

SUSTAINABLE AGRICULTURE IN LATVIA

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Abstract

Rural areas have increasingly become cast as places of nature, and so consideration of sustainable rural development is preoccupied with the management and protection of environmental and natural resources. Yet rural areas are also places of business, commerce and living. While conventional agriculture is driven almost solely by productivity and profit, sustainable agriculture integrates biological, chemical, physical, ecological, economic and social sciences in a comprehensive way to develop new farming practices that are safe and do not degrade our environment.

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.

Sustainability of the rural production system can only be achieved if it can suitably satisfy the local requirement as well as the outside demand with the changing time. With the increased pressure from the food sector in a globalised world, the agrarian economy needs to re-organise its cultivable land system to be compatible with new management practices as well as the multiple needs of various stakeholders and the changing resource scenario.

This paper reviews the concepts of sustainable agriculture and examines its development in Latvia. It sets out some of the challenges for the socio-economic development of rural areas, and explains how concerns about sustainable rural economies have come to be eclipsed within the central government by those of 'greening farming' on the one hand and urban policy on the other.

Keywords: sustainable agriculture, sustainable farming, sustainable development, farm development, rural development, land use.

Introduction

In a today's globalised world, every sector of the economy needs to re-orient itself to meet the chan-

ging demand. This is very much necessary as the need patterns of the individuals are getting transformed by the intensity of the local and global forces. The rural sectors of the developing economies are not exceptions in this regard. In recent decades the undesired consequences of this rapid economic growth have caused growing concern and given a rise to the notion of sustainable development. The concept of sustainability, which originally referred to the environmental consequences of human activities, has been widely discussed not only at the national but at the global level, as well as in particular economic sectors. Agriculture is one of the main sectors which many believe should be sustainable, that is, ecologically sound, economically viable, and socially responsible. This is so because agriculture provides basic human needs, and in most developing countries it is an important source of national income, foreign trade and employment. Agriculture is also a multi-functional sector which is closely related to the environment.

The aim of the research is to investigate the concepts of sustainable agriculture and analyse trends of the development of organic agriculture in Latvia. In order to achieve the aim the authors set up the following tasks:

- to analyse historical development of organic agriculture from the political and economic aspects;
- to analyse the current situation of organic agriculture in Latvia.

The research is based on the recent theories of leading scientists in the field of organic agriculture as well as on the statistical data provided by EUROSTAT (Statistical Office of the European Communities), IFOAM (International Federation of Organic Agriculture Movements), and CSB (Central Statistical Bureau of Latvia).

Technologies used in agriculture have changed dramatically in the 20th century: they became profitable to replace farm labour with machinery, to protect harvest from pests with chemical pesticides, and to increase soil fertility by chemical fertilisers. New forms of agriculture brought some advantages: labour and soil productivity increased, and food became abundant and

cheap for the consumer; the labour force which left agriculture could be productive in other areas of society, and thus increase the total wealth. But there were also problems associated with these developments: in many cases modern agricultural technologies had a negative impact on the natural environment, with a massive build-up of nutrient surpluses and intensive use of pesticides; societies became very concerned in respect of animal welfare in industrial production; loss of heritage landscapes, and biodiversity.

Ecological philosophy of agriculture has existed for centuries, but the organic movement could begin only once an alternative to them existed. Lack of food after the Second World War motivated to look for new possibilities to increase yields in agriculture, which stimulated industrialisation and intensification of agricultural production (Jansen, 2004).

Sustainability and sustainable agriculture

Sustainability has been an exceedingly popular word over recent years, used for almost every activity in human life. The term “sustainable development” was first defined in 1987 by the Brundtland Commission, formally the World Commission on Environment and Development. The Commission defined sustainable development as: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” This concept was then enhanced by the United Nations Conference on Environment and Development at the Earth Summit, Rio de Janeiro, in 1992. From that time, sustainable development became a key issue in political and scientific bodies. A comprehensive definition of sustainability as the attempt to balance economic, social, and environmental goals, might be as follows: “improving the quality of human life while living within the carrying capacity of the supporting ecosystem”.

