organic farms did not increase significantly – only by 2%.

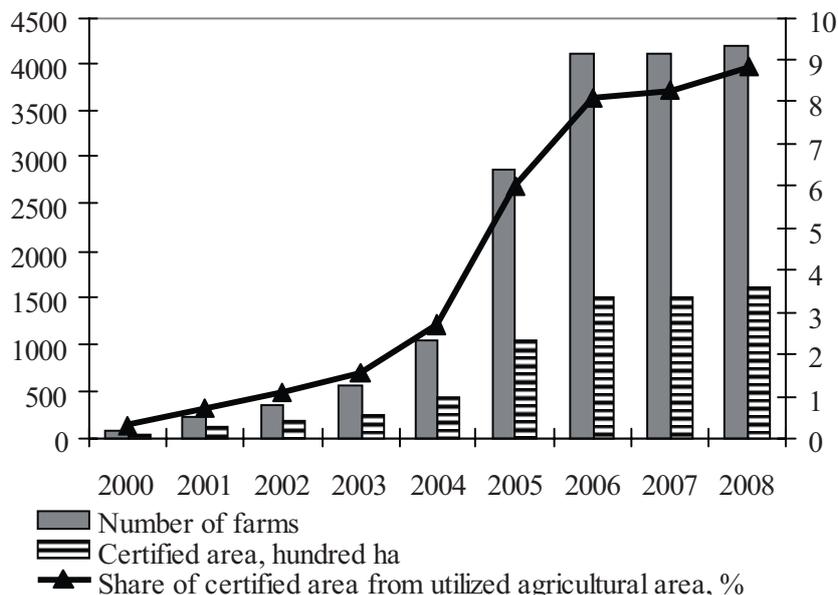


Fig. 1. Number of organic farms, certified area under organic farming (ha) and share of certified area in total UAA (%) in Latvia, 1998–2008
Source: author’s calculations based on unpublished data from RSS

The trend of increasing of number of organic farms from 1998 to 2008 is statistically significant, where coefficient of determination – $R^2 = 0.84$, coefficient of correlation – $r = 0.92$, level of significance in both cases – $\alpha < 0.01$. The same trend has been observed for significant increase of certified area under

organic farming ($R^2 = 0.86$, $r = 0.93$, $\alpha < 0.01$) in Latvia from 2000 until 2008.

Taking into account the rapid development of area under organic agriculture until 2008, the Latvia takes the 8th place (Figure 2) among ten world countries with the highest shares of organic agricultural land in 2008 (Willer, Kilcher, 2010).

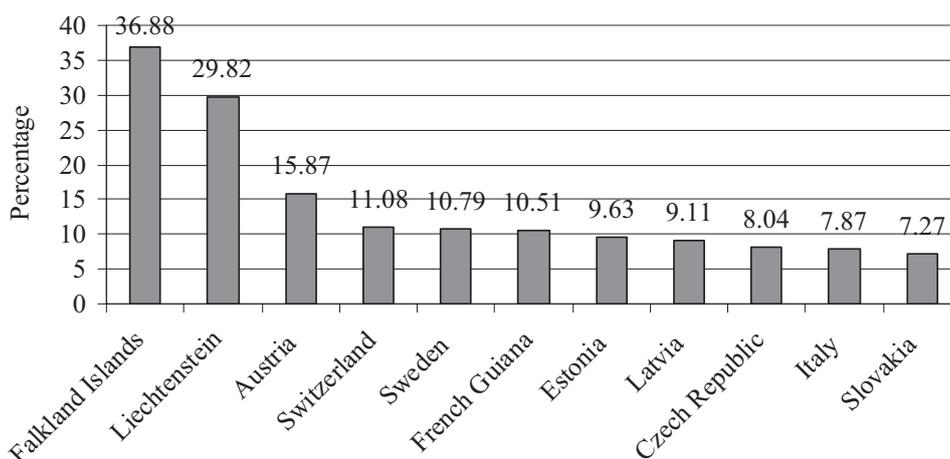


Fig. 2. The share of area under organic farming in total UAA (%) in these world countries, where share is above 7%, 2008

Source: author’s calculation and construction based on data from the Global survey on organic farming²

² <http://www.organic-world.net/statistics-world-area-producers.html>

The performance or economical viability of organic farms in Latvia has been evaluated and published results show that organic farming in Latvia is not economically viable without subsidies (Melece et al., 2009).

