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Macro-level analysis of food supply chain dynamics and diversity

National report – Latvia

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LATVIA

SUS-CHAIN WP2 National Report (deliverable 8.6)

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1. General description of evolution of food supply chains in Latvia – the historical perspective

The concept of food supply chain (FSC) is understood in Latvia as relations between producers, processors, retailers and consumers. Agricultural experts, policy makers and farmers use also expression "from field to table" to designate the structure of food chains.

Relations between agricultural producers, intermediaries, processing industry, retailing organisations and consumers have changed fundamentally during the last decade. These changes were determined by political, economic and technological change. Restitution of land property rights, break-up of collective farms, establishment of private farms, privatisation of food industries and market liberalisation were crucial factors which altered the agricultural structure (Figure 1). Latvia's integration into the European Union, adoption of EU legislation in the field of agricultural production, food safety, agri-environment, animal welfare also influence dynamics in food supply chains.

In historical perspective of 20 century we may distinguish several phases in agricultural history and food supply chains in Latvia related to general political and economic environment. The triggering factors in FSC change have been political regime shifts, changes in land and production ownership structure, and the general process of industrial and urban development (Table 1). The legacy of 20 century has been quite a diversity economic and political organisation and dynamism of FSC including large industrial food chains, co-operatives, localised food networks, international trade etc. Food chains have also seen different types of political regulation – guardianship of large land-owners under czarist regime, support to small farmers and co-operative movement during 1920-1940, formation of large-scale "agri-industrial complex" under soviet rule, privatisation and liberalisation of agriculture and food production after restitution of Latvia's independence in 1990s, introducing complex regulation of FSC in the process of Latvis's integration in the European Union. These historical variations of food supply chains with their sustainability potentials should be reconsidered in the current debate about sustainable FSC and their role in sustainable rural development.

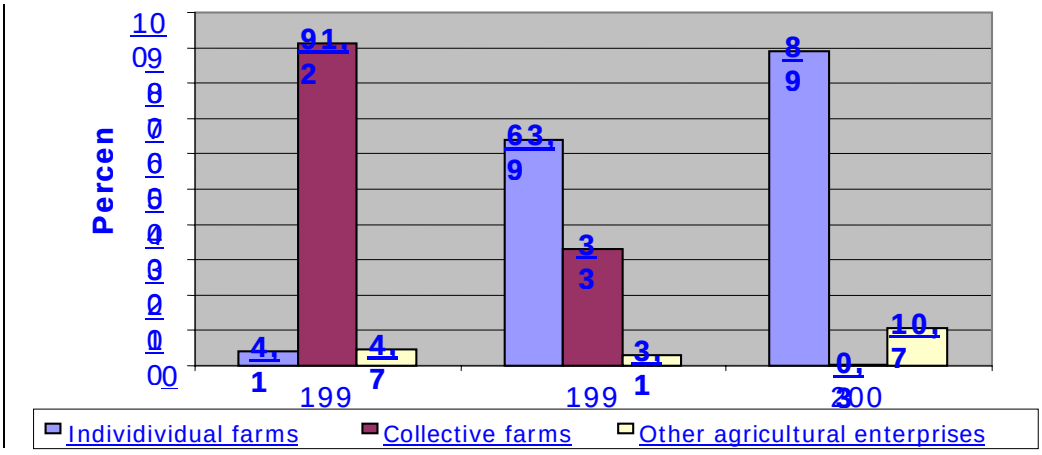
Table 1. Phases in development of FSC

Period	Polity and economy	Agricultural structure	Food supply chains
1900 – 1918	Latvia was a part of Russian empire, one of industrially and agriculturally most developed regions. Riga was the third largest industrial city after Moscow and St.Petersburg.	Land ownership was concentrated in hands of German nobility. There were approximately 600 large country estates – from several hundred up to several thousand hectares in size, which belonged to German landlords. There were also approximately 60 thousand farms, which belonged to Latvian peasants.	Estate farming was comparatively advanced from agronomic and technological point of view, production on country estates was both multi-branch and specialised. Estates were integrated in larger regional and even international markets, which generated landlord income. There were also production and labour exchange between estates and peasant farms. These food networks supported dynamic industrialisation and growth of towns in Latvia. Consumers were organised in first co-operatives.
1918 – 1940	Latvia was an independent republic. As a nation state it was	Nationalisation of land ownership of German nobility, followed by Agrarian Reform of 1924. This	Although agricultural structure became scattered in some 300 thousand producing units the state

	constructed on implicit ideology of peasant state – characteristic to nation states in Northern Europe in the beginning of 20th century.	process lead to dissolution of large country estates and establishment of some 150 thousand new peasant farms. The state provided strong political and economic support and protectionism of agriculture and promoted co-operation.	support stimulated gradual consolidation of farms and modernisation of production. Farms were integrated in local food networks, local co-operatives and producers unions. Dairy and pig productions were two most developed sectors. Dairy farmers were organised in regional and national unions and state support measures facilitated export of dairy and meat products.
1940 – 1991	Latvia was annexed and became a part of Soviet Union. Industry and agriculture was nationalised and governed according to rules of planed economy.	Land ownership rights were abolished. Overall collectivisation of agriculture begun in 1949 together with deportations of wealthy farmers to Siberia. Numerous kolhozes (collective farms) and sovhozes (soviet farms) were established which concentrated agricultural land. Former independent farmers became labourers of kolhozes and sovhozes. By mid 1980 there were 800 large collective farms in Latvia, some of them advanced agricultural enterprises with modern production technology. The soviet state stimulated modernisation of agri-industrial farms, although management system and lack of incentives lead to flaws in economic performance. In the meantime rural households could retain small land plots for family production.	Agricultural production and correspondingly food supply system was double sided. 800 collective farms provided agricultural production, which often failed to meet consumer demands. Processing and marketing was concentrated in state owned industries. FSC were organised as large-scale administratively managed food complexes called "agri-industrial complexes". They were characterised by all sorts of deficits. In the meantime there was important segment of individual "semi-official" production on household plots, which, for instance, in dairy sector reached 25%, on meat production – some 15% and in some groups of vegetable production – even up to 40% of total production. This informal production was integrated in diverse marketing systems, which included collective farms, state owned processing enterprises, farmers markets, informal sales channels.
1991 till now	Latvia regained its independence. Transition from planned to market economy took place in the beginning of 1990s through such mechanisms as restitution of ownership rights, privatisation, price liberalisation, establishment of market institutions. Starting from	Law on property rights resituated land ownership structure as on 1940 (before soviet annexion). Former owners and their heirs were given right to apply for land and restitute farms. This process lead to dissolution of large collective farms and reestablishment of some 200 thousand small (average size – 20 hectares) farms, which in most cases lacked appropriate buildings, machinery, investment capacity and	FSC in this period are characterised by dramatic transformation. Break-up of large-scale administratively commanded chains was accompanied by establishment of market relations between new private farmers, privatised processing enterprises, importers, retail companies. Inability of many producers to sustain competition, provide production of scale and meet quality demands throw them

	mid-1990s political process became dominated by EU integration policies.	farmers' agricultural knowledge. Agriculture experienced sharp decline in production. In the meantime many small processing industries went bankrupt whereas large industries were privatised by non-agricultural entrepreneurs. From the end of 1990 agricultural sector stabilised and started to recover after crisis.	back in weak position in FSC. Large processing industries, retailers and importers dominate development of conventional food chains. At the same time farm structuring and consolidation tendency as well as liveability of many small farms determine revival and development of traditional and alternative food networks – local markets, farmers markets, direct sales, informal food networks, emergence of innovative production and marketing.

Figure 1. Breakdown of aggregate land areas



Source: Latvian State Institute of Agrarian Economics, basing on materials of the Land and Cadastre and Information headquarters of the State Land Service

2. General configuration of food supply chains in Latvia

The overall structure of FSC depends on actors, their definitions of sustainability, and relations between actors in chains. This section concentrates on three aspects of sustainable FSC in Latvia: perceptions and definitions of sustainable food supply chains, characterisation of actors in FSC and preliminary classification (typology) of diversity of FSC.

Perceptions and definitions of sustainable FSC

In agricultural discourse in Latvia the notion of sustainability is usually associated with environmental sustainability and concept of sustainable agriculture is often equated with concept of environmental protection as well as biological agriculture. Recently this quite limited understanding is being broadened including other aspects and dimensions of sustainable agriculture and rural development, such as food quality, farm income, rural livelihood, diversification of employment and other. In relation to food supply chains such aspects of sustainability are being mentioned:

- Food safety,
- Health, healthy diet concept,
- Tasty food,
- Quality standards and requirements,
- Environmental protection in agricultural production,
- Organic agriculture,
- Plant and animal protection,
- Animal welfare,
- Decent price paid to producer,
- Products with local identity and origin,
- Direct relations between producer and consumer (or short chains, e.g., farm-to-flat sales),
- Food labels,
- Transparency of decision making in the chains,
- Trust among chain participants,
- Fair trade and economic relations,
- Alternative products,
- Traditional products,
- Local products,
- Rural development,
- Diversification, and other.

It should be noted that these are only elements or aspects of sustainable food chains as identified by some interviewed experts and there is no coherent understanding and discourse among agricultural producers, processing industry, retailers, consumers and policy makers what sustainable food chains are or should be. Perception and definition of sustainable FSC depend on actors, their interests, knowledge and involvement in chains. The further in-depth case studies should address this issue how definitions and meanings of sustainability are created, shared and transmitted from one chain participant to another.

Characterisation of actors and their involvement in FSC

General characterisation of farming sector: As described earlier in Table 1, privatisation of agriculture and restitution of pre-war land-ownership has resulted in the formation of small holding structure. Agricultural Census of 2001 counted 50 thousands peasant farms (this notion corresponds with Western concept of family farms) and 115 thousands household plots in Latvia (Table 2). The total number of farming households reaches 165 thousands. According to data of Central Statistical Bureau, currently there are 752 thousands rural residents in Latvia, of which 273 thousands represent households and enterprises engaged with agriculture and use of rural resources. The number of directly employed in agriculture and forestry is calculated at 142 thousands people which constitute 14% of workforce.

Table 2. Land ownership structure and number of farms in Latvia in 2001

Source of data	Peasant farms			Household plots		
	Number of farms	Land area of farms, thsd, ha		Number of farms	Land area of farms, thsd, ha	
		Total area	Of which agricutural land		Total area	Of which agricutural land
Land Balance data	101 844	2 443,6	1 429,7	150 844	1 209,6	723,4
Agricultural census	50 384	1 766,9	1 078,2	114 549	1 389,7	844,8

Small farms: There are two major tendencies, which characterise current development in farming sector – tendency towards petit production and subsistence farming and tendency towards commercial large-scale production. These tendencies draw the major division between so called "small farms" and commercial farms. It has been noted by some researches, that the small-scale, low-input/ low-output and subsistence oriented farming is predominant outcome of agricultural reform of 1990s (Davis, Slee & Tisenkopfs, 1997). Majority farms in Latvia are actually households that have ownership or access to a plot of land and do farming predominantly for the needs of family subsistence. These farms often lack capital financing, machinery and buildings, their production and subsequently marketed volumes are small generated income is low. According to SUDAT surveys, average size (8 to 40 hectares) farm is loss making. Losses in inefficient agricultural branches are often covered from incomes of forestry activities.

Commercial farms: On the other hand, trends toward efficiency, large-scale production, technological modernisation and concentration of land have also taken root and efficient commercial farms, agro-processing and service enterprises have developed. According to assessments of Ministry of Agriculture, there are about 10,000 commercial farms in Latvia. These are farms, which produce for the market, invest in new technologies, are well integrated in food chains, receive agricultural subsidies (the number of subsidy receivers is the basis of this calculation), are specialising, risk-taking, and attracting EU SAPARD finances (Special Action Programme for Agriculture and Rural Development). Commercial farms are important employers and taxpayers in rural communities. Involvement of commercial farms in food chains is organised on the basis of contracts with processing industries.

In reality there are a greater variety of farms in Latvia beyond mainstream ideal type division in subsistence and commercial farms. According to such structural characteristics as land area, volume

of production, technological equipment, use of labour, political support, income, financial investment, marketing, social demography, use of knowledge – it is possible to distinguish several types of farms. Such types are: small farms, subsistence farms, collective subsistence farms, survival subsistence farms, part-time subsistence farms, pensioner farms, commercial farms, statutory companies, partially commercial farms, agri-forestry farms, minimum production farms, quasi biological farms, biological farms. It should be noted that this typology is incomplete, descriptive and somewhat overlapping, however it is grounded in findings of earlier researches and results of 17 in-depth interviews with farmers, which were carried out within SUS-CHAIN project. An attempt to typify farms according to their structural characteristics and involvement in FSC is represented in Table 3. Farms belonging to the same type might operate in different sectors of agricultural production.

Table 3. Farm typology and involvement in FSC

Farm typology	Typical structural chatracteristics	Typical involvement in FSC
"Small farms"	• Usually registered as household plots, might be also peasant farms • Small size • Small volumes of production • Two – four caws • Difficulties to conform with quality demands • Not organised in marketing co-operatives	• Self consumption • Provision of food to extended family and relatives • Giving food • Partial integration in conventional chains • Small processing industries as buyers • Sales to processing industries through individual channels • Sales with assistance of traditional intermediaries • Personal sales on local and regional markets • Sales on local and regional markets through intermediaries • Individualised, informal, non-institutionalised marketing channels (e.g., sales to schools, hospitals, small shops, etc.) • Direct sales to consumers
Subsistence farms	• No state subsidies • Subsidising farming from other sources of family income, including social transfers • "Two caws families" • Small income from milk • Farm work can be combined with outside employment	• Poor integration in conventional chains • Uncertainty about marketing techniques and consumer demands in conventional chains • Traditional chains: local markets, small shops, small processors • Food supplies for family and relatives • Giving food to relatives, neighbours for in kind assistance
Collective subsistence farms (quasi "kolhozes")	• Networks of small, subsistence farmers • Localisation • Informal social and economic exchange	• Labour and food exchange in neighbourhood community • Parish exchange of between farms, excluding intermediaries • Mutual help networks • In kind exchange

Survival subsistence farms	• Less that 5 to 10 hectares • Self consumption • "One caw" farm household	• Practically no sales • Food self-provision • Informal exchange
Part-time subsistence farms	• Outside employment • Size less than 10 hectares • Volumes of production too small for contracted sales to processing industry	• Self consumption • Farming effect on landscape management • Trade with neighbours
Pensioner farms	• Ageing farm owner • Structurally similar to small and subsistence farms • Subsidising farming from pensions	• Similar as for small and subsistence farms
Small commercial farms	• Might be registered as enterprise and VAT payer • Specialisation • Niche production • development of side-line business • Use of subsidies	
Large commercial farms	• Registered as enterprise and VAT payer • Specialisation • Multiple business lines • Hired labour • Learning and expertise • Use of advisory service • Use of subsidies • Productive investments • Participation in SAPARD programme	
Agri-forestry farms	• Forest ownership • Main income from forestry • Cross subsidies to other branches	
Minimum production farms ("precautionary farms")	• No investment • No credits, no risks • Minimum production • Scepticism about agricultural policy • "Wait and see" • Other sources of family income	
Quasi biological farms	• Farmers self-definition of "organic" which differs from official • Non-registered and non-certified • Not using chemicals • Having approval in family	• Similar as for small and subsistence farms • Not involved in specific organic marketing • Neighbours, relatives and personally known urban residents as customers • Customers approval and trust in quality • Social network composition and organisation of chains
Biological farms	• Officially registered and certified farms	• Local markets • Specialised shops • Small shops • Direct sales to individual

		customers • Green markets • Niche customers (e.g. restaurants, school and kindergarten canteens) • Specialised processors (e.g. in medical herbs) • Conventional chains (e.g. for milk and meat products) • Sales through informal individualised channels • Self consumption

Following hypothesis that "small" and commercial farms are two mainstream agricultural production units in Latvia, one might assume that their involvement in FSC also differs. Commercial farms are more oriented towards inclusion in large-scale conventional food chains, whereas small farms are integrated in variety of chains, which include both conventional, traditional, alternative and new chains. Particularly small farmers engage and develop individualistic, non-institutionalised marketing channels, which though might have considerable importance in overall food turnover and which exhibit long-term liveability and sustainability from rural development perspective.

It should be mentioned that practically absolute majority of small farms and large part of commercial farms are mixed and multi-branch producers, therefore farms are usually included in several food chains. The types of chains might depend not only on type of farms business operation (farming strategy), e.g. – whether a farm is a large-scale commercial producer or a petit subsistence producer which sales small surpluses – but also on type of product. Certain chains dominate in certain production sectors, for instance – in vegetables the main actors in chains are local markets, whereas, for example, in dairy sector large processing industries and retailers dominate the chains. Empirically it is possible to build up typology of FSC in Latvia in which so called "conventional", "traditional", "alternative", and "new" food chains can be distinguished. All these chains are institutionalised in certain arrangements.

Processing industry: Food industry has recovered fast after collapse of planed economy, as a result of privatisation and considerable foreign investment, particularly in dairy, meet production and alcoholic beverage sectors. Currently food industry contributes 35% of the total industrial output and is among biggest exporters. The largest sectors are dairy industry, grain and cereal processing, meat production, fishing industry, sugar industry, beer breweries. Food companies play the dominant role in agro-food chains. Large companies invest in modern technologies, reduce production costs, and take over smaller businesses. They improve milk collection systems to meet quality and food safety regulations imposed be national and EU regulations. Dairy industry is considered most advanced in this respect.

Processing industries can be classified in small, medium-size and large enterprises. Although bigger industries have market advantages due to economy of scale, investment capacity, and advanced quality control, the smaller industries appeal for consumer demand in tasty, healthy, regional and niche products.

Market organizations: Retailing, perhaps, has been the fastest developing segment in food chains in the last decade. Food market has seen, on the one hand, increase in number of small shops and proliferation of local food markets (e.g in city suburbs), and on the other hand, concentration of food

market and consolidation of few top retailers. In the last five, six years or so large food retailers have concentrated considerable volume of food sales through their supermarket and hypermarket chains, such as *RIMI, Mego, City Market, T-Market, Sky*. They mainly co-operate with big processing industries, large growers, and importers, thus acting as driver towards market concentration and expansion of conventional chains. Small processing industries and producers have difficulties in relations with supermarkets for various reasons (e.g. difficulties to provide regular supplies of consistent quality products in large volumes). Relationship between small producers, small processors and big retailers could be an interesting aspect for investigation in case studies.

3. Overview of the regulatory and policy environment and institutional setting

Since the end of 1990s Latvia has seen development of new kind of rural policies based on concepts and discourses of integrated development. It presumes diversification of rural economy, strengthening of primary agricultural production, processing and service sectors, enhancement of small business, increasing employment opportunities. It is also about balanced regional development, support to less favourite areas, environmental protection, landscape management, infrastructure improvement, attraction of investments, participation of residents in governing process. Such rural and agricultural policy documents as "Latvia Rural Development Programme", "Agricultural Development Conception", "Agricultural Development Programme", "Single Programming Document" and "SAPARD Latvia Rural Development Plan" include several policy objectives, which presume improvements in functioning of food chains in relation to sustainable rural development:

- To increase competitiveness and export potential of Latvian agriculture and to facilitate sustainable agricultural and forestry activities;
- To restructure employment – according to SAPARD Rural Development Plan employment in agriculture has to be reduced to 5% instead of current 13,7%;
- To support development of non-agricultural business;
- To preserve rural environment, landscape and population;
- To facilitate agricultural development by using Latvia's natural and socio-economic potential;
- To facilitate multifunctional agriculture, thus increasing employment possibilities in rural areas;
- To introduce administrative mechanisms to implement structural transformations in agricultural and rural development.