Sustainable agriculture is shown by many reports (Hansen, 1996; Hansen and Jones, 1996; Gliessman, 1998; Gold, 1999; Tilman et al., 2002 etc.). Much knowledge has been acquired concerning the processes involved in the conversion from conventional to organic agriculture in various regions of the world (mainly Europe, Australia, New Zealand, and North America). Many authors and organisations worldwide give their own definition of sustainable agriculture. Some authors consider sustainable agriculture as a set of management strategies addressing the main societal concerns about food quality or environment protection (Francis et al., 1987). Other authors focus on one main factor of sustainability; for instance, flexibility, which is the adaptive capacity of agriculture to adapt to future changes (Gafsi et al., 2006). Other authors focus on the ability of agricultural systems to

maintain crop productivity over the long term (Ikerd, 1993). Overall, all authors agree on the occurrence of three approaches to the concept of sustainable agriculture: environmental, economic and social approaches. In other words, agricultural systems are considered to be sustainable if they sustain themselves over a long period of time, that is, if they are economically viable, environmentally safe and socially fair.

Sustainable agriculture could involve two approaches. The first approach is that agriculture should sustain itself over a long period of time by protecting its productive resources, e.g. maintaining soil fertility, protecting groundwater, developing renewable energies, and finding solutions to adapt farming systems to climate change. This first approach considers the farming system as a closed area. The second approach is to consider that agriculture also has to contribute to the sustainability of large territories and social communities. Accordingly, agriculture should help urban areas to manage wastes, e.g., by recycling urban sewage sludge, developing rural employment, and offering a rural landscape for urban people. This second approach has wider goals and does not separate rural and urban areas. To conclude, vagueness of the concept of sustainable development and sustainable agriculture is strength because it does not restrict the research field too much, and, in turn gives freedom to scientists to explore wide, unknown domains.

The new paradigm of sustainable development in agriculture is based on respecting the following principles:

- minimum purchased artificial inputs from outside of the farm and avoiding them completely in organic agriculture
- intensive use of renewable sources of energy mainly of local provenience
- a more complete energy and nutrient recycling
- a minimum negative impact on the environment
- utilization of local, more adapted varieties and hybrids of crops, a higher biodiversity of crops
- restoration of soil fertility, which is determining the vitality and the health of soil, crops, animals and people
- equity in relationships between producers, processors, distributors, sellers and buyers, etc.

Unfortunately, many obstacles exist on the way to achieving more sustainable agriculture. Among them we can mention:

- domination of short term (market and profit oriented) interests instead of long-term ones
- export oriented economy instead of providing self-sufficiency at the local level and exporting the extra amount of products

- globalization of the economy with the dominance of transcontinental companies which are selling pesticides, seeds, machines etc.
- lack of the evaluation system for the cost of natural resources in the modern market oriented economy.

But in the same time these obstacles and other factors serve as incentives for a transition to a more sustainable farming system:

- high and increasing prices for non-renewable sources of energy (natural gas, petrol, coal) and their derivatives synthesized in industrial conditions (mineral fertilizers, pesticides)
- profit in permanent decrease for farmers because of high prices for external inputs
- increased levels of degradation and pollution of the environment
- higher risks for the health of producers and consumers.

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.

Organic agriculture is sustainable as it is based on the comprehension of processes going on in nature: first of all, on awareness that everything around us and being in us is coming from the sun and, in the broad sense, from the energy of cosmos. Plants are the only form of life capable of intercepting radiant energy turning it into organic matter through the green foliage in the process of photosynthesis.

Owing to and respecting this plant capability, humans, animals and other organisms including soil microorganisms are ensured safe life. It turns out that each plant with some of its characteristic traits is wanted to soil micro- and macro-organisms, to other plants and humans as well. It seems that these plants have their own purposefully provided place in the development of harmonious environment.

In nature, each organism, which is going to destroy other organisms, experiences counteraction - there exist antagonists for plant diseases, external parasites for harmful insects, and so on.