EU and national support

The state support for organic farming in Latvia (Table 2).

via began in 2001, when the farmers engaged in organic farming could apply for subsidies for organic farming area and organic animal breeding. This support for certified areas and certified farm animals was allocated between 2001 and 2003. In 2002, 167 farmers received support via state subsidy programme which amounted to LVL 276,708, but in 2003 already 292 farmers received support which amounted to LVL 479,788, stimulating the increase of areas under

Table 2

State support for organic farming in Latvia, 2001-2003

Subsidies	2001	2002	2003
Allocated subsidy amount (thous. LVL)	100	100	307
Paid subsidy amount (thous. LVL)	84.6	276.7	479.8

Source: data from Ministry of Agriculture Republic of Latvia and RSS

After accession to the EU the Latvian organic farmers for the first time had a possibility to apply for the EU direct support payments in 2004 and since then the development of the organic farming in Latvia has been supported from EU structural and state subsidy funds. Latvia's RDP for 2007-2013 devised that the measure of "Agri environment payments" is a priority of Axis 2 (improving the environment and the countryside), and more than 40% of the total financing under the Axis has been granted to this measure to support the development of organic farming and integrated horticulture. Sub-measure "Development of organic farming" ensures support for farms or holdings, which are in the process of managing the utilized agricultural land: 1) produce organic farming products; 2) are in transition period to organic farming production.

On the EU level various regulations and policy documents determine that: the measures of RDP listed under Axis 2 provide enough place to include organic farming support in the national programmes and organic farming, where the area support could be provided under the agri-environmental and animal welfare measures; it is important to ensure that the organic farming payments are sufficiently higher than payments for integrated production. Furthermore, maintenance payments should continue at a suffi-

cient magnitude to conversion payments; in order to minimise interregional discrepancy in organic trade, the new RDP should ensure that an organic farming scheme will be implemented in each of the national rural development plans of the forthcoming programming period.

Disregarding the above mentioned EU statement, Latvia has changed the requirements for receiving support or subsidies for organic farmers, which causes inconveniences for smaller farmers. We would like to stress that not only in Latvia, but in all EU Member States and in the world mainly small-scale farms are involved in organic agriculture (Alroe, 2008; Holm, 2006; Parrott & Wright, 2003). In 2008 new Regulation No. 282 of the Cabinet of Ministers of the Republic of Latvia (Ministru kabinets, 2008) was adopted, which radically changed the possibilities of organic farmers to receive subsidies. The Regulation requires the minimum farm's marginal revenue from agricultural production in the previous year (Table 3), where subsidies have not been included. It is important to point out that the Regulation asks for minimum marginal revenue from agricultural production, but not from organic production. It means that farmers could receive the subsidies for organic farming without selling organic products.

Requirements for receiving of support for organic farming

Group of crop	Payment, EUR/ha	Farms' marginal revenue per ha
Permanent meadows and pastures, nectar plants	138	For farms producing meat products and bees' products: at least 50 LVL; For other farms: at least 100 LVL/ha
Field crops (int. al. industrial crops), other crops in arable land, perennial grassland and grassland in arable land for seed production, fallow	108	For farms producing meat products and bees' products: at least 50 LVL/ha; For other farms: at least 90 LVL/ha At least 130 LVL/ha
Vegetables (incl. herbs) and household gardens	357	At least 1000 LVL/ha
Potatoes, starch potatoes	318	At least 1000 LVL/ha; For starch potatoes: at least 600 LVL/ha
Fruit crops and bush fruits	419	At least 2000 LVL/ha, except new garden (<3 years)

Source: based on Ministru kabinets, 2008; Zemkopibas ministrija, 2009

Taking into account Latvian requirements, which link the subsidies for organic farming with revenue from agricultural production, the further development of organic farming is under threat. Many researchers (Kledal, 2004; Offermann et al., 2009, Tzouramani, 2008; Vasary et al., 2007) argue that direct payments play an important role in the financial viability of many organic farms in both Western and Eastern European countries, and this importance will fur-

ther increase by 2013, where the specific support for organic farming made within the agri-environmental programmes is particularly tangible.

Analyzing the trends of Latvian organic farms' number and received subsidies (thousand LVL) in the period from 2004 to 2009 as shown in Figure 3, we can conclude that after 2006 the number of farms and received amount of subsidies almost did not change at all.