Institutional setting of FSC is in place: political institutions, regulations, quality inspections, etc. There are different institutions, which regulate food chains:

- Ministry of Agriculture (Veterinarian and Food Department) prepare policy proposals regarding food quality, production norms and standards, regulations and procedures of certification. These proposals usually are being consulted with agricultural organisations like Latvian Agricultural Joint Consultative Council and Latvian Food Sector Joint Consultative Council before they are submitted for approval in government (Cabinet of Ministers). Ministry of Agriculture is responsible for enforcement of respective EU legislation;
- Latvia University of Agriculture and research institutes;
- Food and Veterinarian Service is the main policy implementing and controlling agency responsible for quality and safety of food products, both domestically produced and imported;
- Rural Support Service is a policy implementing agency which distributes agricultural financing and administers subsidy programmes. Rural Support Service has regional branches.
- Agricultural Advisory and Education Support Centre and its regional divisions provide consultations and training to farmers and other groups of rural population in production technologies, bookkeeping, non-traditional agriculture, marketing, application procedures for agricultural subsidies and other issues;
- Latvian Customs Service and Financial Police are responsible for control of imported production;
- Ministry of Welfare and Latvian Food Centre set and control food safety standards;
- There are also several rather influential NGOs which promote quality foods and advocate consumer rights, for example *Consumer Rights Association, Health Promotion Centre* and other organisations;
- Latvian Agricultural Joint Consultative Council (LOSP) as an NGO has a particular role in agricultural policy making. LOSP unites 48 agricultural organisations (sectoral and multi-sectoral) for cooperation with governmental and non-governmental institutions. The objectives of LOSP are:

to promote production, processing and export of competitive agricultural products and to promote development of alternative employment in rural areas. The organisation is governed by elected board, it has 15 regional offices and a bureau in Brussels. LOSP strives for representation and coordination of interests of all agriculturists. This organisation proposes changes in legislation, approximates policy proposals so that new legislative initiatives are harmonised with the interests of agricultural producers and processors, coordinates standpoints of different agricultural organisations, informs the Ministry of Agriculture about problems in the market.

Since the collapse of the Soviet Union and collective farms, there have been many problems with laws that would set the new rules for farming. The new law on food circulation/supply (P□rtikas aprites likums) was adopted in 1998. According to this law all food producers and processors have to undergo certain quality standards and get certification in order to participate in agricultural business. Only in June 2003, however, the real process of certification has started. So the quality of products is one area that exhibit big improvements.

Democratic governance of rural and agricultural policies (and in more narrow terms – FSC) is partially achieved through consultation process with producers associations and agricultural organisations united in LOSP. Rural and agricultural policy making is more participatory than in many other sectors of governance. As s result policy process is more transparent. On the other hand questions might be posed whether these consultations sufficiently rise policy objectives beyond primary agricultural production and include in policy agenda issues about complexity, integrity, sustainability and contradictions in the whole agri-food complex – different FSC and food networks. If there is a certain capacity for agricultural organisations to influence FSC, this still could not be said about wider civil society and consumers organisations capacity to control food policy and influence governance of FSC.

LOSP has certain potential to influence relations among actors in the food chains. There are six horizontal (multi-sectoral) organisations, like Latvian Farmers Federation, Young Farmers Club, Association of Agricultural Cooperatives. The other organisations are being formed by sectors – 8 organisations in crop production and processing sector, 5 organisations in dairy sector, 8 organisations in meet production, 5 organisations in fruit and vegetables group.

Some of most influential producers' organisations are Latvian Grain Producers, Preservers and Processors Association, Latvian Dairy Association, Latvian Meat Producers and Processors Association and others. These organisations unite mainly large producers and processing industries and they have set tasks to stimulate economic co-operation and influence agricultural policy. With regard to outcomes of activities of large producers and processors organisations and their influence on FSC we can trace resemblance with the influence of large retailers – namely they affect expansion and concentration of large-scale conventional chains. Small producers in general are politically less organised and represented in policy networks and they have less influence in LOSP in comparison with large producers associations. The main organisation of small farmers is Latvian Farmers Federation. Partly these organisations are interested in advocating and supporting traditional and alternative food chains (e.g. local markets, farmers markets, small processing industries, smaller retailers, local food networks, etc).

There are more than 10 organisations in non-traditional agriculture. Producers of non traditional and niche products are united in their associations, such as Latvia Fur-breeders Association, Fish and

Crayfish Breeders Association, Latvian Association of Apiculturists, Association of Wild Animals Breeders, Latvian Association of Biological Agriculture Organisations (LABAO). Non thatitional producers and their organisations play particular role in emergence of new food chains.

According to agricultural census 3,6% of farms in Latvia practice biological agriculture. LABAO plays important role in development of biological agriculture, spreading knowledge about environmentally friendly methods, assisting farmers groups to organise and to establish common marketing. There are more than 15 regional biological agriculture organisations in Latvia, most active groups are in C□sis, Liep□ja, Prei□i, Limbaži, and Aizkraukle districts. LABAO has collaborated with Ministry of Agriculture in elaboration of biological agriculture regulations and certification system. Only in the end of April 2003 the necessary legislation on biological agriculture were adopted by the Cabinet of Ministers (Biolo□isk□s lauksaimniec□bas produktu aprites valsts uzraudz□bas un kontroles k□rt□ba). This legislation sets the standards of biological production, regulates trade and control, thus ending the long period of confusion what kind of production and food can be called biological. Farmers who produce biologically Thus finally are legally defined and can start participate in FSC with according certificates and labels of production. Before the law was adopted there was no judicial basis for controlling those producers that called themselves biological farmers (so called quasi-biological farms, see Table 3 above). Food and Veterinarian Service is responsible for monitoring the quality of biological production. The new law also gives the opportunity for farmers to export their production to European markets that was not allowed before and, finally, this gives them opportunity to apply for finances from European funds (SAPARD etc.). All these processes stimulate emergence, although slow, of organic food chains in Latvia.

4. Sector by sector summary of food supply chains

4.1 Dairy

4.1.1 Production and chains

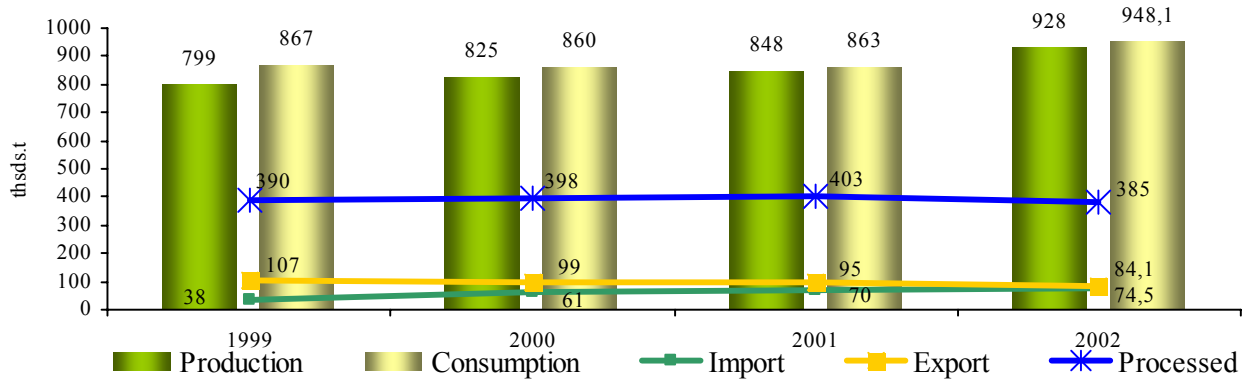
Table 4. Milk balance* (thsds. t) 2000.-2002.

	2000.	2001.	2002.
Remaining amount at the beginning of the year (recalculated in milk)	25,4	40,2	34,7
Resources			
Produced milk and dairy products (recalculated in milk)	825,0	848,0	813,7
Dairy products import (recalculated in milk)	61,3	69,5	75,9
Total resources	999,0	957,7	922,1
Consumption			
Milk and products consumption (recalculated in milk)	859,7	828,1	816,1
Including: consumption in internal market	608,9	657,2	640,4
consumption for feed-stuff	163,5	170,9	175,7
Dairy products export (recalculated in milk)	99,1	94,9	91,8
Total consumed milk and products (recalculated in milk)	958,8	923,0	905,6
Remaining amount at the end of the year (recalculated in milk)	40,2	34,7	16,5

*- including goat milk
Source: LAD

Figure 2.

Milk Production and Consumption Balance, thsds.t. 2002



Source: Central Bureau of Statistics

Table 5. Produced amount of dairy products year 2000.-2002. (thsds. t.)

	2000.	2001.	2002.	2002./2001. (%)
Butter	7,20	6,90	5,70	82,6
Cheese	10,64	11,57	11,9	102,9
Milk preserves	4,20	2,27	n.d.	-
Skimmed milk powder	3,50	2,30	2,2	95,7

Avots: Central Bureau of Statistics, LPCS

Table 6. Produced and consumed cow milk product dynamics year 2000. - 2002.

	2000.	2001.	2002.	2001./2000. (%)
Produced milk (thsds. t)	822,9	846,2	811,5	95,9
Milk and milk produkct consumption (thsds. t)	772,4	828,1	813,9	98,3
Self-provision (%)	106,5	102,2	99,7	

Source: ZM, LAD

Table 7. Milk producing farm grouping according to dairy cows number at the end of the year 2002.

Dairy cow number in the farm	Farm number according to dairy cows amount		Dairy cows in a group	
	Number	%	Number	%
1	39 228	55,1	39 228	19,3
2	17 984	25,2	35 968	17,7
3 - 5	9 877	13,9	44 470	21,9
6 - 9	2 442	3,4	19 721	9,7
10 - 19	1 175	1,6	18 240	9,0
20 - 29	228	0,3	6 811	3,4
30 - 49	134	0,2	5 697	2,8
50 - 99	102	0,2	7 617	3,7
100 - 199	52	0,1	7 730	3,8
200 - 299	19	0,0	4 986	2,5
300 and more	28	0,0	12 656	6,2
Total	71 269	100	203 124	100

Source: Central Bureau of Statistics

Table 8. Milk production in farms year 2000. - 2002. (thsds.t) *

Type of farm	2000	2001	2002
Peasant farms, household plots and private subsidiary farms	727,7	751,7	713,6
State farms and statutory companies	97,3	96,3	100,1

* including goat milk

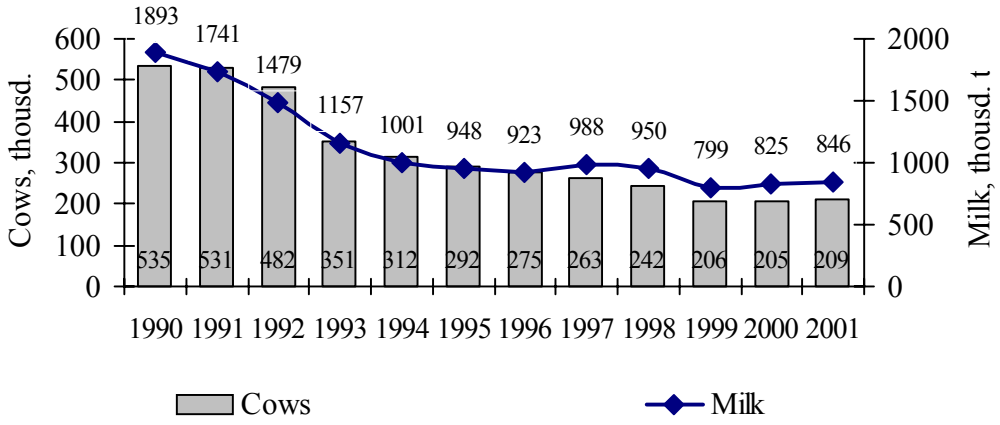
Source: Central Bureau of Statistics

Table 9. Cows herd quality 2000.-2002.

	2000.	2001.	2002.
Number of cows (thsds.)	204,5	209,1	204,6
Number of cows under inspection (thsds.)	73,3	74,5	75,8
Average cow milk yield (kg/per year)	3 898	4 055	3 958
Average milk yield from cow under inspection (kg/per year)	4 408	4 763	4 833
Milk fat % (Cow under inspection)	4,44	4,38	4,37
Milk protein % (Cow under inspection)	3,31	3,27	3,25

Source: VCIDAC and Central Bureau of Statistics

Figure 3. Dynamics of changes in production of dairy products in 1990 - 2001



Source: Central Bureau of Statistics

4.1.2. Institutions, organisational forms and governance

General situation

- Dairy sector alongside the pig-breeding and cultivation of grain is one of the key sectors in Latvia's agriculture. In the structure of agricultural final product dairy sector proportion composes 22%.
- Dairy-farming is one of the priority sectors in Latvia's agriculture; therefore its development is highly supported from the state. Total state subsidies for the cattle-breeding development reached Ls 9369,9 thousands in 2002. Subsidies were used in 22048 cases by 5346 receivers. From the cattle-breeding programme budged 45,9% were assigned for dairy-farming development.
- Cows' number and milk producing amounts continue to decrease, but milk quality and milk yield indicators increase, although milk yield still drops behind from potentially possible yield. Milk producing decrease more often takes place at peasants' farms and households, while at state and statute companies producing increases.

- Milk producing farms' efficiency is low; therefore the development of dairy sector is hampered. Small sized milk producing farms and small number of dairy cows in farms are topical problems in Latvia.
- Self-provision with dairy products in 2001 was only 98% in Latvia. For comparison in Estonia it was 155%, Lithuania - 142%.

Processing industry

Among Baltic States there is the highest number of milk processing enterprises in Latvia – 53, while in Estonia there are 45 and Lithuania-38 enterprises. The number indicates of fragmentized milk processing industry and insufficient expenditure of power at enterprises in Latvia. Fragmentation and inefficiency increase the cost of product decreasing products' capacity to compete. The biggest milk processing industries and dairy products exporters are holding companies *R□gas piena kombin□ts*, *R□gas Piensaimnieks* (in year 2002. enterprise turnover was 14,2 mill. Ls.), *Tukuma Piens* and *Vidzemes piens*, altogether 11 processing industries. However milk producers sell less than 50% of the milk produced to processing companies. The difference between produced and realized for processing is milk consumed at the farms as well as milk offered at local markets.

Small sized milk producing farms and small number of dairy cows in farms are topical problems in Latvia. In most farms there are 1-5 dairy cows. At the end of year 2002 in such kind of farms were located 58,9% of total dairy cows. In average there are only 2,9 dairy cows in herd. Such distribution of farms does not promote development of milk production, improvement of milk quality and attraction of investment and milk production efficiency is low. However, while the number of small farms slowly but gradually decreases, the number of big farms increases. The enlargement process enforces economic motivation to invest in modern technologies and development.

Regulation

The Food and Veterinary Service established in 2002 is a state administrative institution supervised by the Ministry of Agriculture. FVS ensures unified state surveillance and control over the food circulation and the sector of veterinary medicine. The food circulation surveillance takes place in whole food chain according to conception "from the farm until the table" - including feed production and distribution, animals' health, welfare control and product yield, food processing, producing, packing, storage, distribution, transportation, retail and wholesale trade and public catering.

4.1.3. Areas that exhibit dynamism

Dairy sector is very dynamic (M. Rava interview). At present there is a decrease tendency in number of small farms and increase of big farms. Small farms face the challenge as Latvia joins EU – they have to decide whether to grow and develop to meet the standards or to close production industry for the market. Due to subsidies bigger farms are able to invest in development and modern technologies. This is practically inapplicable to small farms due to small overturn. Besides, bigger farms are able to diversify their products, while smaller farms more often rely on direct communication with their customers and deliver their products at customers home. In most cases small and medium sized dairy producers has established their food chain in local market.

Significant factor of development in dairy processing is export market. Top-line export products are butter, cheese and dry milk. Dairy processors have successfully reoriented themselves from CIS countries to West Europe countries. Main export partners are Germany and Netherlands. In order to enforce development of export Latvia's dairy processors have to facilitate identification of their products, which means applying of marketing instruments, advertising and trademark promotion.

Alongside the processes mentioned above the biological dairy develops. It is indicated by growing numbers of biological milk producing - in 1999.there were produced 228 tons of biological milk, but

in 2001 already 3863 tons were produced. The development of biological products is hampered by insufficient amount of production to make processing economically profitable. However at the same time the growing demand for biologically produced dairy products is not met. Consumers are encouraged to establish their own food chains with producers as purchase of these products at the retail trade is inconvenient. Besides the cooperation of biological producers is not expanded, as well as biological farming education is not sufficient.

4.1.4. The sustainability and transparency of the current structure

The objective of dairy sector development is to reach at least 100% self-provision in Latvia and to increase market share in international dairy products market. Support is aimed at production enforcement, herd enlargement, quality raise and technological modernization.
Such factors as unfavourable farm structure (in particular the large number of small farms) and presence of semi-subsistence farming combined with an evolving commercial farming sector bring forward a range of dilemmas. This dualism of structures is likely to exacerbate different kind of tensions during the restructuring process, when not only farm structures, but services and off-farm employment opportunities as well will require development.

4.1.5. Rural development implications and effects of potential changes

Due to changes in dairy sector the number of cows and farms are decreasing, but milk quality and milk yield is increasing. Processing industries modernization takes place. There is a growing demand for qualified labour force and the role of education increases in rural labour market.
One can foresee that the number of small sized farms will continue to decrease. If the prices for milk purchase rises, as well as the number of large farms and cows increase, then overall efficiency of dairy sector in Latvia will be improved.

4.1.6 Bottlenecks for change

Most important bottlenecks for change are:

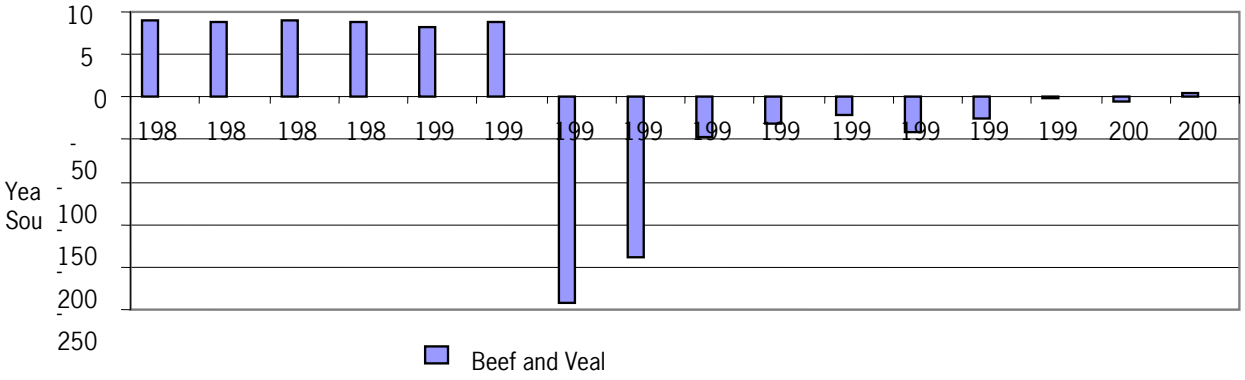
- Low level of cooperation between dairy farmers;
- Slow process of milk quality improvement;
- Unfavourable farm structure and fragmented dairy production and processing;
- Low productivity of dairy cows, therefore small production amounts;
- High expenses of producing, processing and sale;
- Lack of current assets for investment in farms and enterprises modernization;
- Conflict between farmers and milk processing industries on milk quality tests.

4.2 Beef

4.2.1 Production and chains

Cattle breeding in Latvia traditionally have developed as mixed dairy-meat production. During transition period this sector has experienced steady decrease and some recovery is evident quite recently (see Figure 4).

