**European Commission** 



QUALITY OF LIFE AND MANAGEMENT OF LIVING RESOURCES

# "Marketing Sustainable Agriculture: An analysis of the potential role of new food supply chains in sustainable rural development"

## **SUS-CHAIN**

QLK5-CT-2002-01349

# Desk study on consumer behaviour towards sustainable food products

## National report – Latvia

By Mareks Niklass, Sandra Sumane, Laura Suna, Aivars Tabuns, Talis Tisenkopfs, Kristaps Vecgravis Aija Zobena

SUS-CHAIN deliverable no. 9.6

# Macro-level analysis of food supply chain dynamics and diversity

### LATVIA

SUS-CHAIN WP3 National Report (deliverable 9.6)

Mareks Niklass (Institute of Philosophy and Sociology – University of Latvia) Sandra Sumane (Baltic Studies Centre) Laura Suna (Institute of Philosophy and Sociology – University of Latvia) Aivars Tabuns (Institute of Philosophy and Sociology – University of Latvia) Talis Tisenkopfs (Baltic Studies Centre) Kristaps Vecgravis (Institute of Philosophy and Sociology – University of Latvia) Aija Zobena (Baltic Studies Centre)





## Table of content

1. Definition of sustainability for food products					
2. General food consumption trends	3				
3. Consumer behaviour towards sustainable food products:	11				
3.1. Consumers of sustainable food products	11				
- Consumers' values, needs and motivation	11				
- Information, knowledge and uncertainty	12				
- Availability of products and behavioural control	14				
- Decision processes	15				
- Socio-demographic profile	16				
- Social embeddedness	16				
3.2. Barriers for consumption of sustainable food products	18				
3.3. Possibilities to remove barriers					
4. Strategies to stimulate sustainable consumption	21				
References	24				

#### 1. Definition of sustainability for food products

A term "sustainable food products" is seldom used in Latvia (except scientific publications; see Tisenkopfs, T., Zobena A., Sumane S.). The terms "biological products" or organic products (both terms are used as synonymous) are used more broadly. A number of recently adopted laws form a legal basis for Latvian organic farming policy<sup>1</sup>. The Law on Agriculture defines: "organic farming - an agricultural method which is based on enhancement of the self-regulating processes of nature and an increase of biological activity of the soil and precludes the utilisation of mineral fertilisers and pesticides obtained industrially by chemical synthesis, as well as the use of genetically modified organisms and products thereof." Those farms, which produce organic products, can receive a certificate issued by an accredited institution. The circulation of organic farming products is supervised by the Food and Veterinary Service. The institution also supervises and controls the certification procedures for organic farming products and registers persons involved in the circulation of such products. After Latvia's accession into the EU, the Law on Agriculture and regulations relevant to organic agriculture adopted by the Cabinet of Ministers will not be in force. Instead, the new Law on Agriculture and Rural Development will be enforced. The law will replace the Law on Agriculture and will define the procedures for circulation and supervision of production of organic farming products.

In Latvia, two organisations are entitled to issue certificates to those farms, which operate in compliance with standards of organic farming, namely, a public organisation "Environment Quality" and "Centre for Certification and Testing of Agricultural Equipment Ltd."<sup>2</sup>.

Only 0.4% of all farms operate in the organic farming sector. Organic farmers cultivate only 0.7% of agricultural land in Latvia (Kalnins, 2003). There are now approximately 300 members in Latvian Association of Biological Agriculture Organisations.

A label "Latvian eco-product" is used to mark organic foodstuff in Latvia. Latvian Association of Biological Agriculture Organisations is the owner of the label. To be entitled to use the label, producers should obtain a certificate issued by a public organisation "Environment Quality". To get

<sup>&</sup>lt;sup>1</sup> The Law on Agriculture, "Regulations Nr. 514 on the circulation of organic farming products and the procedures for their certification" and "Regulations Nr. 232 on the procedures for the registration of persons involved in the circulation of organic farming products and on the procedures for State supervision and control of the circulation of organic farming products" issued by the Cabinet of Ministers, respectively on November 26, 2002 and April 29. 2003.

<sup>&</sup>lt;sup>2</sup> There are 353 registered organic farms and firms including 158 of those with a transition period of one year and 123 – with a transition period of two years. The certificates of organic farms are issued to 74 farms. The number increased during these recent years. Last year the number of organic farms increased by 62% in comparison with 2001. State support given to the organic farming sector in a form of subsidies has facilitated the increase of the number. //Arnis Kalnins, Between opportunities for profits and stockyards of restrictions. Latvijas Vestnesis, October 29, 2003.

the certificate, producers should observe the regulations of Latvian Organic Farming. These regulations are in compliance with the EU directive No. 2092/91.

There are a number of labelling marks in Latvia that may confuse customers to choose and understand the meaning of the label "Latvian eco-product". A labelling mark "Qualitative Latvian Product" in a form of a spoon is the most recognised label in Latvia. Products containing at least 75% of ingredients of Latvian origin and complying with quality standards can be marked with the label (Source: <a href="http://www.marketingapad.lv/precu\_zime.html">http://www.marketingapad.lv/precu\_zime.html</a>). A public organisation "Marketing Board" is the owner of the labelling mark. The purpose of the label is to help Latvian customers to find a qualitative product, which is produced using local ingredients. Besides, Marketing Board issues a label "Growing Green in Latvia" aimed to mark Latvian products for export (Source: www.marketingpad.lv/ggl.html).

In addition, there is a label "VP – healthy product" recommended by Latvian Diet Doctor Association having evaluated the biological and chemical content and value of a given product.

Also a labelling mark "Latvian Quality" can be often seen in Latvian shops. Latvian Quality Board is the owner of the labelling mark. The label is aimed to mark Latvian products.

Those products produced in compliance with security and quality standards can be marked with a LATSERT label issued by Latvian Certification Centre. The standards are set according to a respective European standard No. 45011. Health Promotion Centre has developed a labelling mark "Healthy diet". The label can be put on products containing less fat and salt.

#### 2. General Food Consumption Trends

#### 2.1. Turnover and consumption

Statistics indicate that the trade turnover of food and other goods has increased during these recent years (see Table 1, 2). Between the years 1997-2002, the average annual growth rate of trade was 12.8% per year, and, in 2002, the sector accounted for 17.7% of the gross domestic product. At the same time, the retail trade structure has essentially changed in the last decade (see Table 2). In 1995, the retail trade of food products constituted 63% of total retail trade turnover. Such a retail trade structure was created in the conditions of dynamic decline of the real disposable income of residents in the beginning of 1990s. After 1995, the share of food products in total retail trade turnover rapidly decreased, and, in 2002, it was by 26 percentage points smaller than in 1995. These changes were partly determined by the changes in the retail trade structure were determined by the difference in the dynamics of consumer prices in various groups of products. It indicates improvement of the well-being of people. Retail trade of food products in the first 9 months of 2003 in comparison with respective period of 2002 went up by 8.9% (Economic Development, 2003).