Organically produced food products are obtained using natural biological methods, avoiding the use of artificial pesticides and fertilizers (save energy used for production, avoid the use of chemicals in weed, pest and microorganism control). The process is going on promoting natural feeding of plants from the water, air and soil with the help of solar energy and microorganisms.

Organic farming precondition is healthy soil, which is a natural and living unit with diverse flora and fauna. Only healthy soil can produce healthy plants resulting in healthy food for humans and feed for animals. Crop yield increase is not achieved through feeding of plants but through the use of different agricultural methods which stimulate living processes in the soil, for instance:

- Plants capable of fixing atmospheric nitrogen when being in symbiosis with microorganisms must be definitely included in crop rotation;
- Sufficient feeding of microorganisms is provided by various organic materials, such as compost, green manure and others, produced by radiant energy and incorporated into the soil;
- Soil tillage techniques, such as repeated soil reversion, furrow method, deep ploughing, etc., such as repeated soil reversion, furrow method, deep ploughing, etc. which stimulate action of soil microorganisms are used;
- Natural preparations used in plant and compost treatment stimulate action of soil microorganisms and transform hard-available to plants combinations into easy available ones;
- Horse traction is quite possible in crop cultivation and transport;
- Increase the amount of solar energy used.

Reduction in environmental pollution is achieved through reduced cattle numbers and decreased application of farmyard manure per unit of land area. For nature conservation, local plant and animal breeds are recommended as they are best compatible with the local microorganisms providing food most suitable to local population.

Wind erosion control, shelter for useful insects and covert for animals in the field are achieved by planting particular trees, groups of trees or shelterbelts. Particular organic agriculture directions put forward some additional provisions; however the basic tasks are compulsory for all directions.

Basic tasks in organic agriculture:

- Sustainable high-quality healthy food production (not maximum yield production), at the same time maintaining diversity of cultivated plants and domestic animals, protecting environment (including plants, animals, soil, waters and air);
- Keeping domestic animals under conditions as far as possible close to their natural requirements (movements, air, light, clean water, grazing in natural environment, etc.);
- Abundant use of direct radiant energy, but economical use of other sources of energy obtained from the earth reserves as different kind of fuel, electricity, etc.

Additional tasks to be solved by organic agriculture:

- Protection of health – food produced organically improves human health, decreases expenses for each person and the State in totality;
- Reduction of water and air pollution – water is free from pesticides and mineral fertilizers residue thus resulting in decreased expenses by the State, which are needed in the treatment of watersheds;
- Creation of the environment attractive to tourists thus providing alternative sources of income for the State;
- Involvement of small-scale farmers in the production and educational systems thus lowering the level of unemployment and reducing the feeling of social loneliness, contribute to rural development.

Rural development aims to improve the quality of life of rural communities, by satisfying their socio-economic and cultural aspirations and strengthening their social organization, while protecting natural resources. Organic agriculture, thanks to its holistic approach, contributes to rural development in the following ways:

- Enhances governance. It puts the farmer at the centre of the farming strategy restoring a decision-making role to local communities, guaranteeing their right to control their own resources and engaging their active participation in a value added food chain.
- Creates a vibrant economic space. Reduced mechanization and avoiding use of agrochemicals create employment and increase returns to labour. Diversified production of quality products decreases the impacts of crop failures and increases marketing opportunities. Income and food security are achieved through diversity.
- Maintains a healthy environment. Through its ecological approach, it maintains the integrity of the ecosystem and the productivity of natural resources. It preserves natural landscapes and wild species, restores life to soils and maintains agro biodiversity by using and developing local seeds. In reducing the use of chemical inputs, organic agriculture provides a healthier working environment to farmers.

- Builds the social capital of rural areas. Being knowledge intensive, rather than capital and resource-intensive, it utilizes traditional knowledge and promotes farmer-to-farmer exchange. It provides tools for inspection and control, like Internal Control and Participatory Guarantee Systems that strengthen social organization and empower rural communities.