Figure 4. PSE for beef and veal in 1986 - 2001, %



4.2.2. Institutions, organisational forms and governance

General situation

Mixed meat-dairy production is traditional for Latvia, it is developed all over the country, only in the central area (Zemgale plain) with the richest lands suitable for intensive crop production number of beef farms is small. Profitability is low as meat market is distorted by legal and illegal import. Self-provision of beef is not yet achieved. Cattle breeders opinion is that state control is insufficient and there is a lot of illegal meat (including beef) of unknown origin in the inner market as prices declared on the borders are higher than purchasing price for extra class bull (interview with A.Veide, member of the board of *Latvia Association of Meat Cattle Breeders*).

There are state subsidies for calves from suckler cows of beef breed, calves from suckler cows of other breeds (accordingly 80 and 50 LVL), also subsidies for young extra and the first class cattle (owned more than 6 month, more 400 kg purchase livestock) sold for meat – young cattle of beef breed (except heifers), hybrids with beef breeds and any other young cattle (if there are at least 20 animals in the herd), accordingly 130, 90 and 60 LVL. Purchase of breed material abroad is also subsidised – 50% of price.

Processing industry

In meat processing industry beef meet is used more by local processing companies (such as *Tri□ls* in Ogre) but large processors, for instance, *Rigas Miesnieks*, *Tukuma Ga□as kombin□ts*, mostly utilise import supplies. Small farms sell cattle to buyers-up, large cattle-breeders have contracts with processing companies. Fresh beef to direct markets and small retail outlets is supplied by small slaughteries. The most part of small slaughteries, unable to meet EU regulations, shut down their operations. Some time and financial resources will be necessary for them to adjust to these regulations.

Specialised beef production is relatively new sector experiencing steady increase during the last decade (see Table). It is regarded as perspective and promising export opportunities in future as Latvia is not affected by BSE and foot-and-mouth disease limiting beef production in many European

countries. Latvian farmers have Charolle, Limuosin, Angus, Herefordshire and Highland cattle and also hybrids with these breeds.

Table 10. Specialized beef breed animals per group

	01.11.2000	01.09.2001	01.01.2002	01.01.2002 % of 01.11.2000
Total	15 524	19 813	19 265	124.1
Of which female	7 694	9 952	9 942	129.2
Heifers, aged 1-12 months	2 666	3 616	2 809	105.4
Heifers, aged 12-24 months	2 671	3 184	3 916	148.3
Suckler cows	2 357	2 640	3 217	136.5

Source: SBDPC

Beef breeders are using services of small slaughteries and trying to find their own market niches - direct supplies to small retail outlets, restaurants. The net of small and medium size slaughteries corresponding to needs of biological and high quality meet processing is insufficiently developed. Slaughterie in Saldus region is shut down as not meeting the EU demands, but recently another one has started operation in Zaube, C□su region. To reduce stress in slaughtering process to preserve high meet quality specific methods should be used. LAMCB is negotiating with the State Veterinary service to allow shooting of animals straight in the pastures and only after that transport them in short time to the slaughterie for further processing. Now animals are kept in slaughteries for 48 hours. To meet food safety demands transportation distances should be small. Only few slaughteries (with facilities to test BSE) are allowed to process animals older than 36 month since 01.05.2003.

The main producers' organisation in the sector is *Latvia Association of Meat Cattle Breeders* (LAMCB) founded in 1998 uniting 69 members - pedigree cattle breeders with 2500 animals in their farms (including 1000 suckling cows; April 2002). Among the association members are the only state farm ("Vecauce" – study farm of Latvia University of Agriculture) and cooperative Zaube, owner of the only slaughterie meeting demands of biological farming. Small farms have 3-4 suckling cows, large – about 20-40. Outside this association are about 40-50 farms keeping hybrids with beef breeds. For small and medium size dairy farms reorientation to breeding of hybrids with beef breeds is a good opportunity for future. Hybrids are more productive than beef breed animals, meat quality increases.

At present the association is more focused on organisation of the beef breeds pedigree record system in Latvia (separate pedigree book for beef breeds does not exist); marketing oriented activities are less successful. Efforts to open butcher's shop and steak restaurant in Riga are still unsuccessful. Association has bought electronic weights and other special equipment for animal productivity control and care. In future LAMCB plans to organise a system of fresh beef sales. Association is an active participant of all the most important farmers' actions in Latvia.

4.2.3. Areas that exhibit dynamism

Market of high quality fresh beef in Latvia is quite limited as pork and poultry are more often consumed. In limited amounts beef is supplied to some restaurants in Riga ("Vincents", "Ka□□u v□rti") and supermarkets (SKY, MC[2]). Low purchasing capacity and food traditions are limiting further widening of fresh beef market. The main sales are in Riga. Association is planning marketing activities

(to open steak-houses etc.) to promote consumption of high quality beef and interested in investigation of export possibilities.

Practices of beef cattle breeding in Latvia are corresponding demands of biological farming and changes of land use practices. Many cattle breeders have biological certificates. Along with demands of *Code of Good Agricultural Practice* (1999) in animal husbandry biological farmers must obey specific regulations of Cabinet of Ministers on biological farming and standards of Latvia Association of Organisations of Biological Farming. Some successful farmers are members of both associations of biological farmers and meat cattle breeders. In near future all the beef farms will be biological. Extensive cattle breeding is appropriate type of management for abandoned lands. Amount of abandoned land in Latvia is increasing every year.

4.2.4. The sustainability and transparency of the current structure

A beef cattle breeding is a good example of sustainable farming in Latvia. Breeders have not yet reached EU quotas for number of suckle cows. Natural potential for the sector is good – natural grasslands and other territories suitable for extensive land use, including restricted areas. The main possible environmental effects in animal husbandry are connected with the manure collection and storage. As animal density is low and intensive meat production technologies are not applied beef cattle breeding practically does not have negative environmental effects. Further development of this sector allows maintaining relatively large share of rural population, large number of small and medium size farms, offers solution of land abandonment problems and is compatible with rural tourism. Demands for livestock buildings in beef breeding are simple. Many old buildings remaining from collective farming could simply be reconstructed for the needs of beef cattle. As share of retired persons among rural population in Latvia is growing beef breeding as suitable for older farmers could be perspective. According to the experts evaluation (interview with A.Veide) at the present market situation beef breeding farm could be profitable with at least 40 suckle cows, if beef prices will reach level of international market, 20-30 suckle cows will be enough. To intensify beef breeding process farmers are studying Swiss experience.

4.2.5. Rural development implications and effects of potential changes

Further development of beef breeding and all the food chains in this sector could be beneficial for the rural development. At present food chains in beef production could not be regarded as sustainable. Processing and marketing is a weak point and should be improved in future. Only some fragments of such chains are emerging (for example, cooperative Zaube, Green market in Riga). In general all the farmers are searching for their own market possibilities from time to time. Development of small and medium size slaughteries, specialised butcher's shops, restaurants and steak-houses could be a promising niche for rural entrepreneurs and an opportunity for farming diversity in future. Increasing diversity of food traditions and rise of purchasing capacity are also essential for the widening of beef market. Customers' should be more educated about meat quality.

4.2.6 Bottlenecks for change

The main bottlenecks in the sector are limited market possibilities; weak state control on the borders; BSE danger abroad is limiting possibilities to renovate breed material (for several breeds danger of inbreeding is possible). Production capacity is still too weak to supply large amounts of beef for export.

4.3. Sheepmeat

4.3.1. Production and chains

Table 11. Sheep breeding in all type of farms, 1999.-2001.ths.

	1999.		2000.		2001.	
	Ths.	%	Ths.	%	Ths.	%
Total number of sheep	27,0	100	28,6	100	29,0	100
State farms and statutory companies	0,1	0,4	0,0	0	0,0	0
Individual farms and house holds	26,9	99,6	28,6	100	29,0	100
Including individual farms	10,0	37	9,5	33,2	11,2	38,6

4.3.2. Institutions, organisational forms and governance

General situation
Sheep breeding is low developed agriculture branch in Latvia with a potential grow, taking into account demand in local, European and World market. Produced amount of sheep meat is low; the sector is unprofitable and can be counted as alternative in Latvia. Majority of sheep breeders are engaged in sector only by tradition, although this trend has been underdeveloped protractedly. Sheep meet is used for personal consumption and direct sales.

Regulation
Ministry of Agriculture provides governmental subsidies for the sector and Food and Veterinary Service is responsible for inspection of farms and controlling implementation of accordant normative acts. The biggest sheep growers are united in Latvian Sheep Breeders Association to represent their interests in governmental level.

4.3.3. Areas that exhibit dynamism

Specialized producers provide sheep meet for restaurants which are interested mostly in year age or 35 – 50 kilos ewes. Commercial sheep breeding can be counted as innovatory and can be used as a sector for reorientation from traditional agriculture in future. Taking in to account that meet processing companies do not purchase sheep for meat, there is no state price accountancy.

4.3.4. Rural development implications and effects of potential changes

There can be slight rise of sheep breeding in Latvia, considering prospective changes in governmental aid entering European Union. Sheep breeding can have significant meaning in forming rural landscapes and can play a role as an alternative source of income.

4.4. Poultry

4.4.1. Production and chains

Table 12. Number of poultry in farms (thsds.)

	All farms	Of which: State farms and statutory companies	Private farms
Total	3576.4	2489.0	1087.0
Of which:			
hens and roosters	2749.0	1775.5	973.2
Of which laying hens	1890.8	1073.3	817.2
broilers	721.5	713.5	8.0
Of which broiler hens	27.7	26.3	1.4
ducks	60.8	0.0	60.7
geese	18.9	0.0	18.9
turkeys	19.8	0.0	19.8
other poultry	6.4	0.0	6.4

Source: Central Bureau of Statistics

Table 13. Egg production and consumption balance (mil.pieces)

	2000.	2001.	2002.
Reminder at the beginning of the year	4,9	26,3	8,3
Resources			
Produced	437,1	452,5	508,6
Import	37,3	27,4	2,8
Eggs of indeterminate origin	38,4	-	-
Total resources	517,7	506,2	519,8
Consumed			
Consumed	455,6	452,9	515,2
Export	35,8	45,2	0,4
Total consumption	491,4	498,1	515,6
Reminder at the end of the year	26,3	8,1	4,1

Source: LAD

Table 14. Poultry production (tons)

	2000.	2001.	2002.	2002./2001. (%)
All farms				
Poultry meat (hoof volume)	10 327	12 707	15 204	119,7
Poultry meat (butcher volume)	7 229	8 895	10 642	119,6
state farms and statutory companies				
Poultry meat (hoof volume)	9 969	12 303	14 679	119,3
Poultry meat (butcher volume)	6 978	86 12	10 275	119,3
peasant, household and private farms				
Poultry meat (hoof volume)	358	404	525	130,0
Poultry meat (butcher volume)	251	283	367	129,7
peasant farms				
Poultry meat (hoof volume)	108	164	277	168,9
Poultry meat (butcher volume)	76	115	194	168,7

Source: Central Bureau of Statistics

Table 15. Poultry meat and products balance (thsds. t)

	2000.	2001.*	2002.*
Reminder at the beginning of the year	2,36	2,36	1,73
Resources			
Produced meat, live weight	10,33	12,71	15,20
Produced meat, carcass weight	7,23	8,9	10,64
Meat (incl. live stock) import, carcass weight	17,41	18,50	23,85
incl. live stock (recalculated in meat)	n.d.	0,19	0,12
meat	n.d.	18,22	23,52
sub products	n.d.	0,09	0,21
Meat products (recalculated in meat) import	0,19	0,74	1,52
Meat of indeterminate origin	1,18	-	-
Total resources (recalculated in meat)	28,37	30,48	37,75
Consumption			
Consumed meat and products (recalculated in meat)	25,8	28,56	33,45
Meat (incl. live stock) export, carcass weight	0,11	0,17	0,20
Meat products (recalculated in meat) export	0,1	0,04	0,09
Total meat consumed and products (recalculated in meat)	26,01	28,77	33,74
Reminder at the end of the year	2,36	41,73	4,00

*- the balance calculation method was changed
Source: LAD

4.4.2. Institutions, organisational forms and governance

General situation

Poultry sector is in the second group of priorities of agricultural production in Latvia. Future challenge is to develop poultry sector in Latvia into a branch that is able to fill the market with competitive products. Poultry industries and farms are able to provide Latvia's internal market with fowl and eggs, but the competitiveness of the local products with imported products is not sufficient. However poultry branch is developing and the number of birds is rising. According to experts' opinion in several years poultry sector can be established as competitive branch both within internal and external market, if necessary investment is allocated.

There are two types of poultry industry in Latvia – intensive technology enterprises with vast production amounts and small farms with slight amounts that produce poultry for self-provision or for very limited local market.

The biggest amount of fowl is located at the state farms and statutory companies and they are major poultry meat and eggs producers. State farms and statutory companies provide approximately 95% of total poultry meat quantity. The biggest poultry meat and eggs producers are holding companies "Putnu fabrika □ekava" and „Balticovo".

Eggs

During the recent years in egg production one can observe gradual production increase and during the year 2002 in comparison to year 2001, eggs production increment rate was 12,4 %. Self-provision with eggs in 2002 was 98,7%. In parallel egg import has stable tendency to decrease.

Poultry / broiler meat

In the sector of poultry meat production the situation is similar to egg production sector. There as well state farms and statutory companies are major industries that produce vast amount of poultry meat in Latvia (in 2002 - 96,5% of total amount). However producers in Latvia do not meet the needs of internal market, although industry potential enables necessary production. The import of poultry meat still highly exceeds production of meat.

Regulation

Main regulations are ensured through such institutions as the Food and Veterinary Service, Ministry of Agriculture, Ministry of Environment. Besides, super-markets also play significant role in quality standard promotion. They set up new quality demands concerning ISO standards, packaging and logistics due to mutual competition and in order to attract more consumers.

4.4.3. Areas that exhibit dynamism

Dynamic is observable in both industries - state farms and statutory companies on one side and private farms on other side. Biggest enterprises tend to invest modern technology, to improve feeding and to purchase high-quality poultry breed-material from abroad (mainly Netherlands) in order to rise the productivity. The state subsidies are available for purchase of high-quality poultry breed-material and eggs from abroad. Subsidy amount is 50% of purchase value.

Growing amount of private farms start quail cultivation and egg production for the retail trade, although the number of entrepreneurs in this area still is small. Most remarkable quail farms are located in Riga district. There are 300 to 500 quails in biggest farms. Private farms also cultivate such domestic birds for narrow local markets as ducks, gooses and turkeys.

Several private farms engage in unconventional poultry keeping, for example, such farms cultivate pheasants, peacocks, guinea-fowls and ostriches. This kind of initiative often is linked to rural tourism business. In Trapenes pagasts the owner of "Niedr□ju" farm is in the process of enlargement of pheasantry. In the winter of 2003 he organized first pheasants' hunting at his property. In its turn Kr□slavas district Grabus□nu farm in Latgale is known with its exotic - the owner cultivates ostriches, pheasants, peacocks and guinea-fowls and has created mini-zoo. Similar strategy is developed by farm *Dobu□i* in lecava pagasts. This farm offers get to know approximately 20 kinds of different hens, 3 kinds of pheasants, peacocks, 2 kinds of gooses, crested ducks, meat pigeons, turkeys, guinea-fowls and quails. In total approximately 200 fowls.

4.4.4. The sustainability and transparency of the current structure

In the nearest future it will be necessary to invest significant amounts of finances to meet the requirements of EU standards of fowl welfare and environmental protection. Environmental readjustment and security are the ones between the top issues in poultry industry in Latvia as it directly concerns sustainable development, rural development and rural landscape.
Some years ago nontransparency of food chains and illegal poultry products import were top problems in poultry industry. Thanks to legislation arrangements (law about labeling, law about packaging) and supermarkets' growing demands for high quality products these problems have been solved finally.
The poultry market has developed and large producers have developed sustainable food chains for distribution of their products. Producers are in the continuous process of quality control and looking for better source material to raise the quality of their products and enforce the production.

4.4.5. Rural development implications and effects of potential changes

Supermarket chains in Latvia are expanding in regions. This process has a direct impact on small poultry producers as competition with large producers will increase. Due to supermarkets' expansion some part of small shops will have to close and local producers will be forced to look for new costumers. On the other side this process can be as an incentive to start unconventional poultry business - differentiation of fowls from that are traditionally produced and biological poultry. Differentiation of products, biological poultry and mutual cooperation could be the necessary tools to find a niche and to establish sustainable food chains in poultry market in Latvia for small producers. As a consequence, these tools could strengthen small producers' competitiveness with large producers and help to allocate their place in supermarkets.

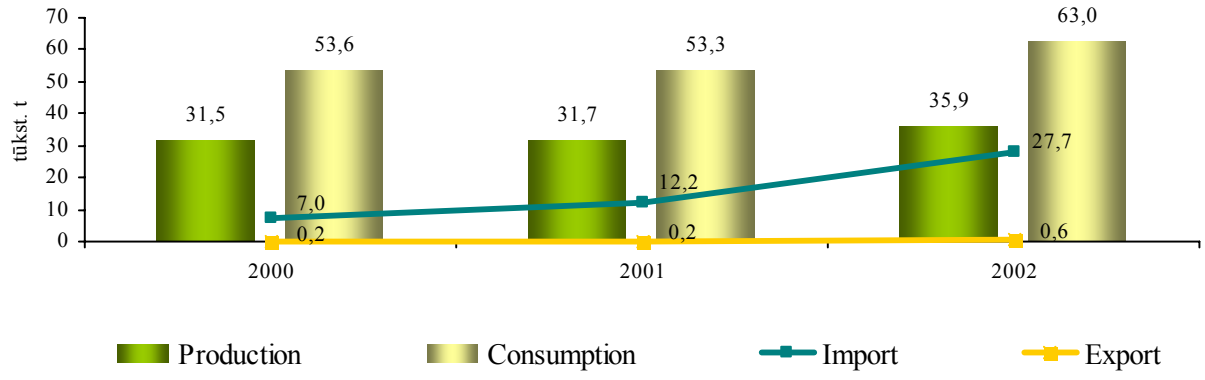
4.4.6. Bottlenecks for change

The structure of poultry production can be described as stable. Main problems that enterprises in this branch face are competition and high quality demands. Small producers may face problems in realization of their products if they stay rigid in order to be flexible and react fast on changes in the market. Still, insufficient information, knowledge and skills hamper small producers to start biological poultry business.

4.5. Pigs

4.5.1. Production and chains

Figure 5. Pork Production and Consumption Balance, ths.t.



4.5.2. Areas that exhibit dynamism

Because of new quality standards (that have been adopted also as part of the process of adoption of the EU legislature) all the previous butcheries are being rebuilt. Butcheries that have worked during last 10 years were not subject to any real control of quality standards, but currently some 250 butcheries are certified and up to standard. Due to Latvia's accession to the EU also processors of pork meat have to face certain technological standards. As a result not only producers, but also

processors are contributing to improvement of food quality. This all is requiring big financial investments; however, producers are supported by the state, but processors are not.

4.5.3. The sustainability and transparency of the current structure

There are big problems with pork market in Latvia. Latvia's participation in Baltic free trade area (Latvia, Estonia, and Lithuania) has created the situation that pork import is much cheaper than local produce and Latvia's producers have effectively lobbied decision-makers for import tariffs. As a result Parliament accepted market protective measures against pork import from Lithuania and Estonia on June 2003. However, these measures are distorting relations within pork FSC. The problem is that local producers do not 100% provide local processors with meat. For example, meat processor in Cesu district *Ruks* bought 20% of meat (raw material) abroad in 2002. The ones located in the capital – even more. Processors complain that state support to local producers actually increases the prime costs of processors and this results in 1) processors' inability to invest in technological improvements that now are demanded by the EU and 2) the end products produced by Latvian processors become unable to compete in local, as well as Estonian and Lithuanian markets. Ministry of Agriculture, however, argues that during last years along with the increase of consumer prices the profit of pork meat processors have increased as well. So these temporary market protection measures will not result in financial losses for processors.