	<i>1995</i>	<i>1996</i>	1997	<i>1998</i>	1999	2000	2001	2002
Goods, total	804.6	835.2	1080.8	1404.2	1597.4	1984.5	1984.5	2362.7
of which foodstuffs	390,2	333.4	321.7	405.6	458.2	487.8	537.5	655.4

Table 1. Retail Trade Turnover by Commodity Group (at current prices, in million	on lattes)
--	------------

Source: Main indicators of retail trade, 2003

<sup>&</sup>lt;sup>3</sup> Wages of people employed in the national economy and disposable income of households continue going up for several years. The net wage earned by people employed in the national economy in 2002 was almost 1.2 times higher than in 1999 (by 21%). It went up by 8% in comparison with the preceding year. Wage continued growing also in 2003. In 9 months of 2003 net wage was by 11.3% higher than in 9 months of the preceding year. Real income of people employed, adjusted for inflation, in 2002 went up by 6% (by 7.5% in the III quarter of 2003 compared with the same period of the preceding year). However, income of people is very uneven; polarisation of material well-being is increasing. Gini index went up from 0.30 in 1996 till 0.34 in 2002. Data show that 20% of the poorest households had 10% of the total disposable income, and 26% of the total number of persons belonging to households lived in such households. In turn, 20% of the richest households disposed of 40% (18% persons) of the total disposable income of all households. According to Eurostat data, GDP per capita in 2002 estimated in purchasing parity units, in Latvia equalled to 35% of the average of the EU (25% in 1995) (Economic Development, 2003).

Ls per one inhabitant	1996	1997	1998	1999	2000	2001	2002
Goods, total	340	444	583	668	743	843	1011
of which foodstuffs	136	132	169	192	205	228	280

Table 2. Retail Trade Turnover per capita by Commodity Group (at current prices; lats)

Source: Main indicators of retail trade, 2003

Table 3. Structure of Retail Trade Turnover by Commodity Group (at current prices, as per cent of total)

	1996	1997	1998	1999	2000	2001	2002
Foodstuffs	39.9	29.7	28.9	28.7	27.7	27.1	27.7
Alcoholic beverages, tobacco goods	10.4	10.6	10.5	10.0	10.3	9.3	9.0
Non-food goods	49.7	59.7	60.6	61.3	52.3	63.6	63.3

Source: Main indicators of retail trade, 2003

There have been quite significant changes concerning food consumption in these recent years (see Table 4). For analytical purposes, one can discern three different groups of food products. The products whose level of consumption approximates that of 1990 (i.e. right before the liberalization of the market) form the first group. In 2000, the consumption of bread and cereal products nearly reached the level of 1990 (96%). It should be bear in mind that prices for such products considerably increased in the beginning of 1990's. Fish products were also consumed in 2000 as much as in 1990. It holds true also for cheese (95% of the level of 1990) although it was consumed on average 2.3 times less than in EU 15 and considerably less than in other candidate countries (the only exception is Lithuania with the same level of consumption).

Those products whose consumption has decreased during these last ten years form the second group. The consumption of dairy products has stabilized although the level of consumption approximates only 61% of that in 1990. In Latvia, milk is consumed 1.4 times less than in EU 15 and less than in other candidate countries, for example, in Estonian and Lithuania where milk is consumed 1.4 times more than in Latvia. Butter is also consumed less in Latvia, i.e. 2.3 times less than in EU 15 although it is consumed more than in other candidate countries such as Hungary and Slovenia. Perhaps, the exception could be cream. In Latvia, it is consumed more than in EU 15 and other candidate countries. It should be noted, however, that the level of consumption of cream has decreased 1.8 times in comparison with that of 1992.

The consumption of eggs and sugar has also fallen (respectively, 85% and 88% of that in 1990). The consumption of meat and meat products considerably decreased in the beginning of 1990's. Although the consumption of meat increased after 1994, nevertheless, the level of consumption still fluctuates around 78% of that in 1990. At the moment, pork is consumed 2.7 times less than in EU 15 and considerably less than in other candidate countries like Estonia and Lithuania where pork is consumed 1.6 times more than in Latvia. The similar pattern can be discerned concerning the consumption of poultry. It is consumed 2.6 times less than in EU 15 and considerably less than in other candidate countries. It should be noted that, for example in Hungary and Slovenia, poultry is consumed respectively 1.7 and 1.6 times more than in EU 15. In Latvia, beef is consumed as much as in other candidate countries although less that in EU 15. People in EU 15 consume beef 2 times more. It should be noted that the consumption of beef has decrease 3 times since the beginning of 1990's (Consumption, 2004).

Those products whose consumption increased during these recent years form the third group (se table 4).

Products	1990	1992	1993	1994	1995	1996	1997	1998.	1999	2000
Meat and meat products, recalculated as meat	82.0	61.6	56.9	51.2	55.9	57.4	56.4	60.2	61.9	63.8
- pork	21.8	15.0	12.5	11.0	12.6	13.9	12.8	14.5	16.8	16.2
- poultry	10.4	7.0	2.6	4.2	5.7	7.2	8.0	8.0	6.8	7.7
- beef and veal	11.2	6.7	10.2	8.8	8.8	5.8	5.2	5.2	5.3	5.2
Fish and fish products, recalculated as fish	15.1	10.9	10.2	11.1	16.2	16.2	14.8	14.5	14.4	15.1
Milk and dairy products, recalculated as milk	482	381	371	344	339	311	291	284	288	293
Butter	7.3	5.5	5.3	4.3	3.1	2.5	1.9	2.0	2.0	2.2
Cheese	4.4	3.8	3.5	3.2	3.2	3.1	3.2	3.7	4.0	4.2
Eggs, including those used in food processing, units.	227	216	200	199	214	192	192	192	192	192
Vegetable oil, litters	2.3	2.3	3.6	5.3	6.4	8.4	8.6	8.9	8.8	9.0
Margarine	2.4	1.3	2.5	2.6	2.9	4.2	4.6	4.8	4.6	4.4
Sugar including that used in food processing	30.3	22.0	24.2	23.2	30.3	32.9	28.0	26.8	26.4	26.6
Bread and cereals, recalculated as flour	80.1	90.7	92.3	89.2	89.9	86.3	82.4	81.7	80.5	76.6
Fruits and berries, recalculated as fresh fruits and berries	37.3	33.6	38.5	33.4	28.0	44.0	53.4	43.6	50.6	52.9
Potatoes	91.6	101.0	110.9	108. 2	126.7	151.6	143.5	135.2	132.8	138.8
Vegetables, recalculated as fresh vegetables	66.6	67.6	58.9	58.5	80.5	96.7	103.1	93.4	94.7	88.4

Table 4 Food consumption (in kg per capita per year)

Source: Latvian State Institute of Agrarian Economics according to the data of from the Household budget surveys carried out by Central Statistical Bureau from 1990 to 2000.