Current agricultural practices force people to abandon rural areas:

- Unsustainable food systems. More and more farmers are depending on only a few crops that demand substantial investments and create dependence on sometimes unavailable and ineffective agricultural inputs. Input costs are high and market prices continue to decrease forcing farmers and workers to abandon their fields. Millennia of traditional and indigenous knowledge are being lost.
- Loss of natural resources. Monocultures using large quantities of chemical fertilizers and pesticides provoke desertification, salinization and contamination of land and water, resulting in the loss of productive lands, ecosystem biodiversity and the extinction of species.
- Poverty. In search for livelihoods, farmers and workers migrate to cities, increasing substandard housing and impoverishment of marginal urban communities. There they have a reduced ability to purchase quality food. The diversity of their diet is decreasing and therefore their chances of adequate nutritional health.

Organic agriculture in Latvia

Agriculture is one of the most important economic sectors in Latvia. Agricultural land occupies 39% of Latvia's territory. It is the biggest user of agricultural land as well as the factor determining the quality of the rural landscape and environment. The development of the sector accelerates year-by-year, yet the contribution of agriculture to the gross domestic product is decreasing against the background of more rapidly growing value added of other sectors.

Analysis of the number of employed persons in agriculture is decreasing year by year (from 8.1% in 2006 to 7.4% in 2007). In 2007, the rate of job-seekers in the rural areas was lower than in the urban areas (5.9% and 6.1% respectively), which can be partly explained by a lower share of permanent jobs and a higher share of seasonal jobs.

**Gross domestic product in agriculture and its share in the structure
of gross domestic product in 2005-2007**

	2005	2006	2007
GDP at current prices, thous. LVL	9 059 087	11 171 693	13 957 410
Value added of agriculture and hunting at current prices, thous. LVL	198 514	215 948	257 198
Contribution of value added of agriculture and hunting to GDP at current prices, %	2.2	1.9	1.8

Source: CSB.

In the last decade, with the dismantling of collective farms, the area devoted to farming decreased dramatically - now farms are predominantly small.

Organic farming is an agricultural system based on the principles of minimising the human impact on the environment, at the same time ensuring as natural as possible functioning of the agricultural system. These principles have been defined in the Council Regulation 2092/91 on organic production of agri-

cultural products and indications referring thereto on agricultural products and foodstuffs, Council Regulation 834/2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91.

At the end of 2007, the number of farms engaged in organic farming in Latvia grew by 0.4% in comparison with the end of 2006 (4120 farms in total).

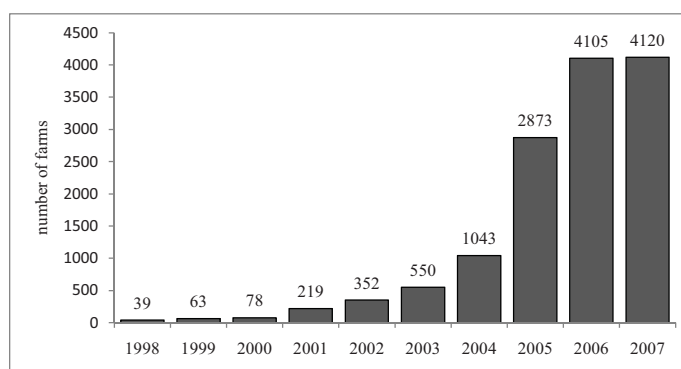


Figure 1. Number of organic farms in 1998–2007

Source: CSB.

More than 2800 of those were organic farming companies, about 1200 farms obtained a certificate for a transitional period towards organic farming and only 63 farms started the transition. The total certified agricultural area also increased in 2007, reaching 6% of all agricultural land or 151 505 ha. Of those, a little below 100 thousand ha were certified as organic farming areas, 46 thousand ha were in a transition period and on 5.8 thousand ha the transition period had just started.

In order to promote marketing of organic farming products, national subsidies were granted in 2007 to support primary processing and processing of those products as well as seed – farming development and establishment of a database of vegetative propagation stock. Support for primary processing and processing of products was received by farms developing and implementing projects. In 2007, 30 farmers received support from the national subsidy programme amounting to over 138 600 lats.