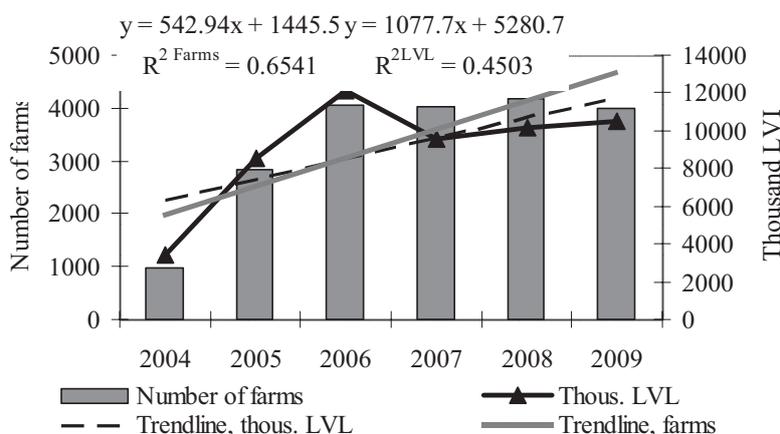


Fig. 3. The trend of organic farms' number and received subsidies (thous. LVL) in Latvia, 2004-2009

Source: author's calculations and construction based on unpublished data from RSS

Comparing the main indicators or parameters related to RDP support for organic farming in Latvia the same result was seen in the period from 2007

till 2009 (Table 4). As shown in the table, the area of UAA and number of applications has not increased, but small trend of decreasing can be observed.

Table 4

Support under RDP for organic farming in Latvia, 2007-2009

Year	Indicator	Value
2007	Number of applications	4246
	Area under support, thous ha	156.26
	Payment, thous LVL	10355.86
2008	Number of applications	4441
	Area under support, thous ha	176.32
	Total payment, thous LVL	11072.62
2009	Number of applications	4202
	Area under support, thous ha	169.46
	Total payment, thous LVL	12041.78

Source: data from RSS

Similarly to other new EU Member States (Luczka-Bakula, 2005; Voicilas, 2008), Latvia's accession to the EU in general brought positive tendencies in the development of the organic agriculture sector. It was mainly encouraged by inclusion of the new EU Member States into the area of influence of environmental instruments of the CAP; creating the possibility of the acceleration of development of organic agriculture.

Notwithstanding the received area payment by organic farmers under RDP, Slabe with co-authors (2006) argue that area payments are the main support measure for organic farming in the New Member States, *inter alia* Latvia, and possible political instruments are, as yet, underdeveloped and underutilized.

Issues of further development

The trends of Latvia's policy regarding the support of organic farming indicate the opposite to the reformed CAP support payments, which are intended to support rural development in general and environmentally friendly low-input farming (as opposed to high-yield intensive farming) more specifically (Aistare, 2006).

Tzouramani (2008) argues that organic farmers are interested in the future of their farm. The farmers consider organic agriculture as a superior farming system, which also contributes substantially to environmental protection, but they face a lot of constraints, lack of information, high cost of production and institutional changes. These conclusions also conform to Latvia's situation.

However, the support for development of organic farming and integrated horticulture is granted in Latvia according to Rural Development Plan, but in our opinion, the further development of organic agriculture and other environmentally friendly methods are threatened due to several factors:

- lack of approved policy and strategic planning documents of state framework for organic farming and food;
- requirements for special rate or at least for marginal revenue from agricultural production;
- great expenses and bureaucratic procedures for certification;
- shortage of processing and marketing facilities;
- imperfection information;
- bureaucratic procedures and various restrictions on small-scale processing (distinctive in the different regions of the country³);

³ Differences depend on knowledge and perception of individual inspectors of Food and Veterinary Service

- bureaucratic procedures for sale and in some cases sales prohibition, *inter alia* e-commerce, and prohibition of organic products' direct sale for catering sector, particularly local, hotels, guest-houses; hospitals, day-care centres etc.

In our opinion the results of survey done by Marketing House Ltd. (2006), conducted a few years ago, show main reasons restricting further development of Latvian organic farming and still remain topical. Although 54% of respondents (organic farmers) argued that they did not have problems, 46% of respondents stressed that the main reasons restricting further development of organic farming are as follows:

- low or similar purchase prices comparing to conventional production (16.1%);
- lack of sale possibilities (9.6%);
- difficulties with seed purchase (4.2%);
- lack of machinery (3.6%);
- imperfection of information (3.6%);
- insufficient financial resources (3.0);
- large bureaucracy (2.9%);
- shortage of processing enterprises (2.0%) etc.