In 2000, vegetable oil was consumed 3.9 times more than in 1990. However, the figure (9 litters per capita within year) is considerably smaller than in EU 15 and the US. The consumption of margarine also increased during the last ten years (183%). In 2000, it appeared that people in Latvia consumed potatoes 1.5 times more than in 1990 (the level of consumption of potatoes is one of the highest in the world). In comparison with 1990, the consumption of fruits and vegetables has considerably increased (respectively 142% and 133%). However, the authors of the report are of the opinion that one should look at these figures with some reservations. It should be noted that the share of the so-called "grey economy" is still substantial in Latvia. Some experts believe it generates approximately 1/3 of GDP.

Experts are of the opinion that such expensive food products as meat and fish will be consumed more in the future and their share in the so-called food basket will increase although the proportion of those expenditures allocated for food products will decrease (Latvian agriculture, 2001; Consumption trends, 2004). Experts also believe that the consumption of almost all dairy products will increase (except cream and butter) because of the expected increase in real income per capita, integration into the Single Market, increasing level of variety and increasing share of out-of-home food consumption. The consumption of meat products will be influenced by the increase of health consciousness (Consumption, 2004).

#### 2.2. Prices

Consumer price inflation in Latvia in the recent years is close to the level of inflation in the developed countries and is among the lowest in the countries of Central and Eastern Europe. Also in the future, Latvian government has declared a goal to keep inflation within the limits of 2-4%. Inflation in Latvia in 2002 was lower than established by the Maastricht criteria. Price changes are different in different groups of goods and services.

Figure 1

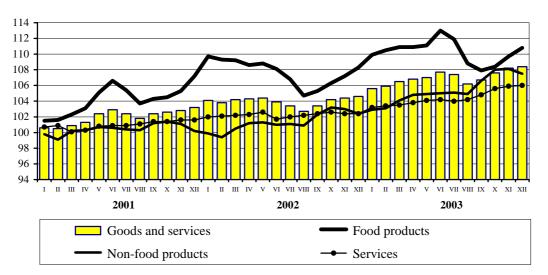




Figure 1 shows that food prices in December 2003 were by 2.6% higher than in the respective period of the preceding year. Prices for non-food products in the same period of time went up by 5% and prices of services – by 3.6%. Prices of pharmaceuticals, clothes and footwear from the

Source: Economic Development, 2003

group of non-food services went up by 4.7%. In the group of services, prices for hairdressers' services, waste collection and medical and public catering services went up most dynamically (Economic Development, 2003).

Experts are of the opinion that prices for food products may increase by 30-50% in the coming years. At the same time, representatives of food industry expect that the increase will not be rapid. It may come after the increase in real income. Prices for dairy products may increase more rapidly because these products cost about 50% more in EU 15 than in Latvia (Agropols, 2004).

#### 2.3. Trade channels

Riga's inhabitants do shopping on average 4.7 times a week, i.e. almost every day. During workdays, purchases are made in the vicinity of one's dwelling place. On weekends, people go for shopping to more distant places (Jestrova, 2002: p.52)

Total trade area of stores has substantially increased during these recent years. In 1995, trade area was 1192 thousand square meters but, in 2001, 1711 thousand square meters.

The structure of retail business has substantially changed (see table 5). There are more and more supermarkets. In the time period from 1999 till 2001, the number of small shops has decrease almost twice but the number of huge retail stores has increased four times (see Table 4). According to a journal *Food International*, the following foreign companies operate in retail business in Latvia: *ICA/Ahold* (Sweden, Netherlands ), *Axfood* (Sweden), *Rietan Narvessen* (Norway), *SOK* (Finland), *Rauakirja* (Finland), *Kesko* (Finland), *Coop* (Germany), *AS Smarten* (Estonia), *Vilniaus Prekyba* (Lithuania).

According to the survey data, the market share of supermarkets in Riga was 48%. The share of open marketplaces was 28% of total retail turnover. As experts suggests, customers chose supermarkets because there are sufficient numbers of supermarkets in all neighbourhoods and they can be easily reached by all means of transportation. Supermarkets have now become principal delivers of foodstuff to Riga's residents (Jestrova, 2002).

Researchers from TNS/Baltic Data House arrived at similar conclusions. According to the data of a research carried out by the aforementioned organisation, a number of shoppers in supermarkets increased by 20% in 2003 alone. 73% of residents of Riga and its vicinity do shopping in a supermarket at least once a week. More than 50% of those shoppers are regular customers. People in their 60's and older or with low incomes seldom do shopping in the supermarkets. Experts are of the opinion that the number of shoppers in supermarkets will increase with the growth of income (Ercmane, 2004).

	1999	2000	2001	1999	2000	2001
	Food	Food	Food	General	General	General
	stores	stores	stores	stores	stores	stores
Total	5047	4762	5114	1548	1496	807
With trade area of						
stores m2						
< 20	713	584	391	155	31	30
20-49	2309	1853	1867	448	544	231
50-119	1479	1730	2008	658	596	298
120-399	492	518	709	258	265	202
400-999	43	55	92	18	47	27
> 1000	11	22	47	11	13	19

Table 5 Number of Stores by Trade area (at the end of year)

Source: Statistical Yearbook of Latvia, Riga, 2002, p.208

However, the development of retail business in Latvia lags behind that of in Lithuania and Estonia. The share of marketplace in retail business is larger in Latvia. According to the information provided by Latvian Marketplace Association, there are 87 marketplaces in Latvia. There were 58 in 1995. It should be admitted that a number of them are open only a couple of days a week. Marketplaces are open daily only in major cities (Jestrova, 2002: p.68). According to the data of a research carried out by TNS/Baltic Data House, 24% of Riga's residents do their shopping in marketplaces several times a week (Ercmane E., 2004).