Support in the amount of 9774 lats was granted also for development of organic seed – farming, com-

paring of species in organic farming received support of 34 872 lats and establishment of a database of vegetative propagation stock received 14 986 lats.

The number of companies and farms engaged in primary processing and processing of organic farming products grew in 2007. 16 companies were operational in 2007: a bakery (Ķelmēni farm), three slaughterhouses (Zaubes cooperative, rabbit slaughterhouses Sveķi and Šalkas – Elvi), four milk processing companies (Ķeipenes piensaimnieku sabiedrība, goat milk processing company Līcīši ltd., Juri farm and JSC Trikātas siers), three tea manufacturers (Ozoliņi, Ragāres and Upmaļi farms), four fruit, berries, vegetables and hemp processing companies (Pārsla – 2 ltd., Meldri and Sidrabi farms and Latvian Cooperative Society of Dairy – Farmers Latgales Ekoprodukti) and a honey processing company (Vinnis ltd.).

Three grain storage facilities, two milk collection companies as well as a packaging and sales cooperative (Zaļais grozs) were also involved in circulation of organic farming products. Under the management of the Agricultural Consulting and Educational Support

Centre, training of organic farmers continued in 2007. The course on organic farming (180 hours total) was completed by 748 farmers.

The Ministry of Agriculture prepared 12 June 2007 CoM regulations “Procedure for monitoring and con-

trol of organic farming” and 15 April 2008 CoM regulations “Procedure for circulation of animals, wild plants and products thereof, not governed by directly applicable European Union legislation concerning organic farming”.

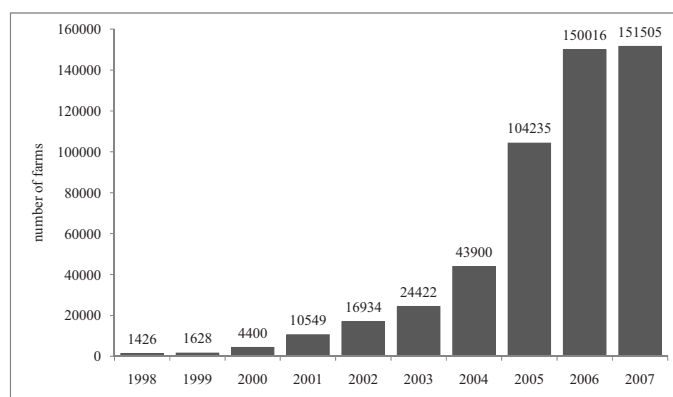


Figure 2. Certified areas of organic agricultural land 1998–2007

Source: Ministry of Agriculture.

Table 2

Foreign investment stock in the company capital of enterprises registered in Latvia (in thousand LVL)

	2002	2003	2004	2005	2006	2007
Total	1 168 155	1 274 573	1 291 472	1 386 485	1 747 650	2 301 474
Agriculture, hunting and forestry	6 178	11 588	19 919	21 192	17 825	32 592

Source: CSB

Outside Riga region the largest numbers of enterprises per 1000 inhabitants were observed in agriculture. During the period 2004–2007 the biggest increase in this number of enterprises could be observed in agriculture.

In total, Latvia imported food and agricultural goods worth LVL 837.4 million, which is LVL 380 per capita or 68% of the food consumed in 2007 (Table 2). This amount is very large, and it negatively impacts Latvia’s agriculture. The import of all types of timber products also increased in 2007, amounting to more than LVL 300 million. Of the total amount, a half was timber and its products imported from Belarus and Russia, while less than a half was paper and cardboard imported mostly from the European Union. The import of timber from the East keeps increasing, and it is expected that in the future it will increase as re-export and a part of it will be also processed in Latvia.

The value of food and agricultural goods exported in 2004 was LVL 206.4 million and LVL 574.2 million in 2007. In Latvia, the largest part of goods was exported and imported from the European Union countries. The most important export partners for Latvia in 2007 were Lithuania and Estonia, while Germany and Lithuania were the most important import partners.