In public mass media Latvia's organic producers stress that the lack of processing possibilities is the most important restricting factor for further development of organic agriculture. Comparing the number of organic farms, which exceed 4 thousand, and 53 processing and/or packaging enterprises, most of which are small-scale and process and use raw materials produced by themselves, we see lack of processing facilities. Despite the fact that the number of processing facilities has risen from 2007 significantly – nearly 3 times (Table 5), there is insufficient number of places for processing of organic production, particularly of animal origin; as shown in the Table below only one organic meat processing enterprise is registered in Latvian FVS.

However, the practice of the EU countries was shown by Haring with co-authors (2005) who argued that support measures of organic farming could be specifically targeted to favour organic agri-tourism, and farm shops, but could also provide incentives for village restaurants and hotels to use local, organic raw materials. As an example the authors describe the situation with "Bio-Hotels", which is an association of independent hotels offering holidays based on environmentally friendly tourism and organic products, available in many different regions in Austria, Germany, Italy, Switzerland, Spain and Ireland. Through alliances with local organic farmers and constant developments and improvements in their product ranges, their standards are maintained.

Type of Latvia's production / processing enterprises and their number in 2007 and 2010

Type of production/processing enterprise	Number of processing enterprises/farms	
	2007	2010 (14.06)
Processing and/or packing of products of plant origin	4	20
Milk processing (milk products including cheese)	4	7
Milk collection	2	-
Rabbit slaughterhouse	1	1
Low capacity cattle and sheep slaughterhouse	1	-
Bread and bakery	1	2
Honey packing	1	2
Oil processing	-	1
Goat milk processing	-	4
Grain storage	3	1
Meat processing	-	1
Rye's malt	-	1
Hempseed's butter	-	1
Total	17	41

Source: author's calculations based on data from FVS databases

There are many restrictions on and strong requirements for processing, catering and farm shop facilities and activities in Latvia, which limit the further development of processing and marketing of organic food (Melece, 2006). The requirements regarding facilities and self-control system, which include the strict demands in written procedures and records, are the same for all size of enterprises, *inter alia* micro-enterprises. Fulfilling all the requirements is time and money consuming.

Conclusions

Like in other countries, for organic agriculture in Latvia it is important to resolve the issues concerning healthy and local food, resources, and ecological security, *inter alia* biodiversity, water and soil contamination etc., increasing farmers' income, promoting the sustainable development, and improving the competitiveness of Latvian organic products in the national and international markets. The importance and place of this kind of agricultural production is outlined by support through measures of Rural Development Plan 2007-2013.

After Latvia's accession to the EU in 2004 the number of organic farms, area of utilized agricultural land under organic farming, as well as share of organic land in Latvia's total utilized agricultural area has increased more than four times. Nevertheless, the trends of previous years (2008-2009) show that the development has been almost halted.

The gaps between Latvia's and EU organic policy and support system still exist. The lack of approved strategy and acting plan for the production, processing, labelling and marketing of organically produced products should be tackled. For promotion, deve-

lopment of organic agriculture the devising of national Action Plan of Organic Farming and Food and its approving on governmental level is substantially necessary. Absence of policy and strategy documents, contributing and encouraged legislation without restrictions for organic agriculture and food, particularly processing and sale activities, hinder farmers' entrepreneurial activity in this sphere.

Despite the fact that the number of processing facilities has risen from 2007 significantly (more than 3 times), there is insufficient number of places for processing the organic production, particularly of animal origin. Insufficient or absent processing and sale facilities and possibilities, decreasing demand as well as shortage of various information for organic producers has complicated the future of organic sector in Latvia.

In Latvia organic farming is not economically viable without the subsidies and conventional agriculture would be preferred by all farmers, regardless of their degree of risk aversion. Taking into account these predictions, the national Regulation (Ministru kabinets, 2008), considerably influencing the number of farms, particularly small, that are eligible for support, could be abolished.

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Дружественное для окружающей среды сельское хозяйство: проблемы развития в Латвии

Резюме

Двадцать первый век часто называют «зеленым» веком, и в этом веке приходится сталкиваться со все более серьезными проблемами окружающей среды и природных ресурсов, и все заинтересованные страны, в особенности в Европе, должны действовать на основе долгосрочной стратегии развития, уделяя особое внимание производству продовольствия. Глобальное развитие биологического сельского хозяйства, а также широкое применение альтернативного сельского хозяйства или сельского хозяйства с более низким внешним влиянием – это результат поисков моделей долгосрочного. Экологическое производство также играет важную роль в дальнейшем развитии предпринимательства в сельской местности и в формировании цепочки товаров сельскохозяйственного производства с добавочной стоимостью. Более того, экологическое земледелие дает малым фермерам особые преимущества.