Table 6 Proportion of the market shares of shops and marketplaces respectively in the Baltic region in 2000

Country	Proportion (%)
Latvia	55/45
Estonia	70/30
Lithuania	60/40

Source: Jestrova, 2002

There are only few farmers selling their products in marketplaces because they do not have any time to carry on trade. Most farmers sell their products to dealers although they loose their profits. As a survey's data indicated, there were only 12 farmers selling their products in the mid of a workweek in one of the biggest marketplaces in Riga (Riga Central Marketplace).<sup>4</sup>

There are more sellers in marketplaces in summers, fewer in autumns and winters. Marketplaces are busier on Fridays and Saturdays. However, marketplace looses its share and attractiveness.

<sup>&</sup>lt;sup>4</sup> The data are exact and precise because only farmers do not need cash registers.

More and more supermarkets and other retailers take over marketplaces, which are often situated in the vicinity of one's dwelling place, are more convenient and are providing better services. For example, a total turnover of trade generated by farmers and individual sellers in a marketplace in Agenskalns (a neighbourhood in Riga) decreased twice as it was before when a supermarket "Rimi" started its business here (Jestrova, 2002).

Views of experts are quite contradictory on the issue of the demand for organic farming products. The price for such products is similar to that of products produced using traditional methods. A group of customers for such products is still forming. According to some rough estimates, only 2% of customers in the Baltic States are ready to pay 30% more of the price of products produced using conventional means. In addition, only 3% of customers are willing to pay 21-30% more (Kalnins, 2003). In sum, approximately 5% of people could form a customer group for organic farming products.

A number of experts are of the opinion that the supply of organic farming products does not meet the demands of potential customers (Majenieks, 2003). In a seminar organised within an exhibition "Riga Food 2003", Daiga Kreismane, a chairperson of the Council of the Association, stressed that the demand for chemical-free products are much greater than the supply (Graudins, 2003). Most experts are of the opinion that there are good prospects for such products both at home and abroad. There are no export quotas imposed on producers of organic farming products. When the purchasing power of Latvian customers is greater and when more and more people become aware of the implications for health, there will be more demand for healthy organic farming products and foodstuffs.

These experts believe that one of the preconditions for the development of organic farming in Latvia is the increasing awareness of more and more people that organic farming products are of crucial significance for their state of health. They know that well-thought-out diet is one of the ways to stay healthy.

#### 3. Consumer behaviour towards sustainable food products

#### 3.1. Consumers of sustainable food products

#### a. Consumers' values, needs and motivation

There have not been any academic studies carried out to find out consumers' values, needs and motivation to buy organic farm products. Moreover, there are studies on organic farming where, though indirectly, analysis of existing and potential demand for such products was carried out. They are some marketing and case studies surveys, which allow to evaluate farmers, retailers, producers, consumers, experts opinions and attitudes. The largest part of marketing research data is not available for academic researchers. The samples of all these surveys have been rather small, and the main task of the research was to study particular groups of products. Therefore, the research results may give only some insights and understanding of consumers' values.

The data obtained by K.Peipina indicates that most consumers (59%) first pay attention to the price of a given product. There are fewer respondents who pay attention to so-called health criteria (40%). The third criterion is whether a given product contains preservatives. Only 28% respondents pay attention to the name of producer and 24% - to expire dates. According to the data, people prefer well-known products (35%) as well as those that can be purchased in the nearest shop (27.5%) (Peipina, 2003).

A.Runce, a chairperson of Latvian Association of Organic Agricultural Organisations, thinks that the low purchasing power of Latvian consumers is the main cause for the low and insufficient incomes of green farmers. Other experts (Zola, 2002) argue that organic farmers cannot sell their products for a higher price – most consumers look for cheaper, not better products. The view is also shared by one Internet discussant: "People buy cheaper, but not - more expensive. It is utopia that most consumers will be willing to pay more for such products. Quality of products produced using biological methods does not differ at all in comparison with that of conventional products." (Pelane, 2002).

However, many experts believe that Latvian consumers will be willing to pay more for such products in the future. Thus the income level of organic farmers will reach that of other farmers (Zola, 2002; Tisenkopfs, Sumane, 2000).

Latvian Food Centre in co-operation with Association of Latvian Diet Doctors and Federation of Latvian Food Producers organised a survey of consumers to find out the healthiest cereal and dairy products. According to the survey data, 52% consumers choose a given product for its taste, 34% - for its value, 10% - looking at its price, 4% - out of habit, 3% - for its package

(Steinfelde, 2001). A.Bremanis, a chairman of Association of Latvian Diet Doctors believes that "There are more and more people in Latvia that want to lead healthy life and use healthy food products in their diet" (Steinfelde, 2001).

#### b. Information, knowledge, and uncertainty

Most experts are of the opinion that consumers are not sufficiently well informed about organic agricultural products. It also holds true for retailers and distributors of such products (Sumane, 2003). In one of surveys (Zelmanis, 2003), it was found out that distributors do not know all characteristics of food products, they are not sufficiently well informed about ingredients used in their production, impact of products on human health. Store personnel are less competent on these issues. Consumers are the least competent persons because they do not receive full information about producers and distributors. M.Zelmenis thinks that fines and punishment for inadequate labelling are inconsiderable. It does not stimulate retailers to pay more attention to elaborate precise and fully informative labels. He argues that problems are caused by the fact that a labelling mark "bio" is also used to mark two other product categories: traditional products containing bifido and acidophil bacteria (Source: http://www.alberts.lv).

Similar concerns are also expressed by other experts. They think that there are too many labels marking the quality, healthiness, ecological purity and other characteristics of products. Margers Rava, a chairman of the Board of Latvian Dairy Committee, thinks that "two labels are enough – "Latvian eco-product" and "Spoon" (also known as "Qualitative Latvian Product"). All others labels only confuse people's minds. As one journalist jokes: "the very product could not be seen under jungles of labels" (Steinfelde, 2001). There are more and more labels year by year and it cause confusion among consumers and chaos in the market. It does not mean that a given food product is produced by Latvian farmers even it is labelled with a title and name in Latvian.

To inform consumers about the issues, a number of Internet sites are created (www.bode.lv, www.consumer-guide.lv) where every Latvian consumer can get necessary information about products, their purchase and use. Both producers and distributors lately take measures to inform and increase the competence of consumers. However, these measures are taken irregularly and they cover only small target groups of a given product.

The activities in the organic sector are rarely represented in the mass media. There have been a couple of articles in the national media. Organic farmers themselves use local press to put some announcements, as well as the association's leaflet and webpage. Also the information about coming seminars is published in the local media. Thus, everybody who is interested may attend them. Since the beginning of 2003, LAOAO disseminates its monthly leaflet to organic farmers.