Logo and labelling

The current EU organic legislation sets out rules for plant and animal production and for processing of food and feed to be labelled as organic. Compliance with the EU organic legislation is required for all products carrying the EU organic logo. In order to being able to trace organic products, the name or code number of the certification body that has certified the organic producer, has to be on the label.

To make it even easier to recognise organic food in shops, new labelling rules will apply from 1 July 2010 with a mandatory use of the EU organic logo on all pre-packaged organic food produced in the EU. The origin of the farmed ingredients has to be indicated together with the logo, and the code number of the certification body has to accompany the label.

In addition, you can find many private organic standards in the Member States. Most of these standards have their own organic logo. However, they all have as a minimum to apply the harmonised EU organic legislation.

Statistics show that many consumers in the EU are looking for products bearing these organic logos and labels when shopping for groceries or buying a meal in a restaurant or canteen. Studies estimate that the market for organic products is growing by 10–15% a year (European Commission).

The Association of Latvian Organic Agriculture maintains a national organic label “Latvijas Ekoprodukts” depicting a four-leaf clover threaded through a horseshoe. All products carrying the “Ekoprodukts” label are organically certified.

Currently there are two organic-certification agencies operating in Latvia: Vides Kvalitate and the Certification and Testing Center. Both agencies are nationally accredited, meaning that national organic certification is standardized and employs strict requirements to enforce control.

Latvia’s certification agencies now follow the regulations and standards developed by the European Union under article 2092-91. While external organic certification has been available to local farmers since 1995, national certification began only in 2002. Latvian food products now spot a variety of labels – from the “Green Spoon” label available for products in which at least 75 percent of the ingredients are grown in Latvia, to the “VP” label used for healthy items.

The organic farming movement began in the late 1980s, alongside Latvia’s green movement and subsequent push for independence. Production has grown over the past decade and exploded after Latvia joined the EU in May of 2004.

As organic farms and processing centers continue to grow, opportunities for rural employment have also expanded. Many organic farms now operate as education centers for student interns who wish to learn farming or small-enterprise development in a rural setting. Organic farms often double as eco-tourism retreats where guests can sleep in comfortable beds, eat organic farm-grown meals and partake in the country’s sauna tradition.

Very active in promoting organic agriculture worldwide is IFOAM. The goal of this organization is to adopt ecologically, socially and economically sound systems that are based on the Principles of organic agriculture. The IFOAM Basic Standards for Organic Production and Processing are well known. The European Community has adopted the Regulations N 2092/91 for organic production. Different countries have their own standards for organic (biologic, ecologic) production, also Latvia.

In Latvia Association of Latvian Organic Agriculture (ALOA), founded in April 7, 1995 with organic agriculture performs main activities connected. It is a professional organization in the framework of which people producing, processing and selling organic agriculture products as well as people supporting organic movement have been united.

Special Accession Programme for Agriculture and Rural Development (SAPARD) came into being as an assistance instrument for the countries applying for a membership in the European Union. Assumedly, it was to serve a purpose of structural transformation processes in rural areas as well as those of adaptation

to the Community law. Implementation of the programme was to prepare institutions and beneficiaries to use the Common Agricultural Policy instruments after accession to the EU.

Conclusions

Organic agriculture is a model for rural development. Organic agriculture with real-life examples is demonstrating how to enhance economic, social and environmental sustainability. Not only rural populations enjoy the fruits of organic agriculture, urban citizens are better off as well. Therefore: Governments at local and national levels should use organic agriculture as a strategy for rural development, involving rural communities and consumers in their decisions. Local authorities can create positive conditions for developing organic agriculture in their region. This can be achieved by:

1. Organizing daily and weekly farmers’ markets in cities,
2. Providing local and organic food in public canteens (schools, hospitals, etc.),
3. Promoting the establishment of eco-agrotourism,
4. Educating younger generations on the close links between agriculture, ecology and their daily food.