4.6. Fruit and vegetables

4.6.1. Production and chains

Table 16. Production of Vegetables in All Type of Farms, 1999 – 2001

	1999	2000	2001	2002
Area of open field vegetables, ths.ha	9,8	9,7	13,3	12,5
Yield ths. t	123,2	97,7	148,4	135,4
Productivity cnt/ha	125,8	100,8	111,8	108
Green house area ha	81,6	113,5	168,5	
Yield ths. t	6,9	8,2	10,9	12,8
Productivity kg/m^2	8,5	7,2	6,5	

Table 17. Production of Fruits and Berries in All Type of Farms 1999 – 2001

	1999	2000	2001
Area ths. ha	12,3	12,3	13,3
Including seed plants	8,9	9,0	9,1
bone plants	1,7	1,4	1,9
berry bushes	1,7	1,9	2,3
Yield ths. t	45,5	48,6	50,3
Including seed plants	35,6	36,9	37,8
bone plants	3,3	3,6	4,0
berry bushes	6,6	8,1	8,4
Productivity cnt/ha	37,0	39,3	37,7
Including seed plants	39,7	41,2	41,6
bone plants	19,5	23,8	20,9
berry bushes	39,8	42,8	36,4

Table 18. Production and Consumption of Fruits and Vegetables

	Production		Consumption	
	2000.g. I. quarter	2001.g. I. quarter	2000.g. I. quarter	2001.g. I. quarter
Canned fruits, vegetables and mushrooms, t	195,7	317,4	748	1296
Juice mlj.l	7,5	9,6	9,2	10,3
Jam, marmalade and puree, t	401,4	558,6	404,0	520,0

4.6.2. Institutions, organisational forms and governance

General situation

The last 5 years are characterized by the advent of big retail stores in Latvia. Most of the big producers now deliver their production directly to these supermarkets. Thus 1) production is always fresh; 2) retailers demand for higher quality standards, for example, they prefer vegetables that are packed; 3) production is being labeled. Before big retail chains food supply chain looked slightly different - individual stores came to the particular production unit or farm and bought needed amount for the day. The requirements for quality were lower and the freshness of products could not be controlled by producer as individual stores would not buy new products while the previous ones are not sold. Big retailers are more brand name and quality aware.

Regulation

The politics of quality control has been improved since 2001 when the unified P□rtikas veterin□rais dienests was created. Its main aim is to control the quality of food throughout whole food chain. Before 2001, different governmental institutions were responsible for various areas of each sector and their work was not effective.

4.6.3. Areas that exhibit dynamism

Regarding the dynamics that has taken place in recent years, the current structure of FSC is changing. Three areas of improvement are identified: 1) quality of food, 2) labelling and 3) bargaining power of producers.

Another area of dynamism is product labelling. The products that are grown in Latvia and meet certain quality standards are labelled with "green spoon". This applies not only to fruits and vegetables, but other sectors as well.

There is also the problem of diversity of production. In 2002, big producers enlarged their fields for about 30-50%. Thus bigger concentration of vegetables producing is taking place that allows lowering the prime cost of producing, but it also leads to narrowing of assortment. The hope for widening assortment is put on small farms. According to subsidies policy, a farm can get governmental support even only 3 ha are planted with vegetables. Small farms, however, still do not feel so stable in order to engage in serious production of fruits and vegetables. Only very small amount of farmers have taken loans in order to effectuate their business ideas. The main constraints mentioned are low purchasing power of local consumers and the high cost of transportation.

4.6.4. Judgment of sustainability and transparency of current structure

There are many problems with sustainability and transparency of fruit and vegetable food chain. There are many producers that have not registered and do not pay taxes. It is believed that there are around 15 000 farms in Latvia, but only 5 000 of them are taxpayers. Many of these 145 000 farms (that are partially self-subsistent) also grow some fruits, berries and vegetables that are flown into the market through direct sales. Big producers complain that there are two things that distort fruit and vegetable market: 1) illegal small farmers and 2) illegal import. These products go at much discounted price and mainly through wholesalers that use the chaotic situation and push the prices down even more. If small farmer sells its products to wholesaler without invoice, he does not have any bargaining power. On the contrary, mutual cooperation of producer and individual shop or retailer increases producer's bargaining power because both parts are interested in mutually beneficial outcome.

Most of the small producers still sell fruits and vegetables to wholesales. For example, at Riga Central Market so called night market is taking place. Early in the morning at 4 – 5 AM small farmers bring their fruits and vegetables where wholesalers buy their production at very cheap price. Central market is said to be one huge 'tax-free' zone, the territory of shadow economics.

Regarding transparency of the FSC, producers complain that wholesalers mix local production together with imports and thus reduce prices. As a result the country of origin of vegetables and fruits can never be surely known. (There is no law on country of origin (?). Even if there were, nobody really monitors the situation. Import is not controlled. There is still no governmental control of quality of food.

4.6.5. Rural development implications and effects of potential changes

Only local people are employed at one of the big tomatoes and cucumbers producers Marupe, but the CEO says that there are problems to get qualified and motivated workers. He thinks that there is no unemployment in Latvia, people just do not want to work.

4.6.6. Bottlenecks to the further development

Producers are reluctant to form cooperative farms because, firstly, the idea resembles the Soviet time collective farms and, secondly, farmers are afraid that they would do the job, but somebody else will reap the benefit. Farmers are reluctant to trust each other and are afraid to get under someone else's control. A cooperative farm 1) would have greater bargaining power with wholesalers and retailers, 2) could be able to produce great variety of products and thus lessen the risks, 3) could afford to transport their production to the big cities where purchasing power is bigger, 4) could lower the prime costs of production, 5) could share with technical support.

4.7. Cereals

4.7.1. Production and chains

(data source: Central Statistical Bureau, 2002)

Figure 6. Cereals chain in Latvia

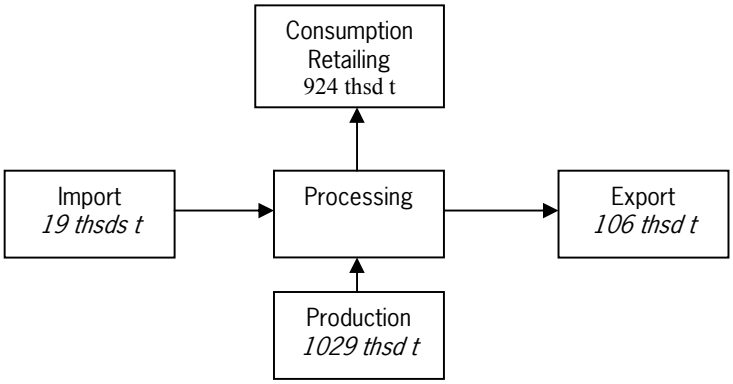


Table 19. Size of sown arable land and production of cereals 1998-2002

	1995	2000	2001	2002
Area of arable crops, thsd ha	**408.4**	**420.0**	**443.7**	**415.0**
Of which:				
wheat	32.3	32.4	35.9	36.4
barley	57.0	19.0	18.1	19.4
rye	12.0	9.0	9.0	7.2
oats	12.1	5.6	6.8	5.8
mixed cereals	1.2	1.4	2.0	1.5
triticale	0.5	0.9	1.2	1.4
buckwheat	0.0	1.3	1.4	1.3
Grain production, thsd tons	**689.0**	**923.6**	**928.0**	**1028.5**
Of which:				
wheat	243.7	427.4	451.7	519.5
barley	284.0	261.1	231.1	262.4
rye	71.3	110.7	107.2	101.5
oats	73.2	79.6	82.4	79.7
triticale	4.9	13.5	28.9	40.9
mixed cereals	11.9	25.4	16.9	16.2
buckwheat	0.0	5.9	9.8	8.3
Average purchase prices of cereals, lats per ton:				
wheat	70.34	61.19	59.14	59.58
rye	53.04	57.17	53.19	58.12
barley	43.34	56.83	52.02	53.10
Of which – barley for beer	*63.01*	*51.92*	*79.94*	*58.11*
oats	47.08	51.83	49.23	51.63
mixed cereals	40.78	54.61	48.51	48.16

Table 20. Distribution of sown arable land of cereals in farms 2002

Sown area of cereals on farm, ha	*Farm with a sown area of cereals*		**Sown area**	
	Number	**%**	**Area, ha**	**%**
Under 1.0	26 160	39.5	15 310	3.6
1.1 – 5.0	26 685	40.3	69 672	16.6
5.1 – 10.0	6 682	10.1	48 642	11.6
10.1 – 20.0	3 594	5.5	51 323	12.3
20.1 – 50.0	2 020	3.0	62 455	14.9
50.1 – 100.0	606	0.9	42 805	10.2
100.1 – 150.0	209	0.3	26 926	6.4
150.1 – 200.0	79	0.1	14 085	3.3
200.1 – 300.0	85	0.1	22 092	5.3
Over 300.0	107	0.2	66 318	15.8
Total over 10.0 ha	**6700**	**10.1**	**419 628**	**68.2**

4.7.2. Institutions, organizational forms and governance

General situation
Several tendencies can be seen in the production of cereals within the last 10 years. The demand of the grain processing industry for quality wheat has also resulted in export as the domestic production cannot saturate the local market. The average price in lats per ton of grain has generally decreased since 1995 as the total sown area has increased. The sown area of barley has decreased from 57.0 thousand hectares in 1995 to 19.4 in 2002, and the sown area of oats has decreased twice. On the other hand, the gross yield of barley has stayed approximately at the same level, and the total amount of wheat produced has increased twice since 1995. The production of triticale and buckwheat has also increased since 1995.

The state agricultural policy is aimed at saturation of the local market with the domestic cereal production, thus influencing the development of the cereal production into the direction of intensive production.

Most of the farms engaged in the production of cereals are those with the sown area under 1.0 hectares (39.5%) and 1.1-5.0 ha (40.3%). Only 10.1% farms have sown are of grain exceeding 10 hectares, although they account for the 68.2% of the total sown area. Farms with sown area of cereals over 100.0 hectares make only 0.7% of all farms with sown area of grain, but account for 30.8% of the total sown area. These figures indicate a structure of cereal production with concentration in farms with small or medium sized sown area of grain and, and farms of considerable size of sown areas and can be considered specialized.

Processing industry
In the processing industry of cereals three branches can be distinguished:
malting plants and breweries;
milling industry (including storage plants for grain and/or in some cases also bakeries);
animal feed industry (self-consumption and local cooperation in the field of animal feed should also be mentioned).

Separate cereal storage plants should also be mentioned as an intermediate between the producer and processing industry.

Organic arable farming has also been introduced in Latvia, but it is still on a very small scale as those involved in the conventional cereal production are sceptical towards it because of the rules that apply to organic production. The production costs for biologically grown cereals are higher than those produced by conventional methods, but the retailing price for such grain is quite low, thus generating low profit. Though bread produced from organically grown grain has been recognized among the consumers, as the bread produced by one of the two bakeries having acquired the certificate of being a biological producer, “Zelta kli□□eris”, is quite well-known and accepted brand name.

Relationship between the primary producers and processing industry are neutral and quite distant on the whole. Most of the dissatisfaction with retailing prices, low reimbursement rates in the cases of crop damage, and administration of subsidies is directed towards the government agricultural policy.

There exist some institutional cooperation involving both producers and processors, though it is difficult to perceive it as an integrated food supply chain cooperation as retailers are not involved and

the whole branch is quite fragmented. There exist also non-institutional grain consumption chains based on mutual agreement, there exist mostly in the branch of animal feed.

4.7.3. Areas that exhibit dynamism

Effects of EU policy can be distinguished as one of the drivers of change, as we are accessing the EU with its common agricultural policy. The effects, though, are unclear, but in the field of cereal producing it can be assumed that there are going to be both structural changes as well as those in the volume of production. Arable farming, it is quite believable, will decrease in the terms of number of primary producers, but the production will be optimised and intensified in order to saturate the local market.

Low prices and the subsequent necessity to grow in substantial amounts and with the methods of intensive farming is also an emerging tendency. The costs of production are quite high, but it is problematic to rely only on the cereal production as it involves risks that are not reimbursed by the state policy (e.g., bad weather etc.), so it is quite probable that other equally important production activities will be developed in some of the farms. So diversification of the primary producers of cereals will occur, as well as other supplementary production activities are developing.

Biological farming is also a growing sector in agriculture in general, and also in the cereal production in particular. There are two bakeries processing grain produced by organic farming methods, but organically grown cereals are important also as the animal feed in the biological farming

4.7.4. The sustainability and transparency and effects of potential change

It is quite probable that the biological farming and more sustainable production activities will increase in scope with accession to EU, as now they are only developing.

The intensive primary production methods will also pertain, but it is still difficult to foresee the real implication on the scope of cereal production and the rural environment in general.

4.7.5. Rural development implications and effects of potential change

Intensive farming will probably pertain in the areas where the conditions for grain production are favourable and where the cooperation with producers is institutionally established. In the areas less favourable for cereal production and in cases where grain production is one of the supplementary activities, some other forms of economic activity might emerge.

The quality requirements and administrative requirements introduced with the EU common agricultural policy will also cause restructuring of the primary production and retailing volume.

4.7.6 Bottlenecks for the development

Main bottlenecks in grain industry are:

- Lack of power of primary producers within the chain.
- Quality requirements of the processing industry as opposed by the quality of grain.
- Low profits.
- Structural consequences and consequences in attitudes left by the lack of consistency in the state policies.

4.8 Potatoes

4.8.1. Production

Table 21. Self-provision of Potatoes in Latvia 1998. – 2003.* ths.t.

	1998	1999	2000	2001	2002	2003
Production of **potatoes**	946,2	795,5	747,1	615,3	635,0	620,0
Consumption	1049	759	764,1	707,4	680,0	650,0
Self-provision, %	**90**	**105**	**98**	**87**	**93**	**95**

*Year 2003 - prognosis
Source: Ministry of Agriculture

4.8.2. Institutions, organisational forms and governance

General situation
Potatoes growing is an important sector of Latvia's agriculture and level of self-provision of potatoes has always been high. Potatoes are grown all over the country, but large-scale production is concentrated around large cities (R□ga, Daugavpils) and processing enterprises (Limbaži, Valmiera).

Potatoes production has reached some stability – area of production is every year about the same and variations of yields are caused by climatic conditions. According to the experts evaluation (interview with M. Narvils, horticulture expert of the Latvia Agricultural Advisory Centre) the main trends in the sector are concentration of production in specialised farms and alignment of technical and technological level.

Potato producers could be divided into three groups:
1/ relatively small number of large farms were potatoes are grown in tens of hectares, yields are high (20-30 t/ha), technical and technological level is high, potatoes are produced mostly for processing (starch or chips) using high quality seed material; very few farms produce table potatoes; quality of potatoes is high;
2/ middle size potatoes producers – farms were potatoes are grown in area up to 10 ha and yields vary from 10 to 20 t/ha, usually these farms are not able to renovate seed material regularly, to provide full technological cycle and do not have adequate storage facilities; these farms produce potatoes of variable quality, try to sell all the stock during autumn and beat down the price (usually it goes down at the very beginning of the year, sometimes only in spring);
3/ small potatoes growers – for self-consumption potatoes are grown in almost each farm, yields are up to 10 t/ha, technological level and seed quality in these farms is poor step by step these growers are leaving the market.

Range of varieties grown is rather high. During last ten years the main trend is to replace locally selected varieties with Dutch and German selections, mostly varieties selected for processing industry. Large-scale producers grow about ten varieties, such as '*Asterix'* and '*Sante'* (western European origin), but also varieties of local selection – such as *'Agrie dzeltenie'*, *'Madara'*. During last ten years many varieties susceptible to serious potatoes diseases are introduced in Latvia. Local selections are resistant to many diseases, but look and shape of potatoes is not so good. Recently introduced varieties demand more intensive plant protection activities. Only large-scale producers pay

enough attention to plant protection activities, middle size producers have 1-2 sprayings during the season. According to experts' evaluations (M.Narvils), plant protection activities should be more intensive.

Several farms are specialised in growing of seed material, but development of this sector is limited, as demand for high quality seed material is limited. Small and middle size potatoes growers chose varieties according to their own taste and do not care about quality of seed material.

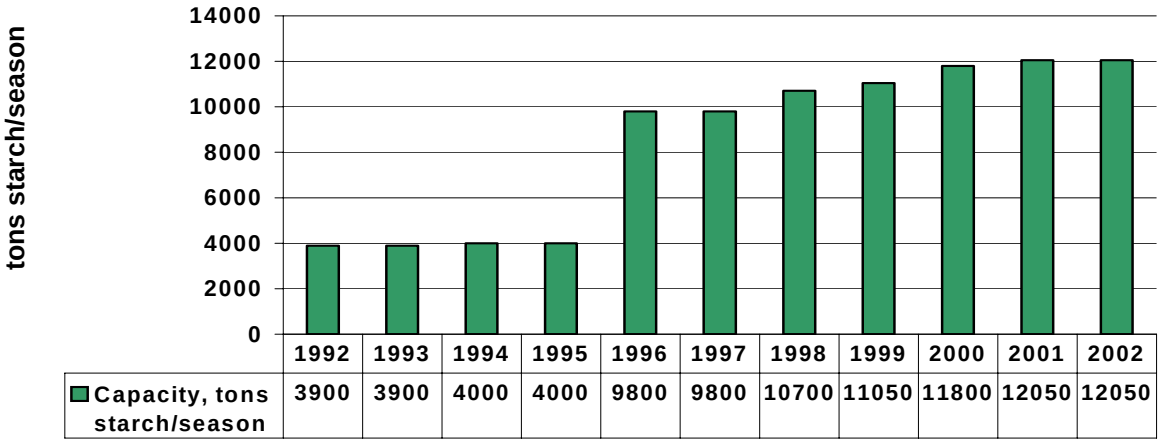
Potatoes growing for stark production is subsidised by state (3 LVL/t if starch content is at least 15 %, increasing by 1 LVL with each 1 % of starch).

The main producers' organisation in the sector is *Union of Potatoes' Growers and Processors*, uniting farmers' suppliers of *Aloja Starkelsen*, the only starch producer from potatoes in Latvia, participant of Swedish concern *Lyckeby Starkelsen*. Efforts to organise cooperatives supplying table potatoes have been unsuccessful up till now. Cooperative *Tupenis* in Jelgava district is such example – low technological level and financial failure. Promising initiative starting only this year is cooperation of large potatoes growing farms around the farm *Z□l□tes* in Limbažu district to supply table potatoes for RIMI supermarket chain.

Processing industry

In Latvia about 10 % of produced potatoes are processed, this sector has reached some stability. The main processors are *Aloja Starkelsen*, the only starch producer from potatoes in Latvia, participant of Swedish concern *Lyckeby Starkelsen* and Latfood potatoes chips production *□dažu □ipsi* (Figure).

Figure 7 . Aloja Starkelsen potato production capacity in 1992 - 20021



Processing enterprises have long-term contracts with suppliers – large potatoes growing farms were specialised varieties in general of Western European origin were grown. Prices are not high, but

[1] Source: Aloja Starkelsen

stimulating production of high quality raw material for processing. Farmers have access to modern technologies, agrochemicals and seed material of appropriate potatoes varieties.

Production of frozen products – fries etc. failed due to large import of polish products. Some small potatoes chips producers starting their activities in the middle of 90-ties have closed down (for example, family farm *Upeskalni*). Production of wide range of pre-prepared vegetables, including vacuum packed peeled or grated potatoes has started small company *Bille* in Riga. Range of their suppliers is still unstable – the main reason is delayed payment. Opportunities to start production of deeply processed potatoes products in Latvia are limited by wide range of import.