Altogether, around 380 farmers receive it at their farms. It is available also on the association's website, as well as it is distributed through the offices of Agriculture Advisory and Education Centre. "The leaflet is a step forward. The leaflet does not contain yet a lot of information, but at least the main questions are presented there." The leaflet does not appear only as top-down information. It serves as well to be a communication tool among the farmers themselves - they use the leaflet rather actively to express their needs, experience, advice, supply and demands etc. The themes covered in the leaflet gives a list of urgent 'keywords' in the organic community (legislation and subsidies; market, opportunities, co-operative projects, trademark certification, training, etc.). This information helps in farmer's communication with consumers and sellers. Casual vis-à-vis interactions with consumers have had positive outcomes, too (Sumane, 2003).

LAOAO has created a deeply green organic farmers' Internet site <u>www.ekoprodukti.lv</u>. It offers comprehensive information about organic agriculture in Latvia – legislation, organisations, market, organic farming, current events, and advertisements. General information about organic agriculture in Latvia is accessible also on some other strategic internet sites – that of the Ministry of Agriculture, the Council of Collaboration of Agricultural Organisations, Agricultural Advisory and Education Centre. Informative leaflets about organic agriculture were prepared by local organic farmers group, too (Sumane, 2003). Farmers take part in various public activities and events. Various exhibitions - on food, gardening, health, etc - are a popular mean of communication among organic farmers. Exhibitions are both a market place and a way to advertise and popularise organic agriculture, organic products. Several organic farmers from Cesis district have taken part in a competition organised by the Ministry of Agriculture and the Ministry of Environment Protection and Regional Development "Sower". On March 21.2003, there was organised the first conference "Organic Agriculture and Health". The event brought together farmers, representatives from universities, health care institutions, organic agriculture advisors, food technology and domestic animal specialists, certification inspectors, etc. The organisation of the conference was financed by the Mortgage bank (the conference materials were published). Cesis district organic farmers have engaged in the association's initiative to develop a network of health farms. However, these farmers' activities not always reach their goals and only partly help to elaborate communication between market agents (Sumane, 2003).

Even if the demand for organic products is still low, there have been some cases when uncertified farms have offered their products as organic, thus misleading consumers and potentially shaking their faith in organic food (Sumane, 2003)

13

#### c. Availability of products and behavioural control

At the moment, organic food products are distributed in a number of ways:

1. Supermarkets. As a survey carried out by a newspaper "Lauku Avize" indicates, retailers are willing to buy organic food products but they need a regular supply in large quantities. Some supermarkets already co-operates both with farmers and local producers. For example, one of the largest retailers Rimi Ltd. has 240 suppliers in total including 98 local producers and 12 farmers (Jestrova, 2002: pp. 55-56).

Supermarkets are one of the few retailers who control that consumers really buy organic farm products not adulteration. Therefore, a lot of customers trust in this distribution channel. It cannot be said about other distribution channels. In Latvia, a number of supermarkets develop conceptions how to market organic food products. They also try to set a particular section for organic food products. A retailer "T-Market" is one of the largest sellers of organic food products. Experts are of the opinion that more and more Lithuanian organic farm products will be brought to the Latvian market in the immediate future. Experts also think that smaller suppliers incur losses in the competition among supermarkets because they have to choose with whom they will cooperate. It is not always good and profitable for the suppliers (Steinfelde, 2004).

2. Specialised marketplaces. There are a number of counters allocated for producers of organic food products in Riga Central Marketplace. On several occasions, organic farm products are sold in the Alberta Square in Riga ("Green Fair").

3. Hotels, restaurants. At the moment, these distribution channels were only partly used for selling organic products. The Radisson SAS Daugava Hotel is one of the few organisations that has actually launched co-operation with organic farmers. The hotel was opened in Riga in 1995 - a time when biological agriculture had not yet received much publicity, and hotel managers lacked information about abilities to purchase organic products locally – instead, they were imported from Denmark. Since 1998, however, the hotel has been concluding agreements on the supply of produce from local organic farmers. The hotel pays top prices for certain types of organic produce. At the same time, the hotel is also forced to buy conventional products, because organic farmers cannot entirely meet the demand. Cafes and restaurants often become partners when individual farmers seek marketing outlets. During a case study, a restaurant director affirmed that their restaurants chain purchase ecologically clean products when possible, but once the foodstuffs are processed, organic products are not differentiated from the conventional ones. He said that they sometimes have some doubts about food compliance with standards of organic farming. He spoke cautiously about company's readiness to purchase these products on an ongoing basis. (Tisenkopfs, Sumane, 2000).

4. Direct sale. The so-called direct sale as a method hasn't been sufficiently and broadly used in Latvia except green markets, which have been established recently. In the meantime, the agricultural market in Latvia is characterized by the presence of broad networks of informal direct supplies and sales from farms to local shops, schools, kindergartens, hospitals etc. (see WP2 report). These direct sales intensify during the harvest season, e.g. sales of strawberries and apples during the season.

There isn't any specialised shop in Latvia that is selling only organic food products. There have been several attempts to set up such shops, however, difficulties with supplies and a lack of coherent marketing strategies lead to the bankruptcies of these enterprises. The Association of Biological Farmers Organization organised two shop stands in Riga for organic produce (Tisenkopfs, Sumane, 2000).

#### d. Decision process

Decision process of customers hasn't been studied in Latvia so far. An academician Arnis Kalnins is of the opinion that customers keep asking and saying that they are ready to pay more but, when in a shop, the final decision is determined by amount of money in their pockets (Kalnins, 2003). This is indirectly proven by the expanding initiatives and practices of food supplies from organic farms to urban families (see WP2 report).

There are customer surveys and marketing research polls, which occasionally includes questions about organic food or healthy food products. In a survey carried out in the March of 2003 a polling company SKDS asked Latvia's people: "On the whole, are foodstuffs you use daily healthy or unhealthy?" The survey indicated that approximately a half of respondents (50%) believed that, on the whole, they use healthy foodstuffs (3% indicated "very healthy" and 47% - "rather healthy"). However, 40% indicated that the foodstuffs they consume are unhealthy (7% - "very unhealthy, 33% - "rather unhealthy"). 10% could not give a definite answer or could not assess the quality of products they use. It should be bear in mind that respondents were likely to think of the foodstuffs with calories and salt, not properly prepared meal, the foodstuffs containing preservatives. The latter is considered unhealthy by most consumers.

#### e. Socio-demographic profile

In her study, Anita Villerusa arrived at a conclusion that those better educated and better off as well as city dwellers can change their habits and turn to healthier diet quicker than others. Women think of changing diet more frequently than men. Therefore, it is much easier for organic farmers to win the hearts of those women that live in cities and are better educated and better off (Tomsone, 2003).