Биологическое сельское хозяйство как экологически благоприятный и долгосрочный метод производства поддерживается на международном и региональном (Европейском), в том числе и Латвийском уровне и признан важной составляющей долгосрочного сельскохозяйственного производства

После вступления в Европейский Союз Латвийские земледельцы впервые получили возможность обратиться за прямой поддержкой Евросоюза в 2004 году и с тех пор развитие биологического сельского хозяйства в Латвии поддерживалось структурными фондами ЕС и государственными фондами субсидирования. План Латвии по «Развитие сельской местности на 2007-2013 гг.» предусматривал, что система «Выплат по агросреде» является приоритетным для 2 Оси (улучшение окружающей среды и сельских районов), и более 40% общего финансирования по Оси отведено для этой системы выплат с целью поддержания развития биологического сельского хозяйства и садоводства. «Развитие биологического сельского хозяйства», как часть системы выплат, обеспечивает поддержку сельским хозяйствам или держателям земель, которые обрабатывают использованные сельскохозяйственные земли: 1) производят экологические сельскохозяйственные продукты; 2) находятся в стадии перехода на экологическое сельское хозяйство.

В следствие такой поддержки число биологических сельских хозяйств, количество сельскохозяйственных земель, находящихся под биологическим использованием, а также доля биологической земли на общее количество использованной в сельском хозяйстве латвийской земли увеличилась в четыре раза. Результаты показывают, что увеличение числа экологических земледелий с 1998 по 2008 год статистически очень значительно: при коэффициенте определенности $R^2 = 0.84$, коэффициенте корреляции $r = 0.92$, уровень значительности в обоих случаях $\alpha < 0.01$. Такая же тенденция наблюдается в Латвии с 2000 по 2008 год в существенном увеличении количества земель

подтвержденных для экологического земледелия ($R^2 = 0.86$, $r = 0.93$, $\alpha < 0.01$).

Принимая во внимание быстрое развитие земель используемых для экологического земледелия до 2008 года, Латвия занимает восьмое место в списке десяти стран с самым высоким в мире уровнем использования земель в биологическом земледелии на 2008 год. Тем не менее, тенденции последних лет (2008-2009 гг.) показывают, что развитие почти приостановилось.

В 2008 году Латвия изменила требования для поддержки или получения субсидий для биологических земледельцев, что вызвало беспокойства среди малых земледельцев. Автор подчеркивает, что не только в Латвии, но и в странах-членах Евросоюза и во всем мире биологическим земледелием занимаются в основном малые сельские хозяйства. В 2008 году было принято новое Постановление №. 282 Кабинета Министров Латвийской Республики, которое существенно изменило шансы биологических сельских хозяйств на получение субсидий. Постановление предусматривает наличие добавочного дохода от продаж сельскохозяйственной продукции за предыдущий год без учета субсидий.

Принимая во внимание латвийские требования, которые привязывают субсидии на биологическое земледелие к доходу от продажи сельскохозяйственной продукции, дальнейшее развитие биологического земледелия находится под угрозой. Многие научные исследователи доказывают, что прямые выплаты играют важную роль в финансовой жизнеспособности многих экологических земледелий как в странах западной, так и в восточной Европы, и эта роль будет становиться еще более важной к 2013 году, когда особая поддержка экологических земледелий будет главным образом осуществляться в рамках эко-сельскохозяйственных программ.

Однако, развитие биологического земледелия и садоводства в Латвии находится под угрозой по нескольким причинам: недостаток одобренных политических стратегий и стратегических государственных программ по биологическому сельскому хозяйству и продовольствию; особые требования по добавочного дохода от сельскохозяйственной продукции; высокие расходы, в том числе и на бюрократические процедуры сертификации; недостаток возможностей и мест переработки и торговли; недостаточное информационное обеспечение; бюрократические процедуры и разного рода ограничения для малого производства (различные для разных регионов страны); бюрократические сложности или в некоторых случаях даже ограничения на торговлю, в том числе и торговлю в Интернете и запреты на прямую торговлю с сектором общественного питания, в том числе в школах, пансионатах и т. д.

Ключевые слова: биологическое сельское хозяйство, развитие, Латвия.