The development of ecological agriculture in Latvia should be based on the same principles on which organic agriculture world wide are based. Improvement of technologies isn’t enough for achieving a more sustainable development and especially for organic farming systems. Changes for the whole farming system are necessary which show the multifunctional role of agriculture. We need to develop self-sufficient and self-regulating production systems, which are less dependent on artificial, industrial inputs, can use more efficiently local resources and are friendly to the environment. But this isn’t enough also.

Research has to be undertaken for the whole food chain – from crop breeding, primary production by farmers, processing, marketing up to consumers. By saying this we mean to take into consideration not only the production sector, but also the environment and social sectors. In other words, the whole link should be in the attention of research – from the fork up to the table of consumers.

Educational work has a crucial role in this respect. Agro ecology which is studying the ecology of the whole food chain has to be studied at agricultural universities. Farmers have to be involved in more on-farm research for answering direct questions raised by them. For educational purposes more model farms have to be founded where all farmers, but especially conventional ones, can change their mentality.

More public funds need to be allocated for doing research on education and extension works at the na-

tional and international levels. Cooperation between universities and research institutions at the international level can play a very important role in straitening the work on organic agriculture. All described above is only the first step toward a more sustainable agriculture in Latvia.

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Устойчивое сельское хозяйство в Латвии

Резюме

В сегодняшнем глобализованном мире каждый сектор экономики должен переориентироваться, чтобы удовлетворять требованиям, которые постоянно изменяются. Это действительно необходимо, поскольку отдельные потребности людей меняются под действием различных местных и глобальных факторов. Сектор сельского хозяйства не исключение в этом отношении. В последние десятилетия негативные последствия быстрого экономического роста вызвали с каждым годом возрастающее беспокойство и дали начало понятию устойчивого развития. Понятие устойчивости, в котором первоначально упомянуты экологические последствия деятельности человека, было широко обсуждено не только на локальных, но и на глобальном уровне, а также в отдельных отраслях экономики и сельского хозяйства. Сельское хозяйство - один из главных секторов, которое по мнению многих, должно быть устойчивым, то есть, экологическим, экономическим,

жизнеспособным, и социально ответственным. Это все потому, что сельское хозяйство обеспечивает основные потребности человека, и в большинстве развивающихся стран является важным источником национального дохода, внешней торговли и занятости. Сельское хозяйство – это также многофункциональный сектор, который напрямую связан с окружающей средой.

Цель исследования состоит в том, чтобы исследовать понятия устойчивого сельского хозяйства и проанализировать тенденции развития органического сельского хозяйства в Латвии. Чтобы достигнуть цель, авторы поставили следующие задачи:

- проанализировать историческое развитие органического сельского хозяйства с точки зрения политических и экономических аспектов;
- проанализировать текущую ситуацию органического сельского хозяйства в Латвии.

Исследование основано на теоритических и практических работах ведущих ученых в области органического сельского хозяйства, а также на статистических данных, полученных из официальных источников EUROSTAT (Статистический отдел Европейского Союза), IFOAM (Международная федерация Органических Движений Сельского хозяйства) и CSB (Центральное Статистическое Бюро Латвии).

Сельские районы все более и более остаются брошенными как места природы, и таким образом устойчивое развитие сельского хозяйства основывается на управлении и защите экологических и природных ресурсов. Все же сельские районы являются также местами бизнеса, торговли и проживания. В то время как в основе обычного сельского хозяйства лежит почти всегда производительность и прибыль, устойчивое сельское хозяйство объединяет биологические, химические, физические, экологические, экономические и общественные науки в одно общее, с целью всесторонним способом развивать новые методы сельского хозяйства, которые являются безопасными и не ухудшают окружающую среду.

Органическое сельское хозяйство – это система производства, которая усиливает здоровье почв, экосистем и людей. Оно опирается на экологические процессы, приспособленные к местным условиям биологическую вариативность и циклы, а не на использование исходных ресурсов с отрицательными воздействиями. Органическое сельское хозяйство комбинирует традиции, новшества и науку, чтобы принести пользу общей окружающей среде и содействовать справедливым отношениям и хорошему качеству жизни для всех заинтересованных.