Data of polling company SKDS (the survey carried out in the March of 2003) shows that respondents from different socio-demographic groups quite differently assess their consumption of healthy food. In a group with no more than 42 Ls per a member of family a month, 45 % respondents considered that they use healthy foodstuffs. But in a group with income more than 127 Ls per a member of family a month, considerably more respondents (67 %) expressed such a view. The data of the survey also reveals that respondents in an age group from 25 until 34 as well as respondents with higher education and those employed in the public sector more frequently consider the foodstuffs they use healthy.

Experts argue that groups with high incomes are potentials consumers of organic food products (Liepa, 2002, Pelane-Slusure, 1998,; Tisenkopfs, Sumane, 2000; Sumane, 2003), too. Mothers form a particular group. They are more concerned about the diet and health of their own children. The youth does not seem to care much about healthy diet at the moment.

#### f. Social embeddedness

There is a widespread belief in Latvia that we have a natural, uncontaminated land, diversified fauna and flora as well as experience in "natural" management of all this (Grotus, 2003). Producers of organic food products think that people are tired of stress and products containing chemical substances. They want to enjoy life consuming healthy products (Lauksteina, 2003). Inguna Gulbe, head of the Centre for Enhancement of Agricultural Market, is of the opinion that a growing interest of consumers about such products can be explained by the successful efforts of producers to tell society what are these products and why they are to be chosen (Pelane, 2002).

There is a wide-spread recognition among policy makers and farmers organisations that currently there are no serious environmental problems in Latvian agriculture. Nevertheless, agroenvironment policy is given an increasing attention by the politicians and decision-makers. There are several reasons behind this:

awareness that environment is a priority in EU countries and that Latvia has to enforce agroenvironmental regulations as a part EU integration; growing awareness that economic recovery and growth of agricultural production may involve negative impact on the nature;

growing awareness that rural development should be considered in broader that agricultural terms and that agro-environment is part of integrated rural development (Tisenkopfs, 1998).

High prioritising of environmental regulations in agriculture is stipulated by the necessity to fulfil EU accession requirements and to adopt the Communities agro-environmental legislation. Environmental concerns are also enhanced by the values and attitudes of emerging urban middleclass towards landscape, food security. Environmental and organic farming initiatives are explicit in rural and regional development programmes of local communities and government (Tisenkopfs, T., 1998).

The representatives of state administration accept environmental goals in agriculture in official discourse. Decision makers are also aware that approximation of EU agro-environmental regulations is a part of EU accession strategy which is a national priority. Major political parties have included proposals for environmental protection in their programmes. These signals demonstrate rising public awareness of rural and regional development and environmental issues (Tisenkopfs, 1998).

The new life-styles and consumer patterns of the urban middle-class are being somewhat constructed around ideas of rurality, green consumerism and nature and could be looked as driving force for rural tourism, ecological food, improvement of rural infrastructure and landscape. The urban consumers start to play increasing role in advocating organic farming and integrated rural development like elsewhere in the developed countries (Tisenkopfs, 1998).

To facilitate public awareness about organic products and to facilitate the consumption of organic food products, a number of seminars and exhibitions have been organised<sup>5</sup>. Promotion campaigns of a labelling mark "Qualitative Latvian Product" or "Green Spoon" is one of the ways to facilitate this. It should be added that the President of the Republic of Latvia Vaira Vike-Freiberga has agreed to become a patroness of the Program for Enhancement of Latvian Agricultural Market. She thinks that the labelling mark "spoon" symbolises a good co-operation among and between Latvian farmers and producers (Valdibas Vestnesis, 2003). The "green" agriculture becomes popular: on the one hand, there is increasing demand for healthy foodstuffs, on the other hand, state provides substantial subsidies to support "green" agriculture and attract more and more small and medium size farms to such a production (Tomsone, 2003).

<sup>&</sup>lt;sup>5</sup> A conference "Organic farming and our health" held at the Latvian University of Agriculture in 2003 was one of the most important events.

#### 3.2. Barriers for consumption of sustainable food products

As indicated above, the purchasing power of Latvian consumers keeps down the consumption of sustainable products. There is no stable middle class in Latvia that might be a target group for organic farmers. Products costs for organic food production are approximately 30-40% higher than those in the conventional agriculture sector (Kalnins, 2003). Besides, state support in the organic agriculture sector is not that significant – 60-150 Euro per hectare. Thus, most people in Latvia cannot afford to buy such products because of their price.

The following factors can be also mentioned as barriers for the consumption of sustainable food products:

- Organic farming sector is very fragmented. There are farms that produce more than 10 different products for the market.
- Major producers of meat and dairy products do not even intend to process products from organic farms because of small quantities and irregular supplies. There isn't any consensus among "green" farmers themselves whether to co-operate with major producers. There is a belief that organic food products loose their value in complex producing process (Tomsone, 2003).
- The consumption of organic products was impeded not only by the low purchasing capacity
  of population but also by the lack of common production and marketing activities of farmers.
  For the most part, producers, retailers and supermarkets have not distinct marketing
  strategies for organic products. The marketing strategies have not been adapted to the local
  market, where consumers, due to their low purchasing capacity, usually choose the cheapest
  products, not that of high quality. Thus, also the demand for organic products still remains
  rather low. Organic food products are "invisible" and largely "inaccessible" to consumers.
  (Tisenkopfs, Sumane, 2000).
- The main reasons for low and irregular supplies of organic products are a lack of knowledge about collective economic activities and a lack of trust in collective actions. Farmers do not know how to harmonise individual and collective interests. Most of them are already engaged in individual distribution chains, and it is difficult to change their orientation. Part of farmers is not much interested in working with less commercially successful colleagues (Tisenkopfs, Sumane, 2000).
- Unprocessed products are mainly supplied to the market (There are only four companies entitled to process such products).

- Only small quantities of cereals, meat and dairy products reach consumers as an organic farm product. Milk, cereals and meat are for the most part processed together with conventional products from the rest of the farms in Latvia.
- The large part of supermarkets currently do not have a distinct approach towards marketing of organic agricultural products;
- There is no one single place or particular places for selling such products (except the socalled "green" market on Fridays in Riga) (Graudins, 2003);
- A number of problems are caused by procedures for labelling foodstuffs;
- Products produced using conventional methods are often advertised as organic farm products. There is a real threat that, because of great demand for such products and loose control, organic food products will be mixed up with products produced using conventional methods. In such a case, people's trust and anything achieved during these years will be lost (Majenieks, 2003).
- Consumers are sufficiently informed about the impact of products on human health (as noted a shopkeeper: "As long as biological products are not known to the consumer, there cannot be any price difference." (Tisenkofs, Sumane, 2000) ;
- There are also shortcomings in the quality evaluation of organic food products (microbiological, physical, chemical indicators);
- Not all experts have positive attitudes towards organic food products (Zola, 2002). Organic farmers often face a lack of interest about their products from the side of other market agents (Tisenkopfs, Sumane, 2000).
- The relative weakness of consumer organisations.