4.8.3. Areas that exhibit dynamism

Market of table potatoes is still unstable. Food chains in this sector are unstable. Majority of potatoes in Latvia is sold as table potatoes. Very few farmers grow high quality table potatoes. Consumers are used to traditional local varieties with certain taste qualities, but quality of potatoes offered for sale is variable. The main actors in this sector are middle and small size potatoes growers and buyers up. The main role plays so called night-market were all the transactions are in cash. Night-market is out of state control and any taxation, origin of product is unclear. Quality demands in night-market are rather high. Share of lower quality table potatoes is remarkable and sales of it - difficult. Absence of storage facilities influences price fluctuations in table potatoes market – majority of farmers try to sell their potatoes in autumn, prices go down and are increasing only after the New Year. Building of potatoes storages is very expensive, only large farmers have bought inherited from collective farms storages or rebuilding old farm-houses for this purpose.

Share of farmers selling their products in direct markets is decreasing. Small growers often offer their products directly in blocks of flats in towns or supply relatives with potatoes. Many people (mostly older generation) living in individual houses still bye in autumn and store at home all the winter potatoes for family consumption. This type of food chains is diminishing.

4.8.4. The sustainability and transparency of the current structure

Chains of supermarkets and wholesalers do not use night-market. Some chains have contracts with large potatoes growing farms and cooperatives (RIMI), some sell imported potatoes (T-Market). In table potatoes market large retailers could act as driving force for progressive changes stimulating potatoes growers to cooperate to meet demands for high quality, to build system of whole and retail sales.

According to experts' evaluation (M. Narvils), situation in table potatoes market is critical – quality of table potatoes is low, producers are unable to provide high quality potatoes (middle size and small farms are unable to renovate seed material every two years, to provide pest and disease control etc.), offer does not meet demands of wholesalers and supermarket chains. State support is necessary to subsidise production of high quality table potatoes, to promote ideas of producers' cooperation in this sector.

Amounts of potatoes produced in biological farms are very small. Even in *Green market* biologically grown potatoes were not available. In biological farms local varieties are grown for tourism farms and self-consumption. Shortage of biologically grown seed material is limiting further development. Market of biologically grown potatoes is in the process of formation.

Latvia Agricultural advisory Centre in cooperation with Danish Agricultural Advisory Service have recently finished project about internet based plant protection forecasting system for farmers.

4.8.5. Rural development implications and effects of potential changes

- as consumption of potatoes is decreasing share of potatoes sales in open markets will decrease, in retail outlets – increase;
- consumption of deeply processed potatoes products will increase;
- specialisation (table potatoes and for processing industry) in potatoes production will develop;
- share of biologically grown potatoes will increase;
- cooperation in processing and marketing of potatoes should develop;
- system of table potatoes sales is in the process of formation to replace illegal night-market.

4.8.6. Bottlenecks for change

- overall technical and technological level is low in the sector (except large-scale producers);
- shortage of qualitative seed material;
- absence of successful models of cooperation;
- unsatisfactory marketing activities;
- narrow spectrum of specialisation.

4.9. Sugar

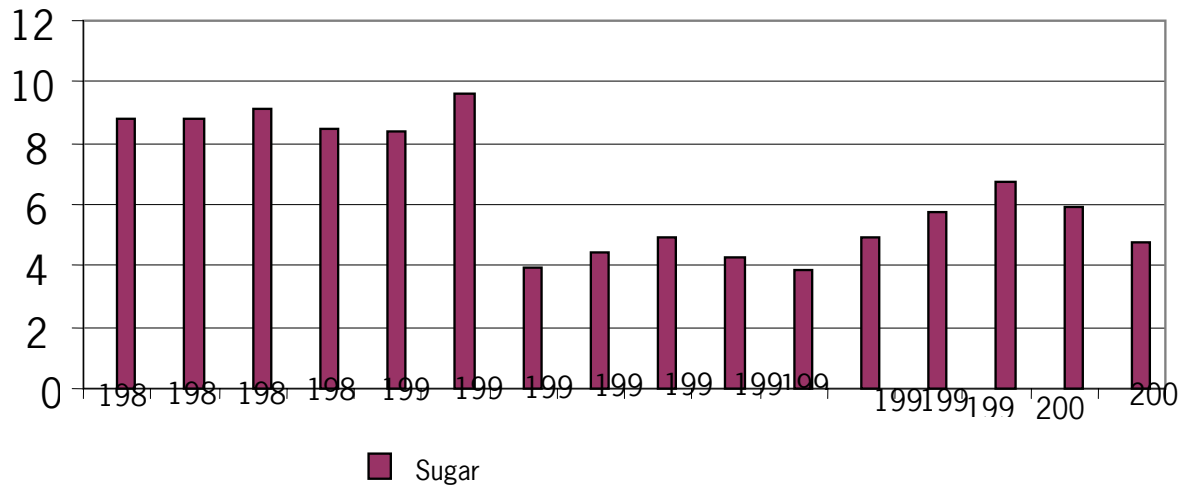
4.9.1. Production and chains

Table 22. Data of sugar production in Latvia

Year	Sugar extracted, thousd.t		
	From sugar beet	From raw sugar	Total
1995	30.7	63.4	94.1
1996	30.0	47.3	77.3
1997	45.0	23.7	68.7
1998	68.2	-	68.2
1999	64.6	-	64.6
Average	X	X	74.6

Source: CBS data

Figure 8. PSE for sugar in 1986 - 2001, %



Source:

4.9.2. Institutions, organisational forms and governance

General situation
Sugar industry in Latvia has long tradition. In turn of 18-19 centuries sugar was extracted in manufactures from imported raw material. Sugar refineries processing prevailing local sugar-beet started operation in Jelgava (1926, central part), J□kabpils (1932, eastern part) and Liep□ja (1933, western part). After collapse of the socialist economic system sugar industry survived sudden change (see Figure).

Regulation
The sector is profitable and not subsidised by the state. In the process of harmonisation of national legislation with the EU Common Market sugar sector quoting system was introduced. As an element of this process was foundation of *Latvia Sugar-beet Growers Association* and *Regional Union of the Sugar-beet Growers* uniting minor part of sugar-beet suppliers of Liep□ja refinery in 2002. In close future both organisations should unite.

Processing industry
Latvia Sugar-beet Growers Association (LSGA) uniting farmers producing 58% of sugar-beet, suppliers of Jelgava refinery is the main producers' organisation in the sector. In 2003 Ministry of Agriculture has delegated keeping of the quota register to LSGA as the main producers' organisation. The main goals of LSGA are to act as lobby of sugar-beet producers, to represent interests of its members in contracting with the processors and to spread technological innovations. Contracting should be process in two stages – at the first stage refineries contract with the LSGA, at the second – association is contracting with the sugar-beet growers. The main issues in the contract are purchasing prices and terms of supply. Role of the LSGA in contracting with the processors is not yet approved by the legislation. Growers are unsatisfied with long period of supply. Capacities of

refineries are insufficient to process all the beets in short time, supplies last till December, 23 and suppliers should store beets till that time.

4.9.3. Areas that exhibit dynamism

At present sugar refinery in J□kabpils has closed down, Liep□ja refinery is looking for new types of products (instant coffee) along with sugar extracting and Jelgava refinery is the leading in the sector. Sugar production has reached some stabilisation.

4.9.4. The sustainability and transparency of the current structure

Sugar-beet growing is concentrated in areas close to refineries as transportation costs reduce income. The most profitable is production in area about 50 km from the refinery. Number of farmers growing sugar-beet has decreased due to centralisation of production. According to evaluations of experts during the last 10 years number of sugar-beet growers has decreased almost twice - from 800 to 500 (interview with U.Caune, leader of LSGA). Production is unprofitable in small areas. Small producers little by little sell their quotas. Technical provision and technological level of beet growing is high – adequate to the EU countries. Use of herbicides is common practice. Regulations on plant protection in Latvia are strict.

4.9.5. Rural development implications and effects of potential changes

Large farms growing sugar-beet in area at least 100 ha produce about 50% of all production, yields are about 40 t/ha (average – 35t/ha). Small growers can not provide full technological cycle in production, many of them bye services. Among association members about 70% are large farmers. Sugar-beet growing is profitable and usually is supplementary to the corn production. It is a good source of income and often helps to modernise other branches of farming. About 90% of sugar-beet growing is concentrated in the central - Zemgale region.

Till 2002 sugar-beet growers were share holders of refineries. For example, in Jelgava refinery farmers owned about 60% of shares. After reorganisation only 5%of shares belong to farmers, relations between farmers and the refinery have commercialised.

4.9.6. Bottlenecks for change

At present sugar industry is stabile and profitable sector of intensive agricultural production. The main bottlenecks for the sector are:

- uncertainty of the sugar policy in the EU;
- absence of sugar tax in Latvia and unsettled sugar market in general;
- position of the producers' association in the sugar industry is not yet fixed in legislation;
- capacities of refineries are insufficient to process all the beet in short time to reduce storage costs and loses;
- refineries are unable to pay price close to EU level when production costs have already reached that level.

4.10. Diversity and dynamism of FSC: Preliminary classification

Review of diversity of relations between producers, processors, retailers and consumers in different sectors of production as well as analysis of multiple involvement of many branched producers in different chains allow to preliminary classify diversity of FSC in Latvia. Several particular types of FSC can be distinguished – conventional, traditional and "new" food chains (Table 23). It should be noted that this classification is somewhat schematic and overlapping and it needs to be elaborated during the next stages of research and case studies.

Table 23. Typology of food supply chains

	Food supply chains		
	Conventional	**Traditional**	**New**
Characterisation and examples of FSC			Innovative products New production methods New marketing channels
Main sectors	Milk	Vegetables Meat Fruit	
Key actors	Large-producers Commercial farmers Large processing industries Retailers Mass consumers	Small farmers Small processors Local markets Community Lower middle-class consumers Small intermediaries	Non-traditional producers
Typical interactions		Personalised sales Social networks Localisation Regionalisation	
Aspects of sustainability	Standardisation Unification Quality control Food safety	Trust Quality Direct feed-back and control	Uniqueness Taste Specialised services

On one hand there is a process of rapid development and institutionalisation of conventional food chains in Latvia. Typical participants are large commodity producers, large processing industries and large retail companies. This process is characterised by establishment and consolidation of respective institutions: large-scale commercial farms, modern dairies, other processing industries, proliferation of supermarkets. Certain economic and political processes such as financial investment, competition, technological modernisation, government subsidies policy and quality regulations enhance unification, standardisation and concentration of FSC, particularly in dairy, sugar beet, pig-meat and grain production.

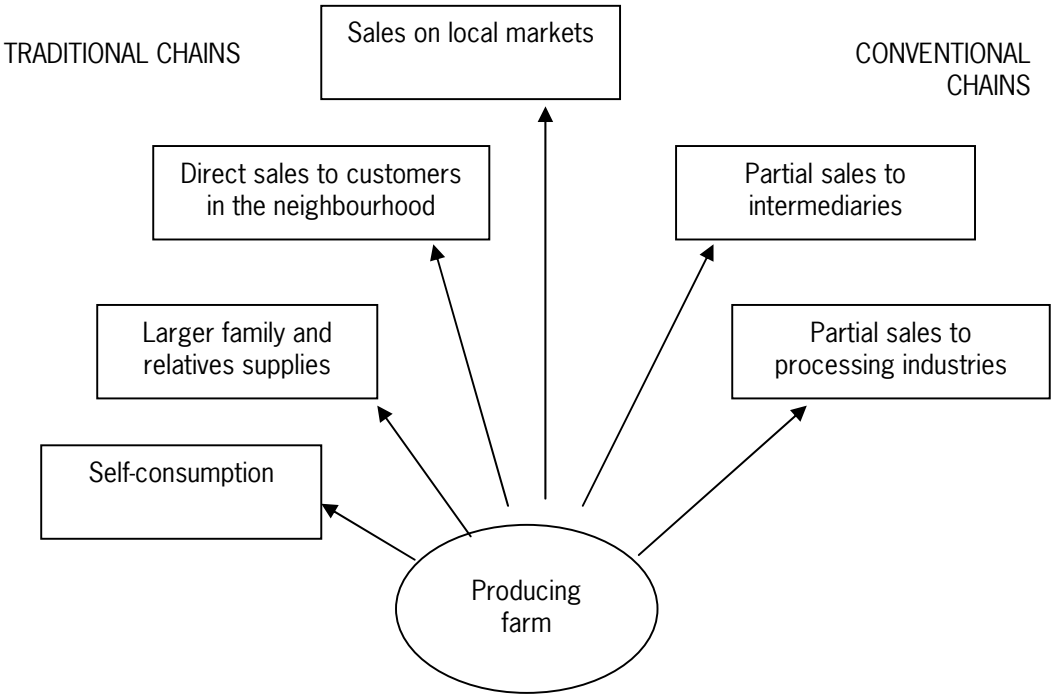
At the same time there is a strong segment of traditional channels and ways of food distribution, and consumption. These are traditional and huge sales on local markets (village, town and suburb markets), wide spread practising of family gardening for self consumption, household plot farming, family and relatives supplies with food, use of traditional intermediaries, direct sales to a circle of customers acquired not on the market but through social networks, and other traditional channels. These are historically sustained and wide spread traditional forms of food marketing, exchange and

consumption structurally related to widespread practice of small-scale farming as well as to historical and cultural factors (such as rural past, urban-rural family networks, food traditions etc.). We call these chains traditional, though they exhibit considerable potential of liveability and may complement or even compensate bottlenecks in the mainstream large-scale conventional chains and contribute to overall sustainability of rural development. To some extent traditional chains are yet un-interrupted in Latvia and they are structurally similar to those re-emerging alternative food networks (e.g. farmers markets) in many Western European countries.

Traditional chains are partially "unofficial". Up to 30% of total agricultural production and consumption take place through such networks, which are not reflected in official statistics. One can call these forms of food distribution "grey chains". Many small household farms produce for family consumption and are not integrated in "official chains" through market mechanisms. This is a problem in dairy sector especially in the period of applying for individual milk quotas. Omission of "unofficial" production in statistics made it difficult for Latvia to argue larger production quotas in EU accession negotiations.

Importance of traditional FSC: Within traditional food chains farms may engage in direct sales on local markets, sales to individual customers, in-kind exchange of products and labour with neighbours, provision of food for relatives in towns, etc. Farmers can combine conventional and traditional channels. Unofficial chains have their own logic and they still are important suppliers of food for large layers of society. Traditional chains are typical for low-cost, low-input, low-output, low-revenue, non-cooperated, non-certified farms, though they keep farms functioning and give certain rewards for engaged people. Traditional chains are real livelihood arrangements for large proportion of rural population currently involved with small scale and subsistence farming. For these reason it is highly relevant political issue whether these chains and food networks deserve greater political support. It is equally important to question whether many small farms should be modernised via inclusion in conventional chains or should they rather develop through diversification and flexible inclusion in "old" and "new", conventional and traditional, traditional and alternative food chains chains. In reality already now many farms demonstrate actual linkage and multiple integration in both conventional and traditional chains (Figure 9).

Figure 9. Example of individual farm inclusion in traditional and conventional food chains



Emergence of new FSC: New food chains emerge where there are novelty products being developed, new production methods applied or new markets identified. Although market forces push industries towards concentration and consolidation of conventional FSC and narrow the space for traditional chains, new agricultural actors and innovative entrepreneurs give dynamism to the whole food sector. New food chains can be distinguished by product (e.g. goat cheese, fur farming, deer farming, ostrich breeding), by novelty production method (e.g. organic farming) by new approaches to marketing (e.g. green markets, pick-and-buy business, complex agri-tourism), or indeed by new arrangement of relationship between actors. A sufficient degree of novelty (of products, marketing, distribution, customer relations, quality definitions, etc.) is necessary to call a food supply chain "new".

Development of new chains is hampered by fact that agricultural production on majority of farms is not specialised, farms are many-branched, which subsequently make it more easy for them to sell through traditional and/or conventional channels. Several new forms of agricultural marketing and links between the producer and consumer are emerging. For example, green markets are special events organised monthly by the Latvian Association of Biological Agricultural Organisations to promote sales of organic products. Pick-and-buy service and farm to flat sales are new types of business started by some farms. Rural tourism is a fast growing sector of rural economy offering variety of services.

Biological chain: Biological agriculture can be analysed as a combination of traditional, conventional and new FSC. There are approximately 300 certified biological farms in Latvia which cultivate 5000 hectares (0,5%) of agricultural land. Farms are usually small - 5 to 10 hectares large although there might be farms with 200 hectares. Biological farms specialise in milk, vegetable, meat production,

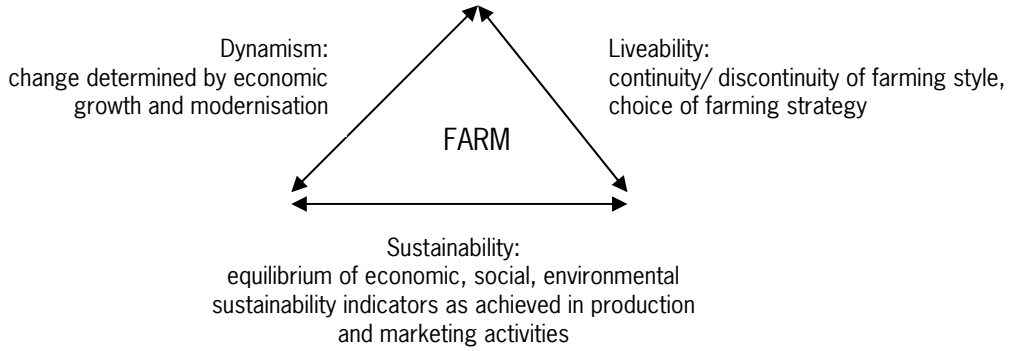
horticulture, medical herbs and other products. The volumes of production are usually small. Currently there is no separate biological milk and meat processing. Therefore predominant marketing channels are similar to those of many other small-scale and conventional farmers. Biological farmers sell their products through individually built networks (to neighbours, local canteens, kindergartens, schools, customers in towns, on local shops, etc) or they sell production through conventional chains (for instance to "regular" dairies and meat processors without any premium). Usually biological farmers are poorly co-operated in marketing for various reasons – small volumes of production, prevalence of individualistic marketing strategies, lack of marketing co-operatives, absence of separate processing, inability to meat supermarkets demand in regular supplies of large quantities (Š□mane, 2003). The interesting thing with biological chains is diversity and combination of new products, traditional sales channels, new market niches and marketing approaches, conventional "reserve" channels.

"Black chains": Particular issue to be addressed are organised systems of illegal import (smuggling) of food products into Latvia without paying taxes and passing sanitary boarder control. When products are smuggled into Latvia, they might be sold through illegal as well as legal channels. Black food market causes distortions in legal chains and local growers are the main losers. Processing industry is less vulnerable to illegal imports, it is said that some enterprises even profit from processing illegally imported supplies. Food quality is impossible to control on black market and consumer health might be affected. Illegal business brings huge profits. Farmers' organisations blame poor performance of State Border Control and Customs pointing at possible corruption. Media often report that cargo tracks are not always weighted when crossing Latvia's boarder, there are problems which checking documentation, proving product origin, transit cargo destined for Russia often settle in Latvia.

Dynamism of FSC

Relations between dynamism, sustainability and liveability are complicated both level of producers, processors and retailers. Dynamism may challenge sustainability and liveability, choice of liveability strategy may steer actor both towards greater dynamism and greater sustainability. At producers level usually we observe no dynamism if the prevalent pattern is subsistence farming, minimum-production farming, or small-scale farming. On the other hand, such farming styles show strong elements of liveability and sustainability. For instance, many small farmers provide family members and relatives with qualitative, usually environmentally friendly produced foods, they are engaged in mutual help and informal exchange networks, sell food in local area and to small processing industries. Often these food networks are trust by end consumers and quality control is assured through social networks – direct feedback to producer. At distribution/retail level small local markets and farmers markets are historically formed and economically justified establishments – the whole "local institutions" - recognised and trusted places of food exchange and social communication. These localised market arrangements have their own identity and history. They demonstrate both stimulating impact on small and niche producers and liveability of direct marketing. Figure depicts potential contradiction between dynamism, sustainability and liveability at farm level. Dynamism usually is provoked by expansion of production, which might undermine traditional farming styles and sustainability indicators.