Устойчивость в сельскохозяйственной системе производства может быть достигнута только тогда, когда она сможет удовлетворить изменяющиеся во времени местные, а так же и внешние требования. Под увеличивающимся давлением со стороны пищевого сектора в глобальном мире аграрная экономика должна реорганизовать свою систему земель, пригодных для обработки, чтобы быть совместимой с новыми методами управления, а также с различными потребностями разных заинтересованных лиц и изменяющимся количеством ресурсов.

Эта статья рассматривает понятия жизнеспособного сельского хозяйства и исследует его развитие в Латвии. В ней излагаются некоторые из проблем социально-экономического развития сельских районов и объясняется, как вопросы долгосрочной экономики сельского хозяйства затмиваются в пределах центрального правительства «зеленым сельским хозяйством» с одной стороны и городской политикой с другой.

Органическое сельское хозяйство является моделью для развития сельского хозяйства. Органическое сельское хозяйство на реальных примерах демонстрирует, как увеличить экономическую, социальную и экологическую устойчивость. Не только сельское население наслаждается плодами органического сельского хозяйства, городские граждане также обеспечены ими вдоволь. Поэтому, правительства на локальных и национальных уровнях должны использовать органическое сельское хозяйство как стратегию для развития всего сельского хозяйства,

вовлекая сельские сообщества и потребителей в процесс принятия решений. Местные власти могут создавать положительные условия для развития органического сельского хозяйства в их областях. Это может быть достигнуто следующим образом:

1. Проведением ежедневных и еженедельных фермерских рынков в городах.

2. Обеспечением общественных столовых в школах, больницах, и т.д. местными и органическими продуктами питания.

3. Продвижением эко-агро-туризма.

4. Обучением младшего поколения о тесных связях между сельским хозяйством, экологией и их ежедневной пищей.

Развитие экологического сельского хозяйства в Латвии должно быть основано на тех же самых принципах, на которых основывается органическое сельское хозяйство во всем мире. Усовершенствование технологий не достаточно для того, чтобы достигнуть более устойчивого развития, особенно для систем органического сельского хозяйства. Изменения в целой системе сельского хозяйства необходимы, т.к. сельское хозяйство очень многофункционально. Мы должны развивать самостоятельные и автономные системы производства, которые будут меньше зависеть от искусственных, индустриальных исходных материалов и ресурсов, а смогут более эффективно использовать местные ресурсы, дружественные к окружающей среде. Но и этого тоже не достаточно. Должны быть проведены исследования для всей пищевой цепи, начиная от посева, роста, обработки и сбора урожая, первичного производства фермеров, переработки и сбыта потребителям. Говоря об этом авторы считают, что надо рассматривать не только сектор производства, но также и окружающую среду и социальный сектор. Другими словами, в центре внимания исследований должна быть вся цепь, начиная от самого начала до стола потребителей.

Важную роль играет также и образовательная работа. Агро экология, которая соединяет экологию всей пищевой цепи, должна изучаться в сельскохозяйственных и аграрных университетах. Фермеры должны быть вовлечены в исследования, которые должны проводиться прямо на фермах для того, чтобы ответить на вопросы, направленные непосредственно фермерам. В образовательных целях должно быть основано больше ферм моделей, где все фермеры, но особенно консервативные могли бы изменить свое мнение.

Государство должно всякими средствами поддерживать исследования на национальном и международном уровнях. Сотрудничество между университетами и образовательными учреждениями на международном уровне может играть очень важную роль в уменьшении объема исследовательских работ в области органического сельского хозяйства. Все выше сказанное является только первым шагом к более устойчивому и жизнеспособному сельскому хозяйству в Латвии.

Ключевые слова: устойчивое развитие сельского хозяйства, устойчивого сельского хозяйства, устойчивого развития, развития фермерских хозяйств, развитие сельских районов, землепользования.