In the future, sales of organic food products could be impeded if stricter regulations concerning public catering of guests in rural tourism business will adopted.

#### 3.3. Possibilities to remove barriers

Both producers and retailers of organic food products cannot expect that most barriers will be removed in the immediate future, basically, for economic reasons. At the same time, those involved in market activities lack necessary marketing information. As a result, it is impossible to evaluate all opportunities and risks involved in producing and selling organic food products. During the exhibition "Riga Food 2003", experts representing the agriculture industry arrived at a conclusion that prospects for a organic food industry, science as well sales of such products would not change without a support to organic farmers (Graudins, 2003).

The growth of the middle class (with a higher purchasing power) and the accompanying shift in values (more attention to the quality of life) will stimulate the consumption of organic and safe food. Different agents (supermarkets, restaurants, hotels, etc) are interested in organic products. Certain dynamism in this sector could be foreseen, as supermarkets will seriously undertake sales and promotion of organic and other sustainable products. Collective market initiatives can increase interest and demand of organic food and will improve co-operation between farmers and sellers of organic products (Tisenkopfs, Sumane, 2000).

The larger part of farmers understands that it would be easier to sell products through collective organisation and not through individual efforts. There is support to collective economic project from the farming consultants and the leaders of LABAO, who are encouraging farmers to set up joint economic activities. Farming co-operatives can serve as intermediaries between farmers and their organisations on the one hand and retailers and consumers on the other hand (Tisenkopfs, Sumane, 2003).

#### 4. Strategies to stimulate consumption of sustainable food products

Latvian scientists suggested that at least 3% of products should be produced in organic farms in the coming years. Unlike their counterparts in Lithuania and Estonia, Latvian politicians have not developed indicators for a preferable development of organic farming (Lithuanian politicians set a target that organic farmers will cultivate 15% of agricultural land by 2010, Estonians – 10% (Kalnins, 2003)). The Ministry of Agriculture expects that organic farmers will cultivate 46 000 hectares or 2% of agriculture land by 2005 (Graudins, 2003). At the moment, the Ministry of Agriculture works out a program for the development of organic farming according to which 10% of agriculture land will be managed and cultivated by using organic farming methods (Zola, 2002). The Minister of Finance Valdis Dombrovskis is more cautious. He believes that, initially, a marketing research should be carried out to find out whether there are enough opportunities for organic farmers and producers. And only then plans of development could be worked out (Valdibas Vestnesis, 2003).

A chairperson of Latvian Association of Organic Agriculture Organisations A.Runce is of the opinion that organisation of co-operatives is one of the priorities in the organic farming sector. It will allow to deliver organic farm products to shops, marketplaces and public catering sector better. Co-operation should be developed on two levels – national and local (Tisenkopfs, Sumane, 2000). "Green" farmers should establish co-operatives whose tasks will be processing and storing of their products (Tomsone, 2003). There is also need for co-operatives dealing with buying up organic farm products. Thus retailers could buy all necessary products at one place. There should be co-operation to process and pack products in order to reach supermarkets. It is reasonable to concentrate organic farms around places where processors of products are situated. It will allow to attract more investments (Kalnins, 2003).

The farmer advisory system should be also supported and developed in the future in Latvia (Tisenkopfs, Sumane, 2000)

Studies on organic farmers have demonstrated that farmers are more successful in cooperation for learning than in production, selling and marketing collaboration<sup>6</sup>. It is typical that marketing

<sup>&</sup>lt;sup>6</sup> Tisenkopfs T., think that the major economic reasons for collective marketing failure were following:

the low income level of many farmers hinders the establishment of co-operatives - farmers have limited possibilities with investments in such co-operatives;

<sup>•</sup> Latvia's biological farms are scattered all over the country, and there are various territorial obstacles which keep farmers from co-operating in terms of transportation, working the land and selling products;

<sup>•</sup> farmers were not sufficiently ready to undertake collective risk. The establishment of a co-operative involves both individual and collective commercial risk, and there is a need for collective risk management forms and skills;

farmers insufficient knowledge about the way in which co-operative operates; farmers lack the skills to undertake collective economic activity;

strategies of organic producers are individual, not collective. This inhibits cooperation with retailers. The farmers must invite agriculture and marketing specialists to their seminars, outspread information about organic produce to conventional farmers and sellers, took more active part in exhibitions, etc. (Tisenkopfs, Sumane, 2000).

One of the priorities for the industry is promotion of products and bolstering consumers' confidence (Majenieks, 2003). Objective and full information about differences of products (either produced using conventional methods or organic ones) should be provided to retailers and consumers. The information should be accessed and available in all places where organic food products are sold as well as on radio and TV, in the press and on the Internet. Free information about products, services and potential partners should be available for all producers and consumers of organic food products (Tisenkopfs, Sumane, 2000). Most experts argue that media play a significant role in facilitating of consumption of organic food products. They inform society about the industry and thus influence its development, shapes "fashion" and "styles".

All available means, channels (including a system of distribution of such products that is still to be created) should be used in selling organic food products. Experts are of the opinion that there is need for a retail chain created by producers themselves. Organic food products should reach schools, hospitals and homes for the elderly. Many experts link the development of organic farming with the development of rural tourism (Majenieks, 2003), i.e. tourism and healthy recreation activities are coupled with consumption of organic food products (Tomsone, 2003). It should be noted that there is a relatively large segment of actually organic but formally not certified food production, particularly in small farms, which cannot afford to buy fertilizers and pesticides (Tisenkopfs, Zobena, 1996). Surpluses from these farms are sold directly to customers or through short chains in localities. Thus, the actual volume of sales and consumption of organic products may be much higher. It is important to consider and use this potential to increase sales of organic products.