Figure 10 . Contradiction between dynamism, liveability and sustainability (at farm level)



Regarding producer component of FSC, we can observe three overriding tendencies in current farm restructuring in Latvia: intensification, diversification and reorientation, which in other conditions have been analysed as widening, broadening and regrounding (Oerlemans & Hees 2002). Intensification strategy means deepening of farm involvement in the market by means of land concentration, technological modernisation and specialisation and in the meantime increasing of market dependency and risks. Diversification means widening of activities at farm level and seeking additional income through many-branch production, undertaking new activities, both in the traditional agriculture, non traditional agriculture and in combination with other sectors. Reorientation means more radical change in farm activities and income structure and might involve starting a new specialisation, conversion to biological agriculture, change to a part-time farming, finding a job outside farm, developing a side-line business, etc. These are economically and politically determined changes, which involve elements of deliberation and choice of development strategy at individual farm level. One might suppose that these restructuring tendencies correlate with involvement in conventional, traditional and new FSC (Table). We might expect that land concentration and specialisation and intensification of production in the segment of commercial farms will go hand in hand with consolidation and expansion of conventional chains.

Table 24. Relation between farm strategies and involvement in FSC

Farm strategies	Involvement in FSC, level of importance		
	Conventional	Traditional	New
Intensification	xxx	x	
Diversification	x	xx	x
Reorientation		x	xx

5. Drivers of change in food supply chains

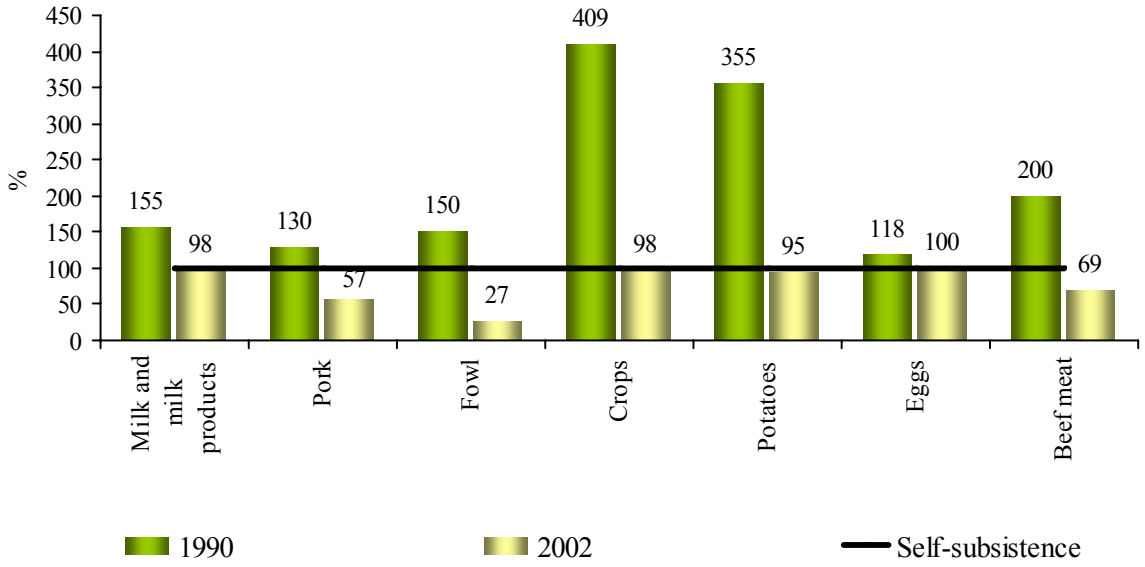
We can distinguish several dominant processes, which have influenced changes in food chains:

- Transition from planed to market economy has created private property structure;
- Privatisation of food industries has contributed to their technological modernisation;
- Market liberalisation has fostered development of diverse retailing structures and distribution channels, emergence of supermarket chains;
- Free trade agreements and Latvia's membership in the World Trade Organisation has determined boosting import of food from countries with more subsidised agriculture;
- Enforcement of EU legislation in national legislation and formation of regulative and controlling institutions have set normative basis and quality regulations for food chains;
- The weakness of governing institutions (particularly boarder control and customs), flaw controlling mechanisms, along with huge profit incentives among illegal traders determine existence of substantial segment of illegal food imports absorbed in "black chains";
- The government agricultural policy implemented by means of agricultural subsidies and market stabilisation policies in essence is aimed at modernisation of farming and food industries, increasing their export potential, regulating and protecting domestic market (the Latvian expression "tirgus sak□rtošana").

Below the drivers of change are analysed according to PEST methodology (political, economic, social, technical driving factors).

Political prioritisation: The Ministry of agriculture has set the following branches as priorities in Latvia: milk, cattle, grain, pig, fruit and vegetables production. One of central political priorities is to stimulate and modernise agricultural production and self-provision of food in Latvia which currently varies from 54% in poultry to 107% in milk production (Figure 11).

Figure 11. Self-provision of Agricultural Production in Latvia, 1998. – 20032, ths.t.3



[2] Year 2003 - prognosis

[3] Source: Ministry of Agriculture

Agricultural subsidies: Since the second half of 1990s when agricultural subsidies were introduced their total volume has increased year by year and they have played significant role in modernisation and economic consolidation of the whole farming and processing sector. The public support to agricultural producers and processing industry comes from the national budget and EU funds. In 2003 total support to agriculture and rural development will reach 85 million euros, including 46 million euros of national agricultural subsidies and 39 million euros of EU SAPARD finances (Figure 12 and Figure 13). Public support through subsidy and SAPARD programmes is directed towards modernisation of farms and food industry, increasing their market competitiveness, diversification of rural economy, training, environmental programmes. Subsidies have contributed to technological modernisation of many farms and processing enterprises, particularly in such sectors as dairy industry, meat production and fishing industry.

Figure 12. Agricultural support of Latvia – producer subsidy equivalent4

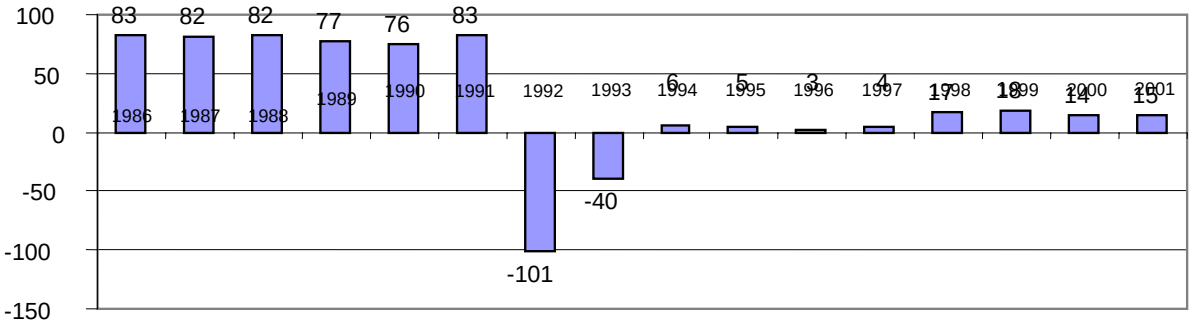
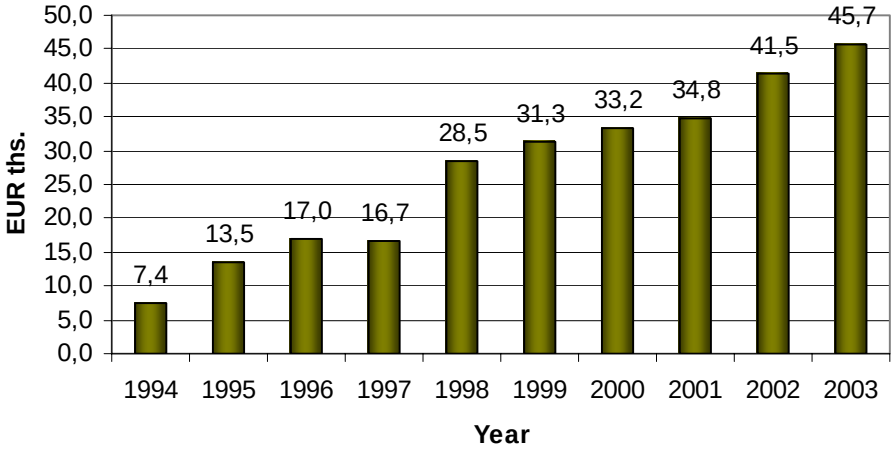


Figure 13 . Total amount of subsidies (EUR ths.)5



[4] Source: Latvian State Institute of Agrarian Economics (LSIAE) calculation by OECD PSE/CSE database
[5] Source: Ministry of Agriculture

Commercial farmers and food industry are among most supported businesses in Latvia as it is in all EU and candidate countries. Only in 2003 the subsidy regulations were changed so that farmers can apply for direct payments "from the first caw and first hectare". Agricultural subsidies have become contested issue in political debate from the point of view of broader rural development objectives, such as enhancing rural employment, diversification of rural economy, development of rural tourism, promoting businesses and employment outside primary agricultural production, support to community development initiatives, environmental management, special programmes of support to socially excluded groups of population.

Agricultural subsidy policy and programmes so far to a very limited extent have addressed issues of complexity and integrity of food supply chains, their sustainable performance and role in rural development. This aspect should be investigated more deeply in SUS-CHAIN project and results disseminated in policy community.

Free trade agreements: Latvia has concluded free trade agreement with two other Baltic states – Estonia and Lithuania. Latvia has also concluded trade agreement with EU and is a member of WTO. This has stimulated trade with agricultural products as well as caused hot disputes regarding unfair trade, contraband, and poor performance of boarder control. There have been recent tensions regarding Baltic Free Trade Agreement. Agricultural organisations claim that subsidised Polish products are imported in Latvia illegally as Lithuanian products. These contradictions lead to political disputes at government level and introduction of import tariffs on Lithuanian pig meat. The responding measures have been Lithuanian ban on import of certain Latvian products. It is foreseen that in the case Latvia will join the EU there will be more possibilities to compete in the single European market because of diminishing of tariffs and introducing new production support mechanisms.

Technical innovation and branding: Biological labels: Biological chain is new one. The full legislation, which regulates conversion, methods of organic production and certification of farms has been adopted only in 2003. Biological farming sets high ecological quality standards for the products; the whole process of production should be certified to meet these standards. There are several internationally recognised organic agriculture certification systems and labels awarded in Latvia, such as Demeter and OCIA label. The Latvian national standard approved by the state is "Latvijas ekoprodukts" (Latvia's ecoproduct). There are several other labels given by Latvian biological farmers organisations, for instance – "Green certificate". Biological products with these labels start to appear on retail outlets. The label *Latvia's Ecoproduct* ("Latvijas ekoprodukts") is national label of biological agriculture and certifies, that product is produced in natural environments by using biological methods. This label is also supported from the state subsidy programme and it is awarded by LABAO. Possession of certificate "Latvijas ekoprodukts" is a precondition to apply for subsidies for biological agriculture. Certified farms have to pass repeated certification procedure in every three years.

New (alternative) labels: Currently there are three other "alternative" labels on the Latvian food market. Recently label Quality Latvian Product has become a recognised quality indicator and a driver. *Qualitative Latvian Product* so called *Green Spoon* label is awarded by the Agricultural Market Promotion Centre. This quality label is supported by Ministry of Agriculture which provides certain financing from subsidy programme to promote the label. The objective is to popularise Latvian products. *Healthy Product* is another label awarded by Latvian Association of Dietary Doctors with a purpose to rise consumers awareness about healthy food. It is planed to introduce similar label called *Grown Green in Latvia* for operation in external markets. Third label *"Health promotion centre*

suggests", is awarded by the Latvian Health Promotion Centre. The purpose is to popularise healthy diet and inform consumers about healthy Latvian products.

Localisation and regionalisation of food: Local, regional and national brands: Recently there is a growing attention by food industry in local and regional branding of products. Local producers and smaller processing industries see in this marketing opportunity. Consumers have also become more aware about certain food qualities and trust associated with regional origin. Ministry of Agriculture recently has started to elaborate policy proposals regarding marking and protecting products with local and regional identity.

Particularly in dairy industry local and regional names are used to brand products, for instance, *Talsu ritulis, Tukuma Sviests, Kurzemes siers, Limbažu piens*. The other industry which uses local names to create brands is beer brewing, for example, *L□vu Alus, C□su Alus, Bauskas Alus, Latgales Alus*. Local names have double function in brand names – they have to emphasise distinguished quality of product and create trust either associated with regional identity or "Latvianness". Especially beer brewery strategy is to brand products as possible in authentic Latvian names. In consumers opinion Latvian origin often means higher quality and this belief is exploited by many processing industries which operate with imported supplies bu label production in Latvian names.

There are places in Latvia which local identity and outside image are strongly related to local products, for instance the village of T□rvete is associated with *T□rvetes Alus,* the town of Lielv□rde is associated with *L□□pl□ša alus*. There is also another disputable marketing strategy when regional food industries associate internationally recognised product names with their products, for instance: *R□gas Šampanietis (Riga Champagne), Limbažu Krievijas siers, Valmieras Šveices siers (Valmiera Swiss Cheese), Valmieras Chamamber*, etc. There are several food brands recognised on international markets as Latvian products, among them *Laima Confectionary*, *Riga Sprats*, *Riga Black Balsam*.

Drivers of change at farm level: pilot survey results

In April-May 2003 we conducted a small pilot survey – 15 farmers were questioned in direct on-farm interviews regarding farm characteristics, production, marketing channels, inclusion in food chains, recent changes and factors of change. The change factors were measured according to PEST methodology. Surveyed farmers were selected randomly and represented all regions. The dominant criterion was that farms were engaged with commodity production and sold production.

In the sample of 17 farms 15 farms were registered as peasant farms (zemnieku saimniec□ba) and two were registered as household plots (piem□jas saimniec□ba). The size of farms (including rented land) varied from 10 hectares (three farms) to 20 hectares (three farms), to 30 hectares (three farms), to 40 hectares (one farm), to 50 hectares (three farms), and more than 50 hectares (three farms). Eight farmers characterised their production as many branched, six farmers – as specialised, and two respondents said their farm was non-specialised. 15 farms were registered in commercial register and eight were registered as VAT payers. 12 farmers worked only on farm, three combined farm work with another employment, and for two respondents outside employment was the main job and they did farming as side work. 15 out of surveyed 17 farms employed permanently from two to five people (including farmers and family members). Thus survey included predominantly farms, which in earlier analysis have been classified as commercial producers, pilot survey results refer mostly to these agricultural units. Small subsistence farms were not represented in the sample. Table 25 gives

insight which political, economic, social and technical factors have stimulated change in the recent years.

Table 25. Change factors at farm level: political (P), economic (E), social (S), technical (T),

Answers to question "Thinking about changes in your farm in the last two or three years, have you: (N=15, number of respondents)

Change factors	Yes	No	Difficult to say / NA
Political factors			
Received agricultural subsidies *(P)*	12	3	0
Implemented the state quality requirements in food production *(P)*	10	3	2
Implemented environmental protection norms in agricultural production *(P)*	4	8	3
Participated in political activities organised by agricultural organisations *(P)*	3	11	1
Economic factors			
Farm has become more competitive *(E)*	7	2	6
Farm income has increased *(E)*	6	5	4
Farm has acquired new markets *(E)*	5	8	2
Farm activities have been diversified *(E)*	2	6	2
Farm has started new production or new services *(E)*	2	12	1
19. The number of employees in farm has increased *(T)*	2	13	0
Social factors			
Take into consideration consumers demand in qualitative and safe food *(S)*	12	2	1
Experienced consumers growing demand in food quality and safety *(S)*	10	3	2
Experienced growing public and NGOs demands in the area of environmnetal protection *(S)*	6	8	1
Started to cooperate with other farms in marketing *(S)*	1	14	0
Technical factors			
Enriched professional knowledge in agriculture *(T)*	11	4	0
Farm has acquired new machinery *(T)*	9	6	0
Started to use computed and internet *(T)*	5	10	0
Farm has started to use new technologies *(T)*	4	10	1
Started to use biological methods *(T)*	4	10	1
Started to practice non-traditional agriculture *(T)*	2	11	2
Started to label production *(T)*	1	14	0

As indicative from the table agricultural subsidies and state quality requirements have been the main political driving factors in farm modernisation. Enrichment of professional knowledge and acquisition of new machinery have been the main technical factors, which reflect the use of subsidies. It has to be noted that 1/3 of surveyed commercial farms have started to use computer and internet and a part of farms have started to use new technologies and practise non traditional agriculture. Majority of questioned farmers has experienced growing consumers'demand in qualitative and safe food and considers these demands in their farming. These factors have determined economic stabilisation or even consolidation of commercial farms – slightly more than 1/3 of farmers admitted that their farms have become more competitive, increased incomes and acquired new markets in the last two or three years. In the meantime, diversification and undertaking new production or services have been the minor tendency, probably explained by the fact that half of farms already have many-branched production.

6. Catalogue of FSC initiatives in Latvia

6.1. Name of initiative: Beef breeding

6.1.1.- Boundaries of the supply chain and main actors

Latvia Association of Meat Cattle Breeders (LAMCB) founded in 1998 uniting 69 members - pedigree cattle breeders with 2500 animals in their farms (including 1000 suckling cows; April 2002). Among the association members are the only state farm ("Vecauce" – study farm of Latvia University of Agriculture) and cooperative Zaube, owner of the only slaughterie meeting demands of biological farming. Small farms have 3-4 suckling cows, large – about 20-40. Outside this association are about 40-50 farms keeping hybrids with beef breeds.
Beef breeding is developed all over the country, only in the central area (Zemgale plain) with the richest lands suitable for intensive crop production number of beef farms is small.

6.1.2.- Collective organisation of the initiative

Latvia Association of Meat Cattle Breeders (LAMCB) is an open group with the code of practices and free entry of new members, it is producers' association, cooperative certification organisation. LAMCB is focused on organisation of the beef breeds pedigree record system; marketing oriented activities are less successful. In future LAMCB plans to organise a system of fresh beef sales. Association is an active participant of all the most important farmers' actions in Latvia, acting as lobby.

6.1.3- Social history of the initiative

LAMCB as a national organisation was established in 1998 as an initiative from the Ministry of Agriculture and farmers. It is sustainable in all aspects –environmental, socio-territorial and economic. Practices of beef cattle breeding in Latvia are corresponding demands of biological farming and changes of land use practices. Many cattle breeders have biological certificates.

In the future main plans and intentions are development of small and medium size slaughteries, specialised butcher's shops, restaurants and steak-houses could be a promising niche for rural entrepreneurs and an opportunity for farming diversity in future. Increasing diversity of food traditions and rise of purchasing capacity are also essential for the widening of beef market. Customers' should be more educated about meat quality.

The main bottlenecks in the sector are limited market possibilities; weak state control on the borders; BSE danger abroad is limiting possibilities to renovate breed material (for several breeds danger of inbreeding is possible). Production capacity is still too weak to supply large amounts of beef for export.

6.1.4. - Marketing issues

The main orientation in marketing area are self-supply and intentions to find a European market niche. Market of high quality fresh beef in Latvia is quite limited as pork and poultry are more often consumed. In limited amounts beef is supplied to some restaurants in Riga ("Vincents", "Ka□□u v□rti") and supermarkets (SKY, MC[2]). Low purchasing capacity and food traditions are limiting further widening of fresh beef market. The main sales are in Riga. Association is planning marketing activities (to open steak-houses etc.) to promote consumption of high quality beef and interested in

investigation of export possibilities. **Main difficulties** in inner market – low purchasing capacity; in European market – small amounts of production

Sustainability profile

Agri-environmental	
biodiversity of wildlife	X
preservation of specific species /races	X
soil erosion	X
water quality	X
animal welfare	X
food-miles	
other important aspects	
Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	X
preservation of landscapes	X
mountain (marginal) areas keeping	X
resistance to sprawl	X
agri tourism	X
other important aspects	
Economic	
producers' income	X
possible succession for farms	X
farmers' quality of life	X
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support to the LAMCB is provided by national subsidies and EU production quotas.

6.2. Name of initiative: Butchers' shop "Jelgavas galas nams"

6.2.1.- Boundaries of the supply chain and main actors

Limited company SIA "Rosiba ZS" is small family business with about 60 employees. It has butchers' shop "Jelgavas galas names "in the centre of Jelgava, small slaughtery and meat processing enterprise in Zalenieku pagasts Jelgavas district. In the shop fresh beef, pork, veal, mutton, chicken and rabbit are sold regularly, there are also other departments were different food products are sold. Company has long term cooperation with the local cattle and pig breeders and does not use imported meat. Fresh meat and meat products are sold in Jelgava and other nearest towns – Bauska, Dobele, Tukums, and small amounts are sold in Riga and Jurmala.

6.2.2.- Collective organisation of the initiative

Family owned business operated as a small company

6.2.3.- Social history of the initiative

In 1993 family farm was founded in Zalenieku pagasts Jelgavas district (in the central part of Latvia). Couple of years ago it was reorganized as limited company SIA "Rosiba ZS", it is run as family business – father and two sons are responsible for the main areas. Father started family business when sons were teenagers. Now one of sons manages the shop, another is responsible for transportation of production.

Reorganization of family farm to the limited company was initiated by the new Law on Entrepreneurship. In the very beginning the main specialization of the farm were cattle breeding and small slaughtery, later production of sausages was organized.

Family planed to start cattle breeding in large complex to control the whole chain "from barn to the table". Plans to start cattle breeding failed – family was unable to manage all the most important areas of this business. Several years regularly in two places in town fresh meat and meat products (smoked ham, sausages etc) were sold in a mobile shop – a bus equipped for meat sale.

In February, 2003 butchers' shop in the centre of Jelgava was opened were along with beef, pork, veal, mutton, chicken and rabbit wide range of other food products are available.

In the future main plans and intentions are to expand sales – to open another, smaller shop in the distant district of the town, to find market niches in Riga. Company is oriented to traditional meat products and is intended to specialize in pigs slaughtering.

The main bottlenecks are connected with the financial issues - credits were taken to reconstruct premises for the new shop. Abilities of family to control larger business are limited.

6.2.4. - Marketing issues

Company is oriented to cooperation with the local pig and cattle breeders and to the local (regional market). Only small amounts of production are sold in Riga.

Sustainability profile

Agri-environmental	
biodiversity of wildlife	
preservation of specific species /races	
soil erosion	
water quality	
animal welfare	X
food-miles	X
other important aspects	
Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	X
preservation of landscapes	
mountain (marginal) areas keeping	
resistance to sprawl	
agri tourism	
other important aspects	

Economic	
producers' income	X
possible succession for farms	X
farmers' quality of life	X
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support: No specific institutional support mentioned.

6.3. Name of initiative: specialised cheese production by SIA "Francu gaume"

6.3.1.- Boundaries of the supply chain and main actors

Small milk processing enterprise, limited company SIA "Francu gaume" in Eleja, Jelgava district (in the central part of Latvia) produces French style (Sen-marselen) cheese "Eleja" from cows' milk. Cheese is "alive", because milk in the processing it has not been treated under high temperatures. Milk is supplied by local farmers. Cows should receive appropriate feed to maintain quality of milk for cheese production (cabbage and beets should be excluded). Cheese maker has established long-term cooperation with milk suppliers. Matured cheese is sold directly to consumers - it is regularly offered in offices and some other places in town, it could be ordered by the phone.

6.3.2.- Collective organisation of the initiative

No specific information available.

6.3.3.- Social history of the initiative

Production of French style (Sant-marcelain) cheese from cows' milk was started in 2003 by retired French farmer Lusjen Heribert. Cows are specially feed to have very specific quality milk. Alive cheese specially packed could be stored for 20 days.
In the future main plans and intentions are to expand market, to establish stabile market niche.

The main bottlenecks – up till now all activities are controlled by only one person. Owner of business is a French man living in Latvia permanently for several years. His knowledge of Latvian language and local conditions still could be improved. As owner is an elderly person and his family lives in France, probability of succession of his business is low.

6.3.4. - Marketing issues

Cheese is sold directly in various markets and special events (f. e. The Annual day of Milk organized in town in the last week of August), to restaurants. Owner has direct contact with consumers

Sustainability profile

Agri-environmental	
biodiversity of wildlife	
preservation of specific species /races	
soil erosion	
water quality	
animal welfare	X
food-miles	X
other important aspects	
Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	X
preservation of landscapes	
mountain (marginal) areas keeping	
resistance to sprawl	
agri tourism	
other important aspects	
Economic	
producers' income	X
possible succession for farms	
farmers' quality of life	X
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support: No specific institutional support mentioned.

6.4.Name of initiative: Crayfish baby breeding

6.4.1.- Boundaries of the supply chain and main actors

In 1999 Janis Krumins, owner of the farm "Robeznieki" in Aluksne district (in the northern part of Latvia), started crayfish baby breeding. The farm has 27 ha of land that includes 1,5 ha of ponds where crayfish babies are bred. Crayfishes cannot be bred in very hot climate. They prefer living in water temperature that reaches not higher than 18-22 C degrees during the summer time. Along with global warming, summers in Latvia are turning rather hot and it is probable that crayfish breeding will be needed to be moved to regions more to the North. The territory must have plenty of freshwater because crayfish breeding requires large areas of fresh water ponds.

6.4.2.- Collective organisation of the initiative

The main collective organization supporting this initiative is the Association of crayfish breeders. A farm that wants to start crayfish breeding can get consultations from the Association, from professors and scientists working in this field. Currently there are only three farms in Latvia that grow crayfish babies that are later sold to crayfish producers.

6.4.3.- Social history of the initiative

Crayfish babies breeding was initiated after evaluating all pros and cons of different possible kinds of businesses. The farm is too small for intensive agricultural production. Besides there are only three crayfish babies breeders in Latvia, but crayfish producing is increasing. Intention to profit from selling crayfish babies to local and European crayfish producers was the main motive of this initiative.
The second was intention to preserve a family farm with long traditions. During the land reform in 1990ies, the current farm owner regained the land that had belonged to his grandfather. First crayfishes were incubated in so called old pond were crayfishes had been bred at grandfather's time. Now six new ponds had been dug.
The first two years of initiative went rather well, but during the third winter many crayfishes had died. Now the scientists are exploring the ponds in order to understand the reasons and to prevent from this happening again.
In the future main plans and intentions are to sell crayfish babies to producers across Europe.
The main bottlenecks: As initiative is rather new, owner still has not gained any profit. There is big dependence on climate and the farmer is not sure how many crayfishes will survive in order to gain profit in proximate years. The second problem is lack of capital. As no profit has come during these 4 years, the owner does not feel so stable to be able to take loan form the bank.

6.4.4. - Marketing issues

Crayfish baby is sold directly to the producer when it reaches 10 cm in length. This takes around 3 to 4 years of breeding (it would take 13 years in wildlife). One crayfish baby costs 0,10 – 0,25 Ls. In order to gain profit, 200 thousand babies have to be sold every year.

Sustainability profile

Agri-environmental	
biodiversity of wildlife	
preservation of specific species /races	X
soil erosion	
water quality	
animal welfare	
food-miles	
other important aspects	
Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	
preservation of landscapes	
mountain (marginal) areas keeping	
resistance to sprawl	
agri tourism	
other important aspects	
Economic	
producers' income	
possible succession for farms	X
farmers' quality of life	X
higher net value per unit of product	
higher net value added on regional level	
other important aspects	

Institutional support: Association of crayfish breeders provides with information about crayfish breeding, with latest studies and on-site explorations. The owner has not yet applied to financial support from European funds (SAPARD etc.), because of lack of knowledge how to do it. He gets no local, regional or national support.

6.5.Name of initiative: Groats production "Annele"

6.5.1.- Boundaries of the supply chain and main actors

Limited company "Auces dzirnas" is small cereals processing enterprise producing coarsely ground (1 and 2 sort) wheat meal, traditional style barley groats employing about 30 people. Two years ago when new processing equipment was bought, semolina and split peas production was started. Cereals are supplied by farmers of near-by regions – Dobele, Saldus, Tukums. Farmers have individual contracts. They can receive mineral fertilisers and plant protection chemicals as a part of payment for cereals. It is mutually convenient as company has long term contract with "Kemira" and "Hidro Latvia" supplying agrochemicals, but farmers using their own transport to the mill return back with the cargo. Processing is organised all over the year, every month about 300-400 t, in general about 3500 t of cereals a year are processed.

6.5.2.- Collective organisation of the initiative

Company "Auces dzirnas" is a part of a network of small agricultural producers and food processors preserving traditional cereal production (for example barley groats), supplying small bakeries with traditional style wheat meals without any artificial additives

6.5.3.- Social history of the initiative

Limited company "Auces dzirnas" was founded in 1998, uniting individual enterprise "A dzirnas" and financial support of Latvian-Norwegian entrepreneurship. It is sustainable in all aspects – environmental, socio-territorial and economic – creating new jobs for small town Auce close to Lithuanian border, offering mutually beneficiary contracts for farmers supplying cereals and producing traditional style product mostly used for further food processing. The company is among the biggest tax payers in town and its neighbourhood employing 30 people. It has developed its own brand name Annele (name from Latvian literature), created its own style of package for products. Products are sold mostly in small retail outlets. Suppliers of cereals are in general farmers from neighbouring areas, many of them have long record of cooperation with the mill. Company has build a good reputation as fair partner for farmers.

In the future main plans and intentions are to find new niches in the local market. Up till now "Auces dzirnas" is quite successful in meeting the standards of Food and veterinary service growing in the process of joining the EU. Further plans are to find export opportunities.
The main bottlenecks are growing standards of Food and veterinary service increasing in the process joining the EU. Quality standards for farmers supplying cereals are also increasing, particularly after starting the new processing equipment. In bad climate conditions (as autumn 2003), company has to bye cereals from larger companies ("Saldus lab□ba", "Latraps" etc) to ensure uninterrupted processing.

6.5.4. - Marketing issues

Processed cereals are sold to small bakeries ("Vec□□de□i" baking traditional style rye and wheat bread, "Ventspils maiznieks", "Saldus ezerkrasts"" etc) confectioneries and other small food processing enterprises. The most part of products is sold to the enterprises in Vidzeme district and Riga neighbourhood. Part of products is sold in retail outlets with their own brand name "Annele".

Sustainability profile

Agri-environmental	
biodiversity of wildlife	
preservation of specific species /races	
soil erosion	
water quality	
animal welfare	
food-miles	X
other important aspects	
Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	X
preservation of landscapes	
mountain (marginal) areas keeping	
resistance to sprawl	
agri tourism	
other important aspects	
Economic	
producers' income	X
possible succession for farms	
farmers' quality of life	X
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support was not mentioned.

6.6. Name of initiative: Latvia Association of Biological Agriculture Organizations (LABAO)

6.6.1.- Boundaries of the supply chain and main actors

Association of organizations of organic farming (Latvia Association of Biological Agriculture Organizations- LABAO) unites about 300 farmers all over the country. This association:
provides cooperation among organizations of biological farmers and state, particularly Ministry of Environment and Regional Development (MERD) and Ministry of Agriculture (MA);
has elaborated demands for the system of Latvian state standard and certificate for biological farming, for the label "Latvijas ekoprodukts"(Latvia ecoproduct; since 1998);

-organizes farmers' training in biological farming practices, establishes contacts with international organizations of organic farmers.

6.6.2.- Collective organisation of the initiative

LABAO has about 300 members all over Latvia. It has developed cooperation with Latvia Agricultural Advisory Centre in organization of organic farming courses; Ministry of Agriculture (prize "Sejejs" in organic farming, ecological label etc).

6.6.3.- Social history of the initiative

Ideas of biological farming were introduced in Latvia at the very end of 1980's when the development of private farming was started.
Latvia Society for Biological Agriculture was founded in September 18, 1993. Its leader Imants Heinackis is a researcher from Latvia Institute of Agriculture. Activities of the LSBA are based on the bio-dynamic agricultural practices. *The Latvian Department of the OCIA* exists since 1993. In April 7,1995 the *Latvia Association of Biological Agriculture Organizations* (LABAO) was founded.
Now association is engaged in various activities – it produces regular informative leaflets for its members; supports activities of the Green market in Riga; it has published book about organic farming practices (Praktiska biologiska lauksaimnieciba); organized conference "Biological farming and our health" in spring, 2003.
In the future main plans and intentions are to promote ideas of biological farming, to develop marketing of organic products, to support initiatives of organic farmers to organize cooperation in processing, marketing and sale of biological products.
The main bottlenecks: organic farms are small and spread all over the country; purchasing capacity of consumers is low; insufficient information about organic farming and products.

6.6.4. - Marketing issues

Biological products need special approaches in marketing to enter conventional food markets, to compete with products familiar to consumers for long time. Organic farming offers the new concept of food and consumption, based on different values. Consumer may choose between highly-processed, nutrient-fortified conventional and minimally processed, naturally nutritious organic food. Nevertheless, some qualities, for example, appearance of these products differ a lot from average products offered by conventional agriculture. At the first stage of development of biological farming when amounts of products are small, farmers use their own distribution channels selling directly to consumers, in special stores or departments etc. So they can control all process from producer to consumer. The circle of consumers is limited. Capacity of this market is limited; sooner or later marketing problems will arise. LABAO supports farmers initiatives to organize processing cooperatives (slaughtery, dairy cooperative), marketing initiatives – The Green Market in Riga.

Sustainability profile

Agri-environmental	
biodiversity of wildlife	X
preservation of specific species /races	
soil erosion	X
water quality	X
animal welfare	X
food-miles	X
other important aspects	

Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	X
preservation of landscapes	X
mountain (marginal) areas keeping	
resistance to sprawl	
agri tourism	X
other important aspects	
Economic	
producers' income	X
possible succession for farms	X
farmers' quality of life	X
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support: State subsidies to organic farming, SAPARD finances.

6.7. Name of initiative: Regional dairy A/S "Lazdonas piensaimnieks"

6.7.1.- Boundaries of the supply chain and main actors

Share holding company "Lazdonas piensaimnieks" is middle range milk processing enterprise in Lazdonas pagasts, Madonas district (the north-east part of Latvia). Annual turnover of the company is about 1.7 million LVL. About 40 to 50 t of milk is supplied daily to the company by the local dairy-farmers. Company produces wide range of dairy products – fresh and sour milk products, butter, yogurts etc. The specialities of the company are milk desserts – rye bred yogurt (yogurt with rye bread crumbs), rye bred yogurt with plums, rye bread pudding with whipped cream etc. Four products of the company have received "The green spoon" label (at least 75% of raw materials produced in Latvia): milk, butter milk, ryazhenka (traditional style sour milk product) and cottage cheese).

6.7.2.- Collective organisation of the initiative

Share holding company "Lazdonas piensaimnieks" is a member of The Central Union of Dairy Processors (Centrala Piensaimnieku savien□ba).

6.7.3.- Social history of the initiative

In 2002 company "Lazdonas piensaimnieks" started to produce rye bread yogurt. Soon later another similar product was released - rye bred yogurt with plums. These products were successful combination of new and traditional. Production of yogurts is relatively – new in Latvia, it was started in 90-ties of the last century. In short time consumption of yogurt importantly increased. Company was the first in Latvia who added traditional touch to this product. Rye bred puddings are very traditional and favourite in Latvian cuisine. Soon after companies initiative many other milk processing enterprises released similar products.

In the future main plans and intentions are to expand market and to offer new services, to develop new successful products, to find small market niches. Recently company started production

of the yogurt for diabetics – yogurt containing 0 fat and sugar, sweetened with fructose. This product has received approval of the Latvia Association of Endocrinologists.
Another initiative is offering new services. Company has opened shopping and recreation centre in Madona, were various services are offered, including special health programme for asthma patients. Recently company in cooperation with scientists from the Institute of Microbiology received patent for the new method of producing compost from whey in the open field. This method is entirely new and helps to solve the problem of utilisation of whey.
The main bottlenecks are connected with necessity to meet demands of EU standards and demands of Latvia Food and Veterinary service.

6.7.4. - Marketing issues

Milk is supplied by the local dairy farmers, usually small farms with few cows. In 2003 amount of supplied milk increased for 18%. Small and middle milk processing enterprises are essential for survival of small farms unable to meet quality standards of big processors. Products of "Lazdonas piensainieks" are sold in many supermarket chains (RIMI, Citymarket) and small retail outlets all over Latvia.

Sustainability profile

Agri-environmental	
biodiversity of wildlife	
preservation of specific species /races	
soil erosion	
water quality	
animal welfare	
food-miles	X
other important aspects	
Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	X
preservation of landscapes	
mountain (marginal) areas keeping	
resistance to sprawl	
agri tourism	
other important aspects	
Economic	
producers' income	X
possible succession for farms	X
farmers' quality of life	X
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support: Bank loans, EU SAPARD Programme financing

6.8. Name of initiative: Mushroom production at individual enterprise "Parsla"

6.8.1.- Boundaries of the supply chain and main actors

The main areas of specialization of the individual enterprise "Parsla" in Stabulnieku pagasts, Preilu district (in the Eastern part of Latvia) is production of frozen berries and mushrooms. Director of the enterprise Vitalijs Pastars is also the regional advisor in fruit-growing. He has about 15 ha of orchards in his farm. Freezer can store about 700 t of frozen products. There are about 25 permanent employees in the enterprise.

6.8.2.- Collective organisation of the initiative

V.Pastars is a member of Latvia Association of Fruit-growers and a member of cooperative "Lield□rzi".

6.8.3.- Social history of the initiative

The enterprise started in 1999. Its main plans were to organize production of frozen berries – sweet and sour cherries, red currants. Demand for frozen berries was limited, and production of frozen mushrooms was started. Majority of mushrooms (chanterelle and edible boletus are imported from Arhangelsk region (Russia, about 3000 km from Latvia). Mushrooms are sorted and packed. The best are packed in 3 kg boxes and exported fresh to France, the others - prepared for freezing and will be sold in the local market.

In the future main plans and intentions are to expand production of fresh and frozen berries and mushrooms, to develop cooperation with Russia to develop import of mushrooms, to have contracts with people from Arhangelsk region for gathering of wild red currants. .

The main bottlenecks – market of berries is limited.

6.8.4. - Marketing issues

Demand for fresh and frozen berries in Latvia is limited. Export of fresh mushrooms is important for the enterprise. Majority of fresh and frozen mushrooms are sold to supermarket chain "Rimi", SIA "Lido", pub "Staburags". In summer about 200 kg of fresh mushrooms packed in 300 g boxes were supplied to the supermarkets. Support of Latvia Association of Fruit-growers and cooperative "Lield□rzi" was very useful to sell the products in these large chains. .

Sustainability profile

Agri-environmental	
biodiversity of wildlife	
preservation of specific species /races	
soil erosion	
water quality	
animal welfare	
food-miles	
other important aspects	

Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	X
preservation of landscapes	
mountain (marginal) areas keeping	
resistance to sprawl	
agri tourism	
other important aspects	
Economic	
producers' income	X
possible succession for farms	
farmers' quality of life	X
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support: Agricultural subsiedies, bank loans

6.9. Name of initiative: Medium-size meat processing enterprise "Ruks"

6.9.1.- Boundaries of the supply chain and main actors

In March, 2003 butchery started operation in Cesis (town about 80 km from Riga). The requirements to rebuild old butcheries are set by the process of adoption of the EU legislation. This means completely new quality standards for food quality and work environment. These quality standards primarily relate to first processors – butcheries. The butchery can process 60 pigs or 12 veal per hour. Till now Latvia has not used all export quota to the EU market exactly due to lack of adequate butcheries.