A number of experts believe that organic food products could be exported to the Western European countries in the future. Other experts argue that organic farmers should focus on the local market and should put aside dreams about exports. Firstly, because a labelling mark "Latvian eco-product" and a certification system of organic farms in Latvia will not be recognised

majority of farmers don't trust the idea of collective sales; cooperation are hindered a lack of human capacity (initiators and trusted co-operation partners, commercially-minded leaders);

<sup>•</sup> market organisations and institutions are passive in trying to create a demand for biological produce and in stimulating consumption of these products (Tisenkopfs, Roque, Just, 2000).

in other EU countries in the immediate future. Secondly, as the experience of other countries shows, the best and most profitable market for "green" products is one's home country. Experts think that it is necessary to work out a program for the development of organic farming. Mortgage Bank is now actively involved in its preparation. There is also need for the support of scientists because due to the lack of resources only few studies aimed to examine products and their impact on human health are carried out at the moment in Latvia (Graudins, 2003).

#### References

- 1. Agropols, 2004 www.agropols.lv/popup.php3?id=60537
- Balode, I. Genetically modified food causes disagreement. *Dienas Bizness* 8.10.2002 [in Latvian]
- 3. Statistical Yearbook of Latvia. 2002. Central Statistical Bureau of Latvia, Riga, 2002
- 4. Consumption Trends for Dairy and Livestock Products, and the Use of Feed Production, in the CEE Accession and Candidate Countries, *Network of Independent Agriculture Experts in the CEE Candidate Countries*, January 2004 *http://europa.eu.int/comm/agriculture/publi/reports/ccconsumption/fullrep\_en.pdf*
- 5. Diena Labeling helps consumers. Diena. 2.04.2003 [in Latvian]
- Economic Development of Latvia. Report. *Ministry of Economics, Republic of Latvia,* Riga, December, 2003
- 7. Ercmane, E., Riga's residents choose supermarkets., Diena, 2.03.2004 [in Latvian]
- 8. Graudins, U. Green farmers do not ask but act. Lauku Avize. 16.09.2003 [in Latvian]
- Jestrova, O. (2002) Bachelor thesis: Analysis of competition in retail trade of foodstuffs. *Faculty of Economics and Management, Institute of Marketing and Quality Management,* University of Latvia. [in Latvian]
- Kalnins, A. Between opportunities for profits and stockyards of restrictions. *Latvijas Vestnesis*. 29.10.2003 [in Latvian]
- 11. Latvian agriculture and the countryside in 2000: policy and development. *Latvian State Institute of Agrarian Economics.* 1(9) 2001, Riga, 2001 [in Latvian]
- 12. Latvian Association of Organic agriculture Organisations. Leaflets No 1, 2, 3, 4, 5.
- 13. Report on Agriculture 2001. Ministry of Agriculture. Riga, 2002
- 14. Liepa, A. Bio-products healthy fashion. Lauku Avize. 6.06.2002 [in Latvian]
- 15. Majenieks, A. Organic agriculture agriculture in new quality. *Zemgales Zinas*. 11.04.2002 [in Latvian]
- 16. Majenieks, A. Live issues in organic agriculture. *Druva*. 11.06.2003 [in Latvian]
- 17. Peipina, K. Bachelor thesis: Factors influencing consumer behavior in the market of foodstuffs. *Faculty of Economics and Management, Institute of Marketing and Quality Management, University of Latvia.* Riga, 2003 [in Latvian]
- 18. Pelane, A. Non-traditional farming arrives. *Diena*. 15.04.2002 [in Latvian]
- 19. Pelane-Slusare, A. About 200 farmers do business in organic agriculture. *Diena*.6.04.1998 [in Latvian]

- 20. Main indicators of retail trade and public catering in Latvia. Central Statistical Bureau of Latvia, Riga, 2003 [in Latvian]
- 21. Steinfelde, I. Consumer in a jungle of labels. *Neatkariga Rita Avize* 01.09.2001 [in Latvian]
- 22. Steinfelde, I., Small enterprises suffer in the competition among supermarkets. *Neatkariga Rita Avize*, 02.03. 2004 [in Latvian]
- 23. Sumane, S., Transforming Rural Communication. Cesis organic farmers (unpublished report), *Baltic studies centre*, 2003, Riga
- 24. Tomsone, I. Organic farmers breed muscles. Lauku Avize. 25.03.2003 [in Latvian]
- 25. Tisenkopfs, T., Sumane, S., Making Agriculture Sustainable. National Report Latvia, *European Research Project DG XII, Environment and Climate Programme ENV4-97-0443*, Riga: Baltic Studies Centre, 2000
- 26. Tisenkopfs, T., Roqu O., Just, F., Marketing networks in organic agriculture: The cases from Denmark, France, Latvia and the Netherlands. *Paper presented at 13<sup>th</sup> International IFOAM Scientific Conference,* Basel, 28-31 August 2000
- 27. Tisenkopfs, T., Making Agriculture Sustainable, The Latvian Report, *Baltic Studies Centre, Institute of Philosophy and Sociology*, May 1998
- Tisenkopfs, T., Zobena A. Agricultural Advisory System in Latvia. Institute of Philosophy and Sociology, Latvian Academy of Sciences, Latvia Agricultural University, Riga, 1996, 43p.
- 29. Valdibas Vestnesis Official publication by the Minister of Cabinet of the Republic of Latvia. 18.09.2003 [in Latvian]
- 30. Zelmanis, M. Bachelor thesis: Genetically modified food products and regulations for their labelling. *Faculty of Economics and Management, Institute of Marketing and Quality Management, University of Latvia.* 2003 [in Latvian]
- 31. Zobena A. Biological Farming in Latvia: Social Aspects of Development. *Proceedings of the Latvia University of Agriculture*. 1996, No. 7, p. 3-14.
- 32. Zobena A. Development towards sustainable agriculture in Latvia: the role of agricultural advisory system. Environment and Sustainable Agriculture: Proceedings of the II International Conference of Agricultural Scientists from the Nordic and Baltic Countries Tartu, November 24-25, 1995, Estonian Agricultural University, Institute of Rural Development, Tartu, pp. 96-100.
- 33. Zobena, A. The role of the agricultural advisory services in spreading of biological farming practices in Latvia. The Role of Education and Research for Economic and Sustainable

Agriculture and Forestry, *Proceedings III International Conference of Agricultural Scientists* from the Nordic and Baltic Countries, Tartu: Estonian Agricultural University Institute of *Rural Development*, 1997. pp. 74-76.

- Zobena, A. Organic farming in the Baltic countries: social aspects of development. *Biopolitics: The Bio-environment, Volume VI. - Biopolitics International Organization: B.I.O.,* 1998. - p. 225-238.
- 35. Zola, I. Organic agriculture today. Ogres Zinas. 13.08.2002 [in Latvian]
- 36. www.ekoprodukti.lv
- 37. www.hipo.lv
- 38. <u>www.losp.lv</u>
- 39. <u>www.llkc.lv</u>