6.9.2.- Collective organisation of the initiative

The owner prides himself in sustaining many pig beeders and rural communities. "Ruks" buys pigs from two big farms (Skaunes bekons Ltd. and Cirmas bekons Ltd) and from various small farmers. These two pig breeding farms buy nutriment from a firm located in another region (Latgale). However, nutriment is prepared form cereals grown in yet another region of the country (Zemgle). Thus FSC of the specific initiative is networked all across the country.

6.9.3.- Social history of the initiative

The primary motive was to improve quality standards for work conditions, food quality and environment. Another motive was to become adequate for export to European market. The initiative became possible because of financial support gained from the EU SAPARD fund. This is considered to be the main historical event.

In the future main plans and intentions are to specialize in few products. As overall capacity of the processor has increased, "Ruks" has decided to specialize in few products. Now it produces over 50 meat products, but it is not profitable. Its main ambition is to export its products since until now it has worked only in national market.

The main bottlenecks. The owner of the company hopes that along with the process that producers and processors improve food quality, the consumer culture will change as well. People still choose to buy the cheapest products even though it is known that cheaper products are of worse quality.

6.9.4. - Marketing issues

Products labelled "Ruks" are sold in specialized stores, to big retailers and to restaurants.

Sustainability profile

Agri-environmental	
biodiversity of wildlife	
preservation of specific species /races	
soil erosion	
water quality	X
animal welfare	X
food-miles	
other important aspects	
Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	X
preservation of landscapes	
mountain (marginal) areas keeping	
resistance to sprawl	
agri tourism	
other important aspects	
Economic	
producers' income	
possible succession for farms	
farmers' quality of life	
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support: The initiative got financial support from the EU SAPARD fund.

6.10. Name of initiative: Sea buckthorn growing

6.10.1. - Boundaries of the supply chain and main actors

Total area of sea buckthorn plantings in Latvia is about 50 ha. In 2003 about 18 ha of new plantings were made. In general sea buckthorn growing is concentrated in large farms. Recently new method of crown formation so called arching is introduced in Latvia.

6.10.2.- Collective organisation of the initiative

Cooperation of sea buckthorn growers is coordinated by the association. Advice in technological and marketing issues and plant material is provided by the association.

6.10.3. - Social history of the initiative

Industrial growing of sea buckthorn is started only some few years ago. Association of the sea buckthorn growers was founded in 2000. Local demand is small, as processing opportunities are limited.

In the future main plans and intentions are to expand export, to meet the demand of processor.

The main bottlenecks: small amounts of production, growing of sea buckthorn, particularly gathering of berries is very labour-consuming.

6.10.4. - Marketing issues

Berries are exported to Finland, to small processing enterprise were orange-sea buckthorn juice is produced. During the season about 10 t of berries are exported, what is only a part of 40 t demanded. Frozen berries cost about 0.95-1.0 LVL per kilo, directly from the garden – 0.75-0.80 LVL. Processors provide containers and transportation. In Latvia only two enterprises are interested in processing of sea buckthorn berries. Association has experience of cooperation with small processing enterprise "Dzimtene" (Tume pagasts, Tukuma district). Recently cooperation is started with one of the largest fruit and vegetable processor – "Spilva".

Sustainability profile

Agri-environmental	
biodiversity of wildlife	
preservation of specific species /races	X
soil erosion	X
water quality	
animal welfare	
food-miles	
other important aspects	
Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	
preservation of landscapes	
mountain (marginal) areas keeping	X
resistance to sprawl	
agri tourism	
other important aspects	
Economic	
producers' income	X
possible succession for farms	X
farmers' quality of life	X
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support New planting of sea buckthorn receive state subsidies.

6.11. Name of initiative: Bakery "Zelta klingeris"

6.11.1.- Boundaries of the supply chain and main actors

SIA (limited company) "Zelta klingeris" (golden knot-shaped biscuit) was founded in 1992 in village Varme, Kuldigas district (in the western part of Latvia). Bakery with 62 employees produces traditional style rye bread, bread from coarsely ground wheat meal etc. mostly for the local market but small amounts are also exported to Sweden and the USA. The main pride of bakery is traditional style rye bread from biologically grown corn labelled with the national biological label "Latvijas ekoprodukts". SIA "Zelta klingeris" is among very few enterprises in Latvia where organic products are not lost in the common food processing process. The most part of products has label 'Zala karotite" (at least 75% of raw material of Latvian origin). Producing about 1400 t of bread per year it is a medium size enterprise.

6.11.2.- Collective organisation of the initiative

Company "Zelta klingeris" is active member of Latvia Association of Biological Agriculture Organisations and Latvia Association of Bakers.

6.11.3.- Social history of the initiative

Production was started in 1992 based on traditions of rye bread baking inherited from 1920-30., grandfather of one of the owners was certified baker he established technology of traditional rye bread baking in the bakery. Dainis Abolins, director of the company is owner of more than 50 % shares. Along with traditional rye bred pies from coarsely ground rye meal filled with grated potatoes and carrots (sklandurausi) traditional for the western part of Latvia are baked.

In 1999 export of traditional style rye bread to Sweden was started. Once a week about 1200-1500 kg of bread by ferry was supplied to retail nets *Ica* and *Vivo*. Company was the first who started export of bread, now several others have started this business

In the future main plans and intentions are to expand market possibilities, to start new products – rolled rye from organically grown corn, traditional style pies etc.

The main bottlenecks are connected with the tension in rye bread sector. Structure of bred consumption is changing – share of rye bread is decreasing. A failure was rye bread export to Sweden started in 1999, the main reason was disagreement about terms of supply and prices with the partner who originally initiated the export.

6.11.4. - Marketing issues

Bakery products of company "Zelta klingeris" are labelled with own trade mark, they are sold in some supermarkets (Stockman), in small retail outlets all over the Latvia, in organic markets. Part of traditional style rye bread and rolled rye are organically produced and are labelled as organic products.

Sustainability profile

Agri-environmental	
biodiversity of wildlife	
preservation of specific species /races	
soil erosion	
water quality	
animal welfare	
food-miles	X
other important aspects	
Socio-territorial	
regional employment and preservation of rural communities	X
food quality and typicity	X
preservation of landscapes	
mountain (marginal) areas keeping	
resistance to sprawl	
agri tourism	
other important aspects	
Economic	
producers' income	X
possible succession for farms	X
farmers' quality of life	X
higher net value per unit of product	X
higher net value added on regional level	X
other important aspects	

Institutional support: Retail organisations

7. Issues summary

During the last decade of economic transition actors in food chain – farm businesses, farmers co-operatives, intermediates, importers, processing and manufacturing companies, retailers, catering services, as well as state controlling institutions and agricultural organisations have been predominantly oriented towards establishing and consolidating themselves in the process of overall reconfiguration of FSC. Little political attention has been given to overall governance of food chains, issues of their sustainability, quality of performance, role of food chains in sustainable rural development.

Current diversity of food supply chains in Latvia can be classified in three/ four types of chains: conventional, traditional, alternative, and new FSC. These can be found across different sectors, however some types of chains are dominant in particular sectors. The inner dynamism of food networks means that chain structures and boundaries are shifting as actors seek to implement their own strategies and in result of market and political regulation.

The future of food supply chains in Latvia will be determined by several factors: technological modernisation, market concentration, changes in consumer attitudes towards food, new initiatives in food marketing, political support measures. Decisive impact will have the actual joining the EU.

Modernisation processes in agriculture will obviously continue and will be industry driven. That would result in consolidation and concentration of conventional FSC. This process in turn will invigorate farm restructuring particularly the tendency towards farm concentration and intensification of production. It has been forecasted that the current number of landholdings will decrease substantially and the number of employed in agriculture will drop from current 14% till 5% in the future. It is believed, that after EU excision the large farms will be pushed even more toward specialisation, intensification as well as co-operation in marketing.

We might expect that land concentration and specialisation and intensification of production in the segment of commercial farms will go hand in hand with consolidation and expansion of conventional chains.

On the other hand, diversification is an influential rural discourse and agricultural policy target in Latvia along with discourse and policy of farm modernisation. Non- specialised, many branched smallholdings exhibit considerable liveability and share in total agricultural production. We might expect that a number of currently inefficient small farms, particularly those managed by young farmers have potential to diversify activities through combined involvement in existing conventional and traditional chains and by trying out new products and new forms of marketing. Such development would be beneficial for rural livelihoods. It can find backing in diversity of traditional food networks. Successful implementation of this strategy will considerably depend on state support to those farms, which diversify or reorient their activities, and on political regulation and support to conventional, traditional and new chains.

On the edge of farm diversification and reorientation we might expect development of new rural businesses, agri-tourism, small-scale niche productions, rising popularity of local brands, niche and specialised products that are distributed in new chains. A lot of food traditions are alive, that could be basis for regional foods. Small productions that earn image and trust among consumers are able to

compete with larger producers. Latvia has good preconditions to develop biological agriculture and export organic products to European markets.

There are many new initiatives, projects and ideas in FSC. However an issue raises – how to evaluate them from sustainability perspective? Usually conventional, traditional and new FSC do not have coherent performance indicators, they are neither perceived by policy actors as an object of regulation. Improved governance of FCC first of all requires political awareness of necessity to analyse and steer FSC as complex socio-political and economic "organism". Chains themselves should be regarded as integral actors for sustainable rural development.

There is general uncertainty both about governance methods and public responsibility for FSC. Many governance issues, such as – who is responsible? How decisions have to be made? How to integrate stakeholders in decision-making process? How to ensure transparency of relations and decisions in chains? How to improve their political management? What sustainability criteria and indicators should be used? – should be addressed.

Different countries have different discourses and policies towards FSC (eg. regional emphasis in Italy, support to alternative chains in Switzerland). In Latvia the governing institutions hitherto virtually have not coordinated agricultural and rural policies with governance of food supply chains. These policies still have to be co-ordinated and rural and FSC policies matched. Elaboration of performance indicators of sustainable FSC is the challenge for SUS-CHAIN project.

From the point of view of good governance it would be difficult to set sustainability indicators for FSC without addressing and reflecting upon broader societal issues of public interest, social responsibility. In this regard SUS-CHAIN project could look not only at actions but also reflections of actors in FSC.

European processes pose questions in relation to FSC: How enlargement will affect FSC? How the chains from "New Europe" would interfere with chains from "Old Europe"? How FSC will be affected by 2006 changes in CAP?

There are several other issues of specific character.
Contested quality of biological products: It is a widespread opinion that organic food is produced environmentally friendly and is safer to consumers than conventionally produced food. However, it has been mentioned by some food experts that quality control in organic farming might be weaker than in conventional farming, that animal infections are not properly treated on and therefore quality of biological milk and meat could be poor. Experts draw attention to the question, how safe in reality are biological products, and how proven is public trust in organic farming. There are no detailed studies in Latvia, which would allow to ascertain the scale of this problem. Certainly there is a need for scrutiny of this problem and new indicators to measure performance of organic food chains.

Domestic-vis-à-vis imported food: There is competition between domestic and imported foods. Both market demand and profit incentives stimulate import. The difference in EU export price and domestic market price determine huge profit incentives for both legal and illegal trade. Illegal trade distorts food chains and particularly inhibits small economic actors. Functioning of local, regional and national food chains cannot be understood in isolation from international trade.

Differences in economic performance of food chains by branches: From the point of view of economic efficiency sugar beat production is considered the most profitable branch, followed by

grain production. Sugar beet and grain producers usually operate on large farmlands, invest in modern machinery by using national subsidies and EU SAPARD finances. These farmers have succeeded in their political self-organisation and have managed to acquire protective market intervention measures. For instance grain intervention price in Latvia is higher than in EU. Dairy and meat production are also stated as agricultural priorities in Latvia and receive considerable subsidies, however, these sectors are regarded to be in more difficult position, because of import of cheaper meat and milk products from EU, Poland and Lithuania, and because of effects illegal smuggling.

Price dispute between actors in food chains.: Relations between producers and processing industry are evaluated by agricultural experts as balanced in terms of achieved market equilibrium between the farm gate prices and the price, which consumer has to pay at the end of cycle. Farmers claim that they are not paid due prices for supplies – milk production costs are 0.13 Ls/l whereas processors offer 0.07-0.12 Ls/l (customers pay 0.25 Ls/l). In pig meat sector production costs are 0.62 Ls/kg, processors offer 0.59 Ls/kg. Processing industries are also blamed for delayed payments, particularly in dairy sector. Relations between agricultural producers and processing industry are complicated due to the fact, that majority of farmers are not well organised in marketing co-operatives, they sell products through individual channels, and are in week positions to negotiate with industries.

Food quality assurance: There are different legislative, technological, educational, social, and cultural factors, which define the concept of food quality, as well as there are different mechanisms of control and monitoring. The state Food and Veterinarian Service implements control over production processes. Processing enterprises improve their technologies and inner control systems. They invest in personnel education about quality issues. Food industry pays attention to customer complaints and suggestions seek to establish feedback links with consumers, as a part of marketing strategy. For small processing industries it is more difficult to comply with quality requirements not only due to limited financial sources, but also because they can not invest properly in personnel training. Good production practices for food industries as well as good farming practices are new initiatives promoted by Ministry of Agriculture and agricultural organisations to stimulate quality production. For industries it might include fulfilment of hygiene regulations and production norms, acquisition of ISO 9000 certificate, HACCP (Hazard Analysis Critical Control Point System) certificate. Large enterprises are motivated to acquire these certificates and make respective technological improvements. Quality certificates are obligatory for export products, but are not currently required on domestic market. Small processing enterprises have fewer incentives to observe quality regulations.

Particularly in dairy sector farms and processing companies are progressing in quality assurance. Latvia has negotiated with the European Commission transition period for dairy and meat sectors until 2006. Food and Veterinarian Service plans to publish in 2003 the list of enterprises, which fully comply with EU requirements.

Ownership and governance of food industries: Dairy farmers own a portion of shares both in small and large dairies (it has been requirement in privatisation) and this gives farmers certain influence on business decisions. It stimulates reciprocal relations between companies and suppliers, for instance, large dairies often purchase cooling equipment for farmers. However it is said that companies care more about large suppliers than about small producers. Similarly, in sugar industry farmers also hold a part of shares in processing enterprises and these companies might give farmers loans. In grain and serial industries companies are privately owned and farmers deal with them on contract basis.

Market competition and concentration: In dairy and meat processing industry there is a strong tendency towards market consolidation. Small slaughteries, unable to meet EU regulations, shut down their operations and foreign investors buy up large enterprises. These large processors, for instance, *Rigas Miesnieks*, *Tukuma Ga□as kombin□ts*, mostly utilise import supplies. There are several smaller manufacturers, for instance, *Ruks* in C□sis, which use only locally produced meat. In beer brewing 45% of market share is owned by *Aldaris Company*, a subsidiary of *Hartwal Company*. However, recently many regional breweries, such as *Bauskas Alus*, *L□vu Alus, Užavas Alus, C□su Alus, L□vu Alus, Latgales Alus, T□rvetes Alus* successfully compete with large manufacturers and increase their market share.

Failures of new food supply initiatives: Several examples of market failures of novel food products could be mentioned, among them – initiative to produce frozen locally grown strawberries, to bottle goat and mare milk. In a small village of □eipene a co-operative of biological milk producers has tried to organise production of bottled biological milk, however so far they have not succeeded, because biological milk was not recognised by Food and Veterinary Service as meeting adopted EU safety standards.

7.1. Key issues summary list

The key issues summary list was discussed and elaborated during the 1st national dissemination seminar. The seminar discussions gave insight into a range of problems that affect both producers, processing industry, retail organisations as well as consumer and policy related problems.

Among the most important issues of functioning and performance of food supply chains the following **general chain problems** were mentioned:

- Legislation related problems;
- Economic problems and factors influencing the economic performance (competition, concentration of the capital, the power imbalance);
- Marketing problems (low purchasing power, poor information among consumers, limited channels for these products, problems with techniques, e.g., marketing labels etc.);
- Lack of communication between actors in the chain (lack of exchange of information, cooperation, mistrust);
- Problems related to concept, definition and regulation of quality (high quality standards determined by law, difficulty to enforce these standards and conform with regulation, different interpretations of quality by different stakeholders, problems of the biological producers to meet the quality standards and maintain them, etc.).

On the **producer side** the main problems mentioned were:

- Lack of cooperation between different types of producers (small, medium size, large scale) often associated with structural differences and discrepancies of interests;
- The other major problem was competition related problem, and difficulties that many producers particularly small enterprises face under conditions of globalisation, e.g., the increase of competition with foreign brands on the domestic market;

- Another set of problems is related to the lack of information and knowledge among producers regarding different aspects of technological modernisation and political regulation pf food production system;
- Problems arising from political regulation of quality related issues, and difficulties of producers to implement these regulations mainly due to the lack of financial investment capacity. Related to this is also very limited support to special sustainability measures at farm level, support to conversion to sustainable production, limited assistance to new initiatives.

On the **processing industry side** the main problems mentioned were:
- Economic and technological differentiation of the processing sector that determines different scope of processing enterprises to enact the quality requirements as well determine different approaches and strategies towards producers, consumers and other market actors;
- Structural differences among processing enterprises and other factors inhibit cooperation;
- Globalisation and increase of market competition is a great challenge for domestic processing industry.

Issues that characterise **retail sector**:
- Retailers are economically the most dominant actors in food supply chains;
- Concentration of trade in the hands of 4-5 big retailers;
- Supermarkets currently do not have distinct approach towards marketing sustainable agricultural products, although they exhibit interest in this potential market and customer demand;
- Supermarkets choose rather reactive than proactive position, and they have not specified sensitive product groups, which always need special measures and support to get introduced in marketing channels (e.g., discounts, special shelves etc);
- The problems with marketing sustainable products arise due to the incapability of producers to provide regular supplies in required volumes, as well as to sustain “quality at scale”.

On the **consumer** side the major issues are:
- Lack of knowledge about sustainable products;
- Lack of information about product origin;
- Limited influence on the quality of the product;
- The relative weakness of consumer organisations;
- Lack of information about different chain actors.

At the end of this research report, based on macro level analysis of food supply chains in Latvia, sectoral analysis, and discussion of preliminary results with a group of stakeholders (chain actors) at national dissemination seminar, we can draw a concentrated conclusion about the main issues that characterise current performance and functioning of FSC in Latvia:
- Food supply chain concept, the role and potential of food supply chains in rural development are quite unfamiliar both for the society at large and the involved institutions and food chain actors/ stakeholder groups in particular;
- The communication between the institutions and chain actors is rather weak. Every participant in the chain perceives its action from the position of competition and neglects itself as an element of the whole chain; cooperation between chain actors is quite undeveloped;
- The involved chain actors try to maximize their profit irrespectively of their impact on other actors and opportunities of balanced future development of all FSC elements;

- The fragmentation of the chain actors can be regarded as the bottom line problem in food chains in Latvia. Despite to this, practically there are no measures and policies that would bridge this gap and harms agricultural production, processing and marketing as a whole;
- Development of sustainable food supply chains is hampered by lack of information about sustainable production, lack of motivation to change, scarcity of financial means to re-orient towards fulfilment of increased quality demands as well as psychological factors and fear from the unknown;
- One may foresee, that in the few next years food supply chains will be substantially changed as a result of Latvia's accession into the EU, adjustment to the single market, and as a result reform of approaching common agricultural policy. Regardless of the forthcoming changes and the reform, majority of chain actors underestimate the foreseeable changes and might be unready (unprepared) to face them;
- In order to facilitate involvement of stakeholders in improving food chains (and their engagement and cooperation with SUS-CHAIN project), it is necessary to start discussion in the agricultural society and beyond in a broader society about performance of food supply chains, thus raising public awareness and level of information as well as increasing interest of policy institutions, producers, processing industry, retailers and consumers in development of sustainable food chains